CA ZAMBIA PROGRAMME EXAMINATIONS

KNOWLEDGE LEVEL

CA 1.1: FINANCIAL ACCOUNTING

MONDAY 14 SEPTEMBER 2020

TOTAL MARKS – 100: TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading time. Use it to study the examination paper carefully so that you understand what to do in each question.

2. This paper is divided into TWO (2) Sections:
   Section A: Ten (10) compulsory multiple choice questions.
   Section B: One (1) compulsory scenario question.
   Plus Four (4) scenario questions. Attempt any Three (3) questions.

3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name must **NOT** appear anywhere on your answer booklet.

4. Do **NOT** write in pencil (except for graphs and diagrams).

5. **Cell Phones** are **NOT** allowed in the Examination Room.

6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.

7. All workings must be done in the answer booklet.

8. Present legible and tidy work.

9. Graph paper (if required) is provided at the end of the answer booklet.

DO NOT OPEN THIS QUESTION PAPER UNTIL YOU ARE INSTRUCTED BY THE INVIGILATOR.

SECTION A

Attempt all ten (10) multiple choice questions

QUESTION ONE

Each of the following questions has only ONE (1) correct answer. Write the LETTER of the correct answer you have chosen in your answer booklet. Marks allocated are indicated against each question.

1.1 Wataika Co bought a new piece of equipment for K 95,000 before VAT at the rate of 16%. Delivery and installation cost were K1,370 and K4,220. Training of the operator of the equipment cost K 6,475. Wataika does not recover any input VAT.

What is the cost to be included in the non-current assets register for the equipment?

A. K 85,390
B. K 100,590
C. K 115,790
D. K 122,265

(2 marks)

1.2 The IASB's *Conceptual Framework for Financial Reporting* defines elements of financial statements. Which one of the following is the correct definition of income?

A. Income is the increase in economic benefits during the accounting period in the form of inflows or enhancements of assets or decreases in liabilities.
B. Income is the residue interest in the assets of the entity after deducting all its liabilities.
C. Income is the resource controlled by an entity as a result of past events and from which future economic benefits are expected to flow to the entity.
D. Income is the present obligation of the entity arising from past events, the settlement of which is expected to result in an outflow from the entity of the resources embodying economic benefits.

(2 marks)

1.3 The following items of information were prepared after comparing the bank statement and the firm's cash book.

	K
Deposits not yet credited	620
Bank charges	85
Dishonoured cheques	235
Unpresented cheques	940

Direct Debit –DSTV Subscription	470

What should be the updated cash book balance if the bank statement balance is K12,575 as at 31 March 2020?

A. K 13,900
B. K 12,255
C. K 12,725
D. K 12,490

(2 marks)

1.4 Which of the following would be reported as a Financing Activity in the Statement of Cash flow according to IAS 7?

A. Profit on disposal of a non-current asset
B. Purchase of an intangible asset
C. A loan repayment
D. Amortisation of development costs

(2 marks)

1.5 Which one of the following is an error of principle when applied to posting of cash purchases of K 5,840?

A. Credited to cash account and debited to purchases account with K5,480 instead of K5,840
B. Credited to cash account and debited to Motor Vehicles account with K 5,840
C. Debited to purchases account with no credit to any account
D. Debited to cash book and credited to purchases account with K 5,840

(2 marks)

1.6 A piece of equipment was bought for K160,000 on 1 April 2014. The equipment's useful economic life was initially estimated at 10 years. After 4 years the management feels that the economic useful life of the asset was supposed to be 16 years.

What is the carrying amount of the asset as at 31 March 2020?

A. K 96,000
B. K 80,000
C. K 64,000
D. K 84,000

(2 marks)

1.7 Which one of the following would be reported in the statement of cash flows according to IAS 7?

A. Distribution costs
B. Revaluation deficit
C. Interest accrued
D. Proceeds of a share issue

(2 marks)

1.8 Which of the following is the treatment of the wages for the barman when preparing the Income and Expenditure of a club?

A. Deduct from a separately calculated Bar trading profit
B. Add to a separately calculated Bar Trading profit
C. Deduct from proceeds of a competition
D. Add to proceeds from a competition

(2 marks)

1.9 Which of the following companies does not employ public sector accounting?

A. Local Authority Organizations
B. Zambia Revenue Authority (ZRA)
C. Road Transport and Safety Agency (RTSA)
D. Lafarge Cement Company (Lafarge)

(2 marks)

1.10 A company disposed of a motor vehicle that had the following details: reported the following in respect of two vehicles in their financial statement:

Statement of Financial Position

1.	Motor vehicles cost	K 80,000
2.	Profit on disposal	K 8,000
3.	Accumulated Depreciation	K 50,000

What amount will be reported as cash flow from investing activities in the Statement of Cash flow for the year ended 31 December 2019?

A. K80,000
B. K88,000
C. K38,000
D. K150,000

(2 marks)

[Total: 20 Marks]

SECTION B

This question is compulsory and must be attempted plus any three (3) from the remaining four (4) questions.

<u>QUESTION TWO</u> – (Compulsory)

Mikalile Plc. is a limited liability company specialized in the manufacturing and distributing office furniture. These products are sold to individual and corporate customers.

The following information was extracted from the books of the company as at 31 December 2020:

	K	K
Purchases	1,315,680	
Payables		189,000
Sales		2,400,000
Receivables	379,200	
Land at cost	540,000	
Buildings at cost	1,140,000	
Furniture and fittings at cost	660,000	
Bank		180,000
Depreciation:		
Buildings		180,000
Furniture and fittings		300,000
Discount received		52,920
Retained earnings at 1 Jan 2020		60,000
Allowance for receivables		24,480
Goodwill	492,000	
Cash in hand	6,960	
Inventory at 1 Jan 2020	427,440	
Research costs	13,080	
Preference dividends	18,000	
Rates	63,720	
Wages and salaries	240,000	
Insurance	56,880	
Returns inwards	11,160	
Purchases	1,315,680	
Loan note interest paid	12,000	
Irrecoverable debts	20,280	
5% Loan notes		480,000
3% K1 preference shares		600,000
K1 ordinary shares		600,000
General reserves		300,000
Share premium		30,000
	5,396,400	5,396,400

The following additional information has been provided as at 31 December 2020:

1. Inventory was valued at K466,380.
2. The insurance includes K3,000 pre-paid
3. An amount of K8,400 for wages had not been settled by the company at the year end.
4. The research costs are all in relation to pure research.
5. Depreciation is to be provided at 10% on cost of buildings on straight line basis and at 20% using the reducing balance method on furniture and fittings.
6. Allowance for receivables is to be adjusted to 5% of trade accounts receivables.
7. Loan notes were issued 2 years ago and will be redeemed on 31 December 2025. Debenture interest outstanding is valued at K12,000.
8. The directors proposed to pay a 5% ordinary dividend though it has not yet been approved by the board of directors at end of the year.
9. A bonus issue of 1 bonus share for every 20 existing ordinary shares must be made out of the share premium.
10. A transfer of K240,000 must be made from retained earnings to general reserve.
11. The corporate tax provision for the year is estimated at K200,000.
12. The preference shares qualify as part of equity.

Required:

Prepare for Mikalile Plc. the following in accordance with the requirements of IAS 1:

(a) Statement of profit or loss for the year ended 31 December 2020. (11 marks)

(b) Statement of financial position as at 31 December 2020. (9 marks)

[Total: 20 Marks]

QUESTION THREE

On 31 December 2019, KOPALA Ltd Company bank column of the cash book showed a positive balance of K6,500,000 while the bank statement showed a credit balance of K6,720,000 on the account. Upon investigations the following month, the following errors were discovered:

(1) An opening debit cashbook balance on 1 December 2019 was overcast by K100,000.
(2) A standing order of K50,000 for water bills was recorded on the bank statement but no entry was made in the cash book.
(3) Dividends received in the month from Tamwibusha Ltd Company of K500,000 were credited by the bank but no entries were made in the cash book.
(4) A cheque drawn and paid to Mr. Kalaba of K350,000 had not been presented to the bank for payment.
(5) Bank charges of K80,000 shown on the bank statement had not been entered in the cash book.
(6) A cheque received from Mukatasha of K300,000 was dishonored by the bank due to insufficient funds. No entry was made in the cash book.

(7) A cheque received from Twatasha Ltd totaling K400,000 had been entered in the cash book and paid into the bank, but had not been credited by the bank until 20 January 2020.

(8) A receipt of K150,000 was shown as a payment in the cash book.

Required:

(a) Explain the importance of carrying out a periodic bank reconciliation to Kopala Limited. (5 marks)

(b) Identify and explain three (3) common explanations for the differences between the cash book balance and the bank statement balance. (3 marks)

(c) Prepare a revised cash book as at 31 December 2019 incorporating the above where appropriate. (8 marks)

(d) Prepare a bank reconciliation statement as at 31 December 2019, starting with the balance as per revised cash book. (4 marks)

[Total: 20 Marks]

QUESTION FOUR

As a Financial Accountant for Waluse, you are responsible for the preparation of the financial statements in accordance with International Financial Reporting Standards (IFRSs). The following is the trial balance for WALUSE, a manufacturing sole trader as at 31 December, 2019:

	K'000	**K'000**
Sales		490,000
Returns inwards	15,000	
Purchase of raw materials	258,000	
Fuel and lighting	21,000	
Administration salaries	17,000	
Factory wages	59,000	
Carriage outwards	4,000	
Rent and business rates	21,000	
General office expenses	9,000	
Repairs to plant and machinery	9,000	
Inventories at 1 January 2019:		
Raw materials	21,000	
Work in progress	14,000	

Finished goods	23,000	
Payables		37,000
Capital		457,000
10% Bank loan		10,000
Freehold land	410,000	
Plant and machinery	80,000	
Receivables	20,000	
Accumulated depreciation on plant and machinery		8,000
Cash	21,000	
	1,002,000	1,002,000

Additional information as at 31 December, 2019:

1. The physical stock count showed the closing inventories of:
   - Raw materials K25,000,000
   - Work in progress K11,000,000
   - Finished goods K26,000,000
2. Rent of K5,000,000 was paid in advance while K4,000,000 was outstanding for fuel at 31 December 2019.
3. Allowance for receivables should be made amounting to 5% outstanding receivables at 31 December 2019.
4. Plant and machinery to be depreciated at 10% per annum on cost. The depreciation for the year has not yet been accounted for.
5. There are accrued administration salaries of K3,000,000 and prepaid general expenses of K1, 000,000 at 31 December, 2019.
6. It has been decided to revalue freehold land upwards by K440,000,000 to reflect the market survey.
7. Fuel and lighting and rent and rates must be apportioned as follows:

	Manufacturing	**Trading**
fuel and lighting	80%	20%
rent and rates	75%	25%

Required:

(a) Prepare the manufacturing account for the year ended 31 December, 2019. (6 marks)

(b) Prepare the statement of profit or loss and other comprehensive income for the year ended 31 December, 2019. (7 marks)

(c) Prepare the statement of financial position as at 31 December, 2019. (7 marks)

[Total: 20 Marks]

QUESTION FIVE

Ndashe sells motor spares in a shop along Los Angels Road in Lusaka. He appears to be holding a large amount of inventory, and this is bothering him. He provides you with a list of assets and liabilities as at 1 January 2019, a summary of transactions in the year and other information you can use to prepare accounts:

Assets:	K	K
Inventory of spares –cost		45,200
Motor vehicles (one old vehicle)	48,000	
Accumulated depreciation –Motor vehicle	(12,000)	36,000
Receivables – from customers		8,450
Rent prepaid		1,800
Liabilities:		
Payables -supplier invoices		9,230
Electricity bills outstanding		490

The following is a Summary of Cash transactions in the year:

	Cash	Bank		Cash	Bank
Receipts:	K	K	*Payments:*	K	K
Open Balance	875	4,290	Suppliers		80,960
Customers	40,195	80,405	Deposits	40,000	
Deposits		40,000	Electricity	500	
Sales	16,890		Rent	1,500	
			Wages	8,000	
			Drawings	2,000	
			Thomas Motors		30,000
			Clos. Balances	5,960	13,735
	57,960	**124,695**		**57,960**	**124,695**

At the end of the year the following information is available:

1. Motor vehicles are depreciated at 12-1/2% per annum on cost in full in the year of purchase and none in the year of disposal.
2. A new vehicle, a Fancargo, was acquired from Thomas Motors on 1 October 2019 on a part exchange basis to replace the old vehicle. The cost of the new vehicle was

K 65,000. After paying the amount in the Cash summary, besides the trade in allowance (whose amount is to be determined), Ndashe still owes Thomas Motors K5,000.

3. Ndashe does not know the value of inventory at the end of the year, but it is his practice to add 25% to cost to arrive at the selling price for spares.

4. Rent prepaid at the end of the year was K1,200, whereas outstanding bills for electricity totaled K720.

5. Suppliers invoices not paid at the end of the year totaled to K3,280 and amounts receivable from customers were K5,570.

Required:

(a) To prepare the following accounts as they would appear in the ledger for Ndashe: Disposal Account (3 marks)
Part Exchange Account (2 marks)
Trade Receivables (3 marks)
Trade Payables (2 marks)
(b) Calculate the gross profit for the year to 31 December 2019 (5 marks)
(c) Calculate the net profit for the year to 31 December 2019. (5 marks)

NOTE: You are NOT required to prepare the Statement of Financial Position as at 31 December 2019.

[Total: 20 Marks]

QUESTION SIX

The opening balances on the Statement of Changes in Equity for Twatasha limited company as at 1 January 2020, was as follows:

Share capital	Share premium	Retained earnings	Revaluation surplus	Total
K	**K**	**K**	**K**	**K**
500,000	300,000	225,000	120,000	1, 145,000

The following information was known as at 31 December 2020:

(i) 10,000 K1 shares had been issued on 1 June 2020 at a premium of K1.40

(ii) Retained earnings for the year after dividends of K20,000 were K35,200.

(iii) Land was revalued upwards by 45,000 during the year.

(iv) On 1 February 2020, Twatasha made a 1 for 4 bonus issue, utilising the share premium account.

(v) Products of K3,250 sold in 2019, and included in revenue for the year, were incorrectly included in closing inventory at 31 December 2019 and opening inventory 1 January 2020. This is regarded as a fundamental error.

Required:

(a) Prepare the Statement of Changes in Equity for the year ended 31 December 2020. (11 marks)

(b) Define the following in accordance with the *Conceptual Framework* for financial reporting, giving an example of each:

(i) Asset
(ii) Liability

(5 marks)

(c) State and explain the two (2) fundamental qualitative characteristics. (4 marks)

[Total: 20 Marks]

END OF PAPER

SUGGESTED SOLUTIONS

SOLUTION ONE

1.1 C

1.2 A
1.3 B
1.4 C
1.5 B

1.6 B

1.7 D
1.8 A
1.9 D

1.10 C

SOLUTION TWO

Mikalile Plc
Statement of profit or loss account and appropriation account
for the year ended 31 December 2020

	K	K
Sales		2,400, 000
Less: Returns inwards		(11,160)
Net sales/turnover		2,388,840
Opening inventory	427,440	
Purchases	1,315,680	
Total goods available	1,743,120	
Less: Closing inventory	(466,380)	
Cost of sales		(1,276,740)
Gross profit		1,112,100
Add: Other income		
Discount received		52,920
Total income		1,165,020
Less: Expenses		
Rates	63,720	
Wages and salaries (240, 000 + 8,400)	248,400	
Insurance (56,880 – 3,000)	53,880	
Research costs	13,080	
Irrecoverable debts	20,280	
Allowance for receivables:		
(5% x 379,200) – 24,480	(5,520)	
Depreciation:		
Buildings (10% x 1,140,000)	114,000	
Fixtures & fittings: 20% (660,000 – 300,000)	72,000	
Debenture Interest (5% x 480,000)	24,000	(603, 840)
Profit before tax		561,180
Taxation		(200,000)
Profit after tax		361,180

Mikalile Plc
Statement of financial position as at 31 December 2020

	Cost	Acc. Dep.	N.B.V
	K	K	K
Non-current assets			
Intangible assets:			
Goodwill	492,000	–	492,000
Tangible assets:			
Land	540,000	–	540,000
Buildings	1,140,000	294,000	846,000
Furniture & fittings	660,000	372,000	288,000
	2,832,000	666,000	2,166,000
Current assets			
Inventory		466,380	
Receivables (379,200 – 18,960)		360,240	
Prepayments		3,000	
Cash in hand		6,960	

		836,580
Total assets		3,002,580
Equity and liabilities		
600,000 K1 ordinary shares (600,000 + 30,000)		630,000
3% K1 preference shares		600,000
Share premium account (30,000 - 30,000)		0
General reserves (300,000 + 240,000)		540, 000
Profit or loss (60,000 -18, 000 -240,000+361, 180)		(163,180)
		1,933,180
Non-current liabilities		
5% Debentures		480,000
Current liabilities		
Bank overdraft	180, 000 (1/2	
Payables	189,000 (1/2)	
Accruals (12,000 + 8,400)	20,400 (1/2)	
Corporation tax	200, 000 (1/2)	
		589,400
Total equity and liabilities		3,002,580

SOLUTION THREE

a) Reasons for preparing a Bank Reconciliation Statement

- To check for errors that the bank may have committed
- To check for errors the business may have committed
- To check for omissions that may have occurred (completeness check)
- To derive correct amount for bank balance in statement of financial position
- Detect possible fraud

b) Common explanations for differences between the Cash book balance and the Bank statement balance

i) **Error:** There could be errors in calculations or recording of income and payments either by the bank or person handling the cash book.

ii) Bank charges or interest: The bank might deduct charges or interest on an overdraft or for its sources, which the business may not be aware of until the bank statement is received.

iii) Timing differences.

- There might be some cheques received and paid into bank but which have not been cleared and credited by the bank.
- The company might have made payments by cheque which has not yet been presented to the bank and yet cash book adjustments have already occurred.

(3 Marks)

c) KOPALA's Ltd Revised Cash Book

Date	Details		K'000	Date	Details		K'000
2019				2019			
31/12	Balance	b/d	6,500	1/12	Overcast balance	b/d	100
31/12	Credit transfer		500	31/12	Standing order		50
31/12	Error in cash book		300	31/12	Bank charges		80
				31/12	Dishonored cheque		300
				31/12	Balance	c/d	6,770
			7,300				7,300

b) 2. KOPALA's ltd Bank Reconciliation Statement as at 31 Dec 2019

	K'000
Balance as per revised cash book	6,770
Add: Unpresented Cheques: Kalaba	350
	7,120
Less: Uncredited cheques: Mwapona Ltd	(400)
Balance as per Bank Statement	**6,720**

SOLUTION FOUR

WALUSE

Manufacturing Account for the year ended 31st December 2019

Details	K	K
DIRECT MATERIALS		
opening inventory raw materials		21,000
add: purchases raw materials		258,000
raw materials available		279,000
less: closing inventory raw materials		(25,000)
Cost of materials issued to production		254,000
DIRECT LABOUR		
factory wages		59,000
PRIME COST		313,000
PRODUCTION OVERHEADS:		
Fuel and lighting (21,000+4000*80%)	20,000	
Rent and rates (21,000-5000*75%)	12,000	
repairs	9,000	
Depreciation (80000*10%)	8,000	49,000
Total production Cost for the period		362,000
Movement in WIP:		
Opening WIP	14,000	
Closing WIP	(11,000)	3,000
Cost of Finished Production		365,000
Transfer to Finished Goods/Cost of Sales		(365,000)

WALUSE

Statement of Profit or Loss and other comprehensive income for the year ended 31st December, 2019

	K000	K000
Sales		490,000
less: sales returns		(15,000)
		475,000
Opening inventory finished goods	23,000	
add: Production cost		

	365,000	
Goods available	388,000	
less: closing inventory finished goods	(26,000)	
cost of sales		(362,000)
gross profit		113,000
less: expenses		
Fuel and lighting (21000+4000*20%)	5,000	
Administration salaries (17,000 +3,000)	20,000	
Carriage outward	4,000	
Interest	1,000	
Rent and rates (21000-5000*25%)	4,000	
general office expenses (9,000 -1000)	8,000	
Allowance for receivables (20000*5%)	1,000	
		(43,000)
OPERATING PROFIT		70,000
Other comprehensive income		
Revaluation gain		440,000
Total comprehensive income		**510,000**

WALUSE

Statement of financial position as at 31st December, 2019

ASSETS	K000	K000	K000
noncurrent assets:			
	Cost	Dep	Carrying
plant and machinery	80,000	16,000	64,000
freehold land	850,000	-	850,000
	930,000	16,000	914,000
current assets:			
inventories:			
raw materials		25,000	
work in progress		11,000	
finished goods		26,000	
Receivables	20,000		
less: allowance	(1,000)		
		19,000	
Prepaid (5,000 +1, 000)		6,000	
cash		21,000	
			108,000
TOTAL ASSETS			1,022,000
CAPITAL AND LIABILITIES			
Opening Capital			457,000
Profit for the year			70,000
Revaluation gain			440,000
			967,000
Liabilities			
Non-current liabilities - 10% loan notes			
Current liabilities:			10,000
Payables		37,000	
Accrued expenses (4,000 +3000 +1000			

interest)	8,000	
		45,000
Total Capital and Liabilities		1,022,000

SOLUTION FIVE

DISPOSAL ACCOUNT:

Debit Entries:	K
Cost of Old vehicle (from Non current assets)	48,000

Credit Entries:	K
Depreciation to date (from Accum Depreciation account)	12,000
Part exchange Allowance (from Part Exchange account)	30,000
Loss on Disposal (Balancing figure To SoP/L account)	6,000
Total	48,000

PART EXCHANGE ACCOUNT:

Debit Entries:	K
Cash paid (from Cash payment summary)	30,000

Part exchange Allowance (Bal fig to Disposal account)
30,000 Owing at the end –To SoFP Clos Balance)
5,000 Total
65,000

Credit Entries:	K	
Cost of New vehicle (To Non Current Assets account)	65,000	
Total		65,000

PAYABLES ACCOUNT:

Debit Entries:	K
Bank (Payment to suppliers)	80,960
Closing Balance	3,280
Total	84,240

Credit Entries:	K
Opening Balance	9,230
Purchases (Balancing figure To SoP/L COS account)	75,010
Total	84,240

RECEIVABLES ACCOUNT:

Debit Entries:	K	
Opening Balance	8,450	
Sales (Balancing figure To SoP/L Sales account)		117,720
Total		
126,170		

Credit Entries:	K
Bank (Receipts from customers)	80,405
Cash (Receipts from customers)	40,195
Bal c/d	5,570
Total	126,170

(b) Calculation of Gross Profit:

Gross profit = 25/125 X Total Sales = 25/125 x (117720+16890)
= 26,922

(c) Calculation of Net Profit

		K	K
Gross Profit b/d			26,922
Rent	(1500+1800-1200)	2,100	
Wages		8,000	
Electricity	(500+720-490)	730	
Depreciation 12-1/2% x 65,000		8,125	
Loss on disposal		6,000	(24,955)
Net profit			1,967

The following SoFP is mere proof that the Solution is correct and complete

NDASHE STATEMENT OF FINANCIAL POSITION as at 31 December 2019

	K	K	K
Non current assets	**Cost**	**Acc Deprec**	**Carry Amnt**
Motor vehicles	65,000	8,125	56,875
Current assets			
Inventory		12,522	

Receivables	5,570	
Prepaid rent	1,200	
Cash	5,960	
Bank	13,735	
		38,987
		95,862
Equity		
Capital at start	86,895	
Add: net loss	1,967	
	88,862	
Less: drawings	2 000	
		86,862
None current liabilities		
None		
Current liabilities		
Part exchange	5 000	
Payables	3 280	
Electricity due	720	
		9,000
		95,862

SOLUTION SIX

(a) Statement of changes in equity for the year ended 31st December 2020 for Twatasha

	Share capital K	Share premium K	Retained earnings K	Revaluation surplus K	Total K
Balance as at 1st January 2020	500,000	300,000	225,000	120,000	1, 145,000
Prior period error /prior year adjust			(3, 250)		(3, 250)
Restated balance	500,000	300,000	221,750	120,000	1,141, 750
Share issue	10, 000	14, 000	-	-	24, 000
Dividends	-	-	(20, 000)	-	(20, 000)
Profit for the year	-	-	55, 20 *		55, 200
Revaluation gain	-	-	-	45, 000	45,000
Bonus Issue 500,000X1/4	125,000	(125,000)	-	-	-
Balance at 31st December 2020	635,000	189, 000	256, 950	165, 000	1,245,950

- Adjusted Profit for the year (35,200 + 20, 000)

(b) i) An asset is a resource, controlled by an entity as a result of past events from which future economic benefits are expected to flow to the entity**.** AN EXAMPLE is Property, plant and equipment.

ii) A liability is a present obligation of an entity as a result of past events for which an outflow of resources embodying economic benefits is expected. An example is loan.

(c) The **TWO** fundamental qualitative characteristics are:

- relevance; and
- faithful representation

Relevance
Information must be relevant to the decision-making needs of users. Information is relevant if it can be used for predictive and/or confirmatory purposes.

- It has ***predictive value*** if it helps users to predict what might happen in the future.
- It has ***confirmatory value*** if it helps users to confirm the assessments and predictions they have made in the past. Only information that is material can be relevant.

Faithful representation
To be useful, financial information must not only represent relevant phenomena, but it must also faithfully represent the phenomena that it purports to represent in both words and numbers.

A perfectly faithful representation would have three characteristics. It would be:

- complete;
- neutral; and
- free from error.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

KNOWLEDGE LEVEL

CA 1.2: BUSINESS STATISTICS

WEDNESDAY 16 SEPTEMBER 2020

TOTAL MARKS – 100; TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading time. Use it to study the examination paper carefully so that you understand what to do in each question.
2. This paper is divided into TWO (2) sections:
   Section A: Ten (10) compulsory multiple choice questions.
   Section B: One (1) compulsory scenario question.
   Plus Four (4) scenario questions. Attempt any Three (3) questions.
3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name must **NOT** appear anywhere on your answer booklet.
4. Do **NOT** write in pencil (except for graphs and diagrams).
5. **Cell Phones** are **NOT** allowed in the Examination Room.
6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.
7. All workings must be done in the answer booklet.
8. Present legible and tidy work.
9. Graph paper (if required) is provided at the end of the answer booklet.
10. A mathematical/statistical formulae book MUST be provided. **Request for one if not given by the Invigilators.**

DO NOT OPEN THIS QUESTION PAPER UNTIL YOU ARE INSTRUCTED BY THE INVIGILATOR.

SECTION A – (COMPULSORY)

Attempt all the ten (10) multiple choice questions.

QUESTION ONE

Each of the following questions has only ONE (1) correct answer. Write the LETTER of the correct answer you have chosen in your answer booklet. Marks allocated are indicated against each question.

1.1 The mean of the business statistics examination results at ZICA for twelve students is 17.75. The data is as follows:

10, 15, 8, 9, 12, 20, 23, 14, 25, 28, 27, x.
Calculate the value of x.

A. 18
B. 18.5
C. 17.5
D. 17.75

(2 marks)

1.2 The "middle 50% range" can be determined by calculating the difference between:

A. The tenth and fifth decile points
B. The 70th and 20th percentile
C. The 80th and 30th percentile points
D. Q_3 and Q_1

(2 marks)

1.3 Which of the following is a major problem for forecasting, especially when using regression analysis?

A. The future exactly follows the patterns of the past.
B. The past cannot be known
C. The future may not follow the patterns of the past.
D. The future is not entirely certain.

(2 marks)

1.4 Let the coefficient of determination computed to be 0.35 in a problem involving one independent variable and one dependent variable. This result means that

A. The relationship between two variables is negative
B. The correlation coefficient is 0.35 also
C. 35% of the total variation can be explained by the independent variable
D. 35% of the total variation is explained by the dependent variable

(2 marks)

1.5 If the value of X for normal distribution is 40, mean of the normal distribution is 60 and the variance is 400 then the standardized random variable is

A. -0.05
B. -1.5
C. +0.05
D. +1.0

(2 marks)

1.6 The value of the second quartile is always equal to the value of the

A. Median
B. Mode
C. Mean
D. Range

(2 marks)

1.7 The type of data which allows one to write the questions is called

A. Primary data
B. Secondary data
C. Continuous data
D. Discrete data

(2 marks)

1.8 The value which is obtained by multiplying possible values of a random variable with probability of occurrence and is equal to weighted average is called.

A. Discrete value
B. Weighted value
C. Expected value
D. Cumulative value

(2 marks)

1.9 $R^2$is used in regression analysis to:

A. Measure model fit
B. Measure the amount of variance in the dependent variable explained by variation in the independent variables
C. To determine how well the model works
D. All of the above.

(2 marks)

1.10 Tickets numbered 1 to 20 are mixed up and then a ticket is drawn at random. What is the probability that the ticket drawn has a number which is a multiple of 2 or 5?

A. $\frac{7}{10}$

B. $\frac{3}{5}$

C. $\frac{2}{5}$

D. $\frac{1}{2}$

(2 marks)

[Total: 20 Marks]

SECTION B

Question TWO (2) in this Section is compulsory and must be attempted.

Then attempt any THREE (3) questions out of the remaining four.

QUESTION TWO - (COMPULSORY)

(a) State which of the following is a discrete or continuous data set;

(i) The units of an item in inventory
(ii) The length of time before the first failure of a device,
(iii) The average number of persons per household in a large community.
(iv) Number of assembled components that are found to be defective;
(v) Weight of a shipment
(vi) The number of companies involved in cassava mealie meal processing

(3 marks)

(b) A large firm had 100 individuals who applied for the position of system analyst during the past year. Of the 100 applicants, 40 had some work experience (W), and 30 had a professional certificate (C), however, 20 of the applicants had both work experience and a certificate.

(i) If an applicant is chosen at random, What is the probability that the applicant has a professional certificate but does not have work experience?

(2 marks)

(ii) What is the probability that a randomly chosen applicant had either work experience or a certificate (or both)? (2 marks)

(c) A sample of fifteen senior executives found the following results as the percentage of total compensation derived from bonus payment.

18	37	52
19	40	54
23	41	56
27	44	59
31	46	61

Calculate each of the following:

(i) The Mean (3 marks)
(ii) The range (1 marks)
(iii) The median (2 marks)
(iv) Standard deviation (4 marks)
(v) The inter-quartile range (3 marks)

[Total: 20 Marks]

QUESTION THREE

(a) In a survey of 400 spectators at a professional football game, each individual was asked to indicate the one–way distance from his/her home to the stadium. A partial relative frequency distribution is given.

Kilometers	Relative frequency
0 to under 5	0.14
5 to under 10	0.22
10 to under 15	
15 to under 20	0.18
20 to under 25	0.16

Required:

(i) Complete the relative frequency distribution. (1 mark)

(ii) How many spectators live more than 10 but less than 15 kilometers from the stadium? (2 marks)

(iii) Show the frequency distribution for the data. (5 marks)

(iv) Calculate the sample mean. (2 marks)

(v) Calculate the sample variance (4 marks)

(b) The union Bank of Zambia conducted a survey to obtain data on the hourly wages of blue - and white – collar workers throughout Zambia. Assume that a sample of 25 workers in the city of Kitwe provided the following data

12.5	12.9	14.1	9.4	10.9
10.2	12.75	7.85	10.15	11.05
16.35	13.05	16.25	12.10	9.45
9.00	15.70	6.85	14.65	14.15
10.80	8.05	14.10	10.05	7.65

Calculate the following statistics:

(i) Mean. (2 marks)
(ii) Median. (2 marks)
(iii) Interquartile range. (2 marks)

[Total: 20 Marks]

QUESTION FOUR

(a) Define the following statistical terms:

- (i) Variable (1 mark)
- (ii) Statistic (1 mark)
- (iii) Parameter (1 mark)
- (iv) Population (1 mark)

(b) The Business Week 2015 Zambian subscriber study collected data from a sample of 2861 subscribers. Fifty nine percent of the respondents indicated that their annual income was K75,000 or more and 50% reported having a Zambian Express Credit card.

- (i) What is the population of interest in this study? (1 mark)
- (ii) Is annual income a qualitative or quantitative variable? Interpret your answer. (2 marks)
- (iii) Is ownership of a Zambian Express Credit card a qualitative or quantitative variable? Explain your answer. (2 marks)
- (iv) Does this study involve cross–sectional or time series data? Explain your answer. (2 marks)

(c) Define time series. (2 marks)

(d) List the four components of time series. (4 marks)

(e) With which component of time series would you associate the following events?

- (i) The rainfall in Lusaka that occurred for five days in November 2017. (1 mark)
- (ii) An era of prosperity (1 mark)
- (iii) Increase in sales of dry fruits in December. (1 mark)

[Total: 2O Marks]

QUESTION FIVE

(a) The increase in demand for timber due to increased economic activity such as construction of houses has led to a significant effect on the size of acre of forest area in major rain forest. The table below shows the estimated size of forests (in thousands of acres) in three (3) major rain forests for the past three (3) years.

PLACE **YEAR:**	**AREA OF FOREST**		
	2017	**2018**	**2019**
AMAZONE	850	500	450
CONGO	600	550	300
INDONESIA	500	300	150

Required:

(i) Present the information in the table above in a bar chart. (5 marks)

(ii) What was the total size of forest in the three (3) areas in the year 2017 and in the year 2019? (3 marks)

(iii) Calculate the overall change in size (in percentage) of the forest from the year 2017 to 2019. . (2 marks)

(b) A corporation takes delivery of newly made equipment that must be installed and checked before it is operational. The table below shows the manager's probability assessment before the machinery become operational.

Number of days	3	4	5	6	7
Probability	0.05	0.2	0.35	0.30	0.10

Let A be the event that "it will take more than 4 days before the machinery is operational"

And let B be the event that "it will be less than 6 days before the machinery becomes fully operational"

Required:

(i) Find the probability of event A (2 marks)

(ii) Find the probability of event B (2 marks)

(iii) Find the probability of intersection between event A and Event B (2 marks)

(iv) Find the Average (expected value) of number of days taken before the machinery become fully operational. (4 marks)

[Total: 20 Marks]

QUESTION SIX

(a) Define the term forecast. (2 marks)

(b) The forecast of a product for the first week of August was 600 units, whereas the actual demand turned out to be 550 units.

(i) Find the forecast for the second week of August by assuming the smoothing constant (α) as 0.3. (3 marks)

(ii) Find the forecast for the third week of August if the actual demand of the second week is 620 units. (3 marks)

(c) A company has the sales pattern (in units) during 1994 to 2002, as shown in the table below:

Year	1994	1995	1996	1997	1998	1999	2000	2001	2002
Sales (in units)	10	12	15	27	33	38	44	49	60

Required:

(i) Find the least square regression line for the sales data. (5 marks)
(ii) Find the correlation coefficient. (3 marks)
(iii) Find the coefficient of determination and interpret your result. (2 marks)
(iv) Compute the sales forecast for the year 2006. (2 Marks)

[Total: 20 Marks]

END OF PAPER

SUGGESTED SOLUTIONS

SOLUTION ONE

1.1 A $195 + x = (12)(17.75)$. Therefore, $195 + x = 213$. Solving for x, we get $x = 213 - 195 = 18$.

1.2 D the difference between Q_3 and Q_1

1.3 A The future exactly follows the pattern of the past

1.4 C

1.5 B

1.6 A

1.7 D

1.8 C The Expected value

1.9 D all of the above

1.10 A $\frac{7}{10}$

Let E be the event of getting a multiple of 2 or 5. A is the event of getting a multiple of 2 and B getting a multiple of 5.

$A = \{2,4,6,8,10,12,14,16,18,20\}$, $n(A) = 10$, $B = \{5,10,15,20\}, n(B) = 4, n(S) = 20$. $P(E) = P(A) + P(B) - P(A \cap B) = \frac{10}{20} + \frac{4}{20} - 0 = \frac{7}{10}$

SOLUTION TWO

a) i. discrete
   ii. continuous
   iii. continuous

   iv. discrete

   v, continuous

   vi discrete

b)

i) probability of having certificate only= $\frac{30}{100} = 0.3$

one mark for working one Mark for correct answer.

ii) Probability of having work experience or having a certificate or having both is

P(w or c)= P(w)+p(c)-P(w ∩ c)

$= \frac{40}{100} + \frac{30}{100} - \frac{20}{100}$

$= 0.4 + 0.3 - 0.2$

$= 0.5$

iii) Probability of having work experience but not having a certificate or having both is

P(w or c but not both) = P(w or c)- P(w ∩ c)

= 0.5 – 0.2

= 0.3

18	37	52
19	40	54
23	41	56
27	44	59
31	46	61

Average $= \frac{18+37+52+19+40+54+23+41+56+27+44+59+31+46+61}{15} = \frac{608}{15} = 40.53$

ii. range $= \max value - minimum\ vale = 61 - 18 = 43$

iii. median

18,19,23,27,31,37,40,41,44,46,52,54,56,59,61

Md $= 41$

iv. Standard deviation

$$\boldsymbol{s} = \sqrt{\frac{\sum x^2 - f\bar{x}^2}{n-1}}$$

$$s = \sqrt{\frac{27564 - 15(40.53)^2}{15-1}}$$

$$s = \sqrt{\frac{2923.79}{14}}$$

$$s = 14.45$$

i. 18,19,23,27,31,37,40,41,44,46,52,54,56,59,61

quartiles:

first quartile $= \frac{\mathbf{1}}{\mathbf{4}}(\boldsymbol{n} + \mathbf{1})$ **observation**

$= \frac{\mathbf{1}}{\mathbf{4}}(\mathbf{15} + \mathbf{1}) = \mathbf{4}\boldsymbol{th}$ **observation**

$\boldsymbol{first\ quartile} = \mathbf{27}$

third quartile $= \frac{\mathbf{3}}{\mathbf{4}}(\boldsymbol{n} + \mathbf{1})$ **observation**

$= \frac{\mathbf{3}}{\mathbf{4}}(\mathbf{15} + \mathbf{1}) = \mathbf{12}\boldsymbol{th}$ **observation**

$\boldsymbol{third\ quartile} = \mathbf{54}$

Interquartile range: third quartile – first quartile

$$\mathbf{54 - 27 = 27}$$

SOLUTION THREE

(a) (i) relative frequency for 10 to under 15 $1.00 - (0.14 + 0.22 + 0.18 + 0.16) = 0.3$

(ii) the number of spectators who live between 10 but less than 15 is $= 0.3(400) = 120$

(i) Frequency distribution

Kilometers	Frequency
0 to under 5	56
5 to under 10	88
10 to under 15	120
15 to under 20	72
20 to under 25	64

(ii) the sample mean is calculated as follows

Kilometers	Frequency (f)	x	xf	x^2f
0 to under 5	56	2.5	140	350
5 to under 10	88	7.5	660	4950
10 to under15	120	12.5	1500	18750
15 to under 20	72	17.5	1260	22050
20 to under 25	64	22.5	1440	32400
	$\sum f = 400$		$\sum xf = 5000$	$\sum x^2 f = 78500$

$$\bar{x} = \frac{\sum xf}{\sum f} = \frac{5000}{400} = 12.5$$

(iii) sample variance is calculated as follows

$$s^2 = \frac{\sum x^2 f}{\sum f} = \frac{78500 - \frac{(5000)^2}{400}}{399} = \frac{16000}{399} \approx 40.100$$

(iv) the standard deviation is given by

$$S = \sqrt{s^2} = \sqrt{40.10025063} \approx 6.33$$

(b)

6.85	7.65	7.85	8.05	9.00	9.4
9.45	10.05	10.15	10.2	10.80	10.9
11.05	12.5	12.9	12.10	12.75	13.05
14.1	14.1	14.15	14.65	15.70	16.25
16.35					

(i) $\overline{x} = \frac{290}{25} = 11.6$

(ii) position of median is given by $\frac{25+1}{2} = 13^{\text{th}}$ position

$Median = 12.9$

(iii) $Position\ of\ Q_1 = \frac{1}{4} \times (25) = 6.5 \approx 7th\ position$; $Q_1 = 10.05$, $position\ of\ Q_3 = \frac{3}{4} \times (25) = 18.75 \approx 19^{\text{th}}$ position , $Q_3 = 12.10$

$$IQR = Q_3 - Q_1 = 12.10 - 10.05 = 2.05$$

SOLUTION FOUR

(a)

i. A variable is a quantity or characteristics that changes from one study unit to the other OR
A characteristic of interest for the elements

ii. A statistic is a numerical characteristic of a sample

iii. A parameter is a numerical characteristic of a population

iv. A population is the set of all elements of interest in a particular study.

(b)

i. All Business Week 2015 Zambian subscribes

ii. Annual income is a quantitative variable because it can be expressed numerically.

iii. Ownership of a Zambian Express Credit Card is a qualitative variable because it cannot be expressed in numerical form.

iv. This study involve Cross – Sectional data because it has the data collected at the same or approximately the same point in time.

(c) A time series is a set of observations taken at specified times, usually at equal intervals.

(d) The four components of time series are listed below

- Secular Trend
- Seasonal Variations
- Cyclical Variations
- Irregular Movements

(e)

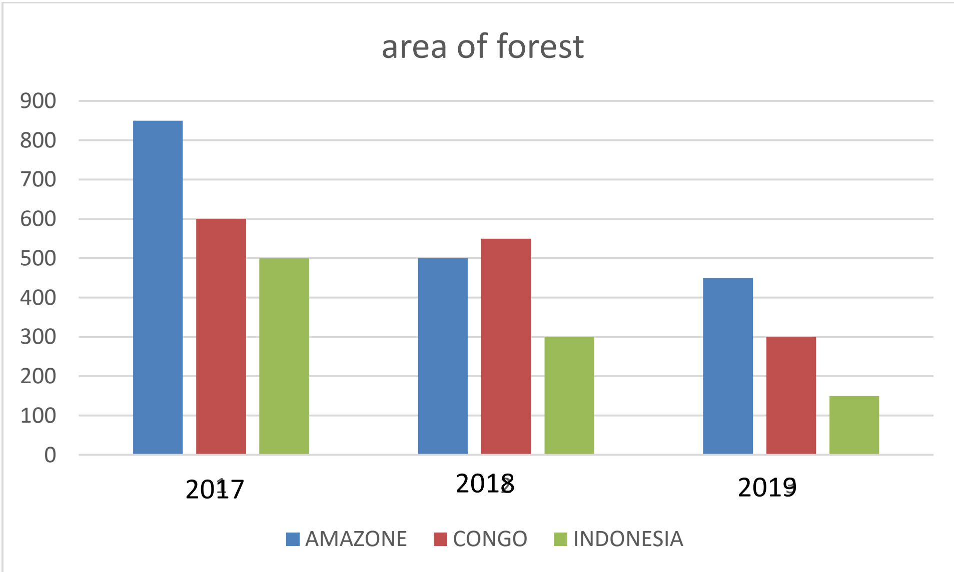
i. Irregular movements

ii. Cyclic variations

iii. Seasonal variations

SOLUTION FIVE

a) i)



ii) in 2017 :$850 + 600 + 500 = 1950$

in 2019: $450 + 300 + 150 = 900$

iii). Percentage $\frac{1950-900}{1950} \times 100 = \frac{1050}{1950} \times 100 = 53.8\%$

b)

i. Probability of A $P(4) + p(5) + P(6) + P(7)$

$= 0.2 + 0.35 + 0.3 + 0.1$

$= 0.95$

ii. Probability of B = $P(3) + P(4) + P(5) + P(6)$

$= 0.05 + 0.2 + 0.35 + 0.3$

$= \mathbf{0}.9$

iii. Intersection will be P(4)+P(5)+P(6)

$= 0.2 + 0.35 + 0.3$

$= 0.85$

iv. Average (expected value) $= 3(0.05) + 4(0.2) + 5(0.35) + 6(0.3) + 7(0.1)$

$= 5.2$

SOLUTION SIX

(a) A forecast is an estimate of an event which will happen in future.

(b)

i. Forecast of the first week of August, $F_1 = 600$ units. Actual demand of the first week of August, $D_1 = 550$ units. Smoothing constant. Forecast of the second week of August, F_2 is given by:

$$\begin{aligned} F_2 &= F_1 + \alpha\left(D_1 - F_1\right) \\ &= 600 + 0.3(550 - 600) \\ &= 600 - 15 \\ &= 585 \end{aligned}$$

ii. Forecast of the second week of August, $F_2 = 585$ units. Actual demand of the second week of August, $D_2 = 620$ units. Forecast of the third week of August, F_3 is given by:
We have from the table

$$\bar{X} = \frac{\sum X}{n} = \frac{0}{9} = 0, \quad \bar{Y} = \frac{\sum Y}{n} = \frac{288}{9} = 32$$

and

$$b = \frac{\sum XY}{\sum X^2} = \frac{380}{60} = 6.33$$

$$a = \bar{Y} = 32$$

iii.

$$\begin{aligned} F_3 &= F_2 + \alpha\left(D_2 - F_2\right) \\ &= 585 + 0.3(620 - 585) \\ &= 585 + 10.5 = 595.5 \end{aligned}$$

(c)

i.

Year (X)	Sales Y (in thousands)	$X = x - 1998$	XY	X^2	Y^2
1994	10	-4	-40	16	100
1995	12	-3	-36	9	144

1996	15	-2	-30	4	225
1997	27	-1	-27	1	729
1998	33	0	0	0	1089
1999	38	1	38	1	1444
2000	44	2	88	4	1936
2001	49	3	147	9	2401
2002	60	4	240	16	3600
	Sum: $\sum Y = 288$	$\sum X = 0$	$\sum XY = 380$	$\sum X^2 = 60$	$\sum Y^2 = 11,668$

ii. $$SS_{yy} = \sum Y^2 - \frac{\left(\sum Y\right)^2}{n} = 11,668 - \frac{288^2}{9} = 2452$$

The correlation coefficient is given by

$$r = \frac{SS_{xy}}{\sqrt{SS_{xx} SS_{yy}}} = \frac{380}{\sqrt{60 \times 2452}} = 0.9907$$

iii. The coefficient of determination is given by

$$r^2 = 0.9907^2 = 0.9815$$

The percentage of the variation in total sales that can be explained by year of sale is 98.15%.

iv. The forecast of sales for the year 2006 is completed by substituting $x = 2006$ in the above equation in (c) i.

$$Y = 32 + 6.33(2006 - 1998)$$
$$= 32 + 6.33 \times 8$$
$$= 82.64 \text{ units.}$$

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

KNOWLEDGE LEVEL

CA 1.3: BUSINESS ECONOMICS

TUESDAY 15 SEPTEMBER 2020

TOTAL MARKS – 100: TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading time. Use it to study the examination paper carefully so that you understand what to do in each question. You will be told when to start writing.

2. This paper is divided into TWO (2) sections:
   Section A: Ten (10) compulsory multiple choice questions.
   Section B: One (1) compulsory scenario question.
   Plus Four (4) scenario questions. Attempt any Three (3) questions.

3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name must **NOT** appear anywhere on your answer booklet.

4. Do **NOT** write in pencil (except for graphs and diagrams).

5. **Cell Phones** are **NOT** allowed in the Examination Room.

6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.

7. All workings must be done in the answer booklet.

8. Present legible and tidy work.

9. Graph paper (if required) is provided at the end of the answer booklet.

DO NOT OPEN THIS QUESTION PAPER UNTIL YOU ARE INSTRUCTED BY THE

INVIGILATOR.

SECTION A – (COMPULSORY)

Attempt all Ten (10) multiple choice questions.

QUESTION ONE

Each of the following questions has only ONE (1) correct answer. Write the LETTER of the correct answer you have chosen in your answer booklet. Marks allocated are indicated against each question.

1.1 To say that the demand curve for movies is downward sloping to the right means that:

A. Less will be demanded at lower prices.
B. More will be demanded as color TV sets become more expensive.
C. Less will be demanded at higher prices.
D. Less will be demanded if movies become poorer in quality.

(2 marks)

1.2 Consumers will bear more of the burden of a tax if:

A. Elastic supply is more.
B. Elastic demand is more.
C. Inelastic supply is more.
D. Consumers always bear the burden of the tax since they pay the final price.

(2 marks)

1.3 Maria wishes to buy gasoline and have her car washed. She finds that if she buys 9 gallons of gasoline at K2.50 per gallon, the car wash costs K2, but if she buys 10 gallons of gasoline, the car wash is free. For Maria, the marginal cost of the tenth gallon of gasoline is

A. zero.
B. 50 ngwee.
C. K2.00.
D. K2.50.

(2 marks)

1.4 Which one (1) of the following is NOT a barrier to entry into a monopoly market?

A. Significant economies of scale.
B. Heavy potential advertising costs.
C. Large capital requirements.
D. Constant returns to scale.

(2 marks)

1.5 Which of the following is best suited to reducing the level of structural unemployment?

A. Lowering the rate of interest.
B. Raising the rate of unemployment benefit.
C. Higher voluntary redundancy payments for workers in declining industries.

D. More government funds for retraining of the unemployed. (2 marks)

1.6 Which of the following does NOT form part of a country's Gross Domestic Product?

A. Salaries of school teachers
B. Net income from abroad
C. Company profits
D. Investment expenditure

(2 marks)

1.7 All else equal, a decrease in the supply of labour will result in:

A. Decreases in AS which will increase the price level and output.
B. Increases in AS which will decrease the price level and output.
C. Decreases in AS which will increase the price level and decrease output.
D. Decreases in AS which will decrease the price level and output.

(2 marks)

1.8 In the circular flow of income model:

A. Savings, taxes and investment are withdrawals.
B. Savings, imports and taxes are withdrawals.
C. Investment, government expenditure and imports are injections.
D. Investment, exports and consumption are injections.

(2 marks)

1.9 If the money supply increases due to an expansionary open market purchase by the central bank then the price of treasury bills will:

A. Rise as the short term interest rate rises.
B. Rise as the short term interest rate falls.
C. Fall as the short term interest rate rises.
D. Fall as the short term interest rate falls.

(2 marks)

1.10 The law of comparative advantage states that countries should specialise in producing and exporting the goods that they produce at a lower:

A. Marginal cost than other countries.
B. Labour cost than other countries.
C. Absolute cost than other countries.
D. Opportunity cost than other countries.

(2 marks)

[Total: 20 Marks]

SECTION B

Question TWO (2) in this section is compulsory and must be attempted.

Then attempt any THREE (3) from the remaining four (4).

<u>QUESTION TWO</u> - (COMPULSORY QUESTION)

Expo 2020-Dubai will host the world for 173 days, each filled with new experiences and eye-catching attractions. Dubai will be the global destination for millions of people to share ideas, showcase innovation, and encourage collaboration. The hospitality industry (hotels) will benefit greatly from this Expo because everyone who will travel to Dubai will need a place to lodge. The Hotel business is generally characterized by differentiation. Hotels in Dubai are preparing themselves for this Expo by differentiating their services even more. For example, offering special packages reduced rates for early bookings or longer stay among others. The United Arab Emirates government, through its agencies, is making sure that all businesses, especially during this period are adhering to the competition policies.

Required:

(a) Draw a diagram to represent a hotel operating in monopolistic competition in the short run. Use your diagram to show:

- (i) The firm's profit maximizing price and level of output. (2 marks)
- (ii) The area representing total profit (2 mark)
- (iii) The effect of an increase in fixed costs. (3 marks)
- (iv) To illustrate the statement that 'production inefficiency is a necessary price to pay for product variety'. (6 marks)
- (v) Explain what happens to the equilibrium position of these hotels in the long run (towards the end of the Expo) (4 marks)

(b) List any three (3) aims of a competition policy. (3 marks)

[Total: 20 Marks]

<u>QUESTION THREE</u>

The construction industry is one (1) of the fastest growing industries in Zambia, which has led to the massive cement consumption by property developers. There are about 14 cement manufacturing companies in Zambia, with Lafarge Cement, Dangote Quarries Zambia Ltd and Zambezi Portland Cement being the major players and contributors to the construction industry.

The cement sector is one (1) of the largest sources of industrial pollution, emitting several tons of sulphur dioxide, nitrogen oxide and carbon monoxide into the environment. In order to mitigate the effects of these emissions, the government enacted the Environmental Protection and Pollution Control Act (EPPCA) of 1990.

CBMI Africa Ltd (producer of Sinoma cement) is one (1) of the new entrants in the cement industry. The increase in the number of players has increased competition in the industry, leading to a decrease in prices. However, this increase also means that, the government, through ZEMA, has to intensify its efforts to reduce or control emissions from the industry.

(a) Assume CBMI can sell its cement at K50 per bag. Below is the information on its cost structure per day.

Output per day	Total cost (K)	ATC	MC	TR	MR
0	50				
1	60				
2	78				
3	105				
4	140				
5	185				
6	264				

(i) Complete the table. (7 marks)
(ii) Determine the level of output at which profit is highest. (2 marks)
(iii) Explain what will happen to the profits in the long-run. (4 marks)

(b) Define the term negative externality. (2 marks)

(c) Outline any three (3) arguments in favour of pollution tax and any two (2) arguments against pollution tax. (5 marks)

[Total: 20 Marks]

QUESTION FOUR

Mwinilunga, located in the North-western province of Zambia, remains with the highest potential for pineapple production in the country. However, a lot of pineapples produced go to waste because of the collapse of the pineapple processing plant in the 1990s. Most fields had been left unattended to because of lack of market. However, after about 25 years without a market for pineapples, Zambezi Pineapples Limited was launched in Ikelenge district, with support from Musika. The company has created an opportunity for over a 100 smallholder farmers to access a continuous and structured market for pineapples.

Furthermore, in early 2019, Zambia was among the 50 countries that participated at the 2019 Macfrut Expo in Italy. Through this participation, Zambian fruit and vegetable companies clinched a $20 million deal to supply moringa powder and leaves, sweet potatoes and pineapples, among others. "this is a great opportunity for the private sector and the economy of Zambia to earn foreign currency through NTEs", this was according to the PS, Commerce, Trade and Industry.

Required:

(a) Explain any three (3) factors that may cause a shift in the supply of pineapples. (6 marks)

(b) Suppose that the domestic demand and domestic supply curves for pineapples are given by the equations below where P is the price per pineapple and Q is the number of pineapples.

$$\text{Domestic Demand: } P = 500 - 5Q$$
$$\text{Domestic Supply: } P = 100 + 5Q$$

Furthermore, you are told that the world price of pineapples is $200.

(i) Calculate the domestic equilibrium price and quantity traded for pineapples. (2 marks)

(ii) Explain the implication if Zambia decides to trade. (2 marks)

(c) Suppose the food and drug company finds some levels of a potentially dangerous fungicide in some samples of locally produced pineapple juice. Explain what happens to the equilibrium price and quantity traded for pineapples. (4 marks)

(d) Outline any three (3) measures the government can put in place to encourage the production of Pineapples. (6 marks)

[Total: 20 Marks]

QUESTION FIVE

In a global economy, countries are connected to other countries through a network of trade and financial relationships. These relationships have great advantages but they may also result in problems. The Balance of Payments is a yearly summary statement of a nation's transactions with the rest of the world. Zambia's balance of Payments occasionally shows a deficit because her imports are more than she exports to other countries.

(a) Describe the following theories of international trade:

(i) Absolute Advantage Theory (3 marks)
(ii) Comparative Advantage theory (3 marks)

(b) When a country has a persistent current account deficit in her Balance of Payments, outline:

(i) Any four (4) ways that a country can use to finance or cover the deficit. (4 marks)

(ii) Any three (3) ways that a country can use to correct or rectify the deficit. (2 marks)

(c) Explain the meaning of 'infant industry' argument in international trade (2 marks)

(d) Explain the meaning of 'invisible items' in the balance of payments account (2 marks)

[Total: 20 Marks]

QUESTION SIX

"Standard Chartered Bank Zambia has announced the closure of five of its branches without stating any reasons. According to a Client Notice, the bank stated that the Mongu, Kasama, Chililabombwe and Luanshya branches would close, whilst the branch at Crossroads Mall in Lusaka would merge with Kabulonga branch. Changes take effect on 1 January 2020. However, please be advised that our online self-service platforms remain available for ease of banking". (News Diggers, 15 November, 2019).

Some commentators have alleged stiff competition from Mobile Money Service Providers like AirtelMoney, MoMo, Zoona and so on as the main reason.

Required:

(a) Discuss the three (3) objectives of commercial banks (12 marks)

(b) List any three (3) services/products that a client can obtain from a bank branch. (3 marks)

(c) List any three (3) services/products that a client can obtain using the bank online platform. (3 marks)

(d) Explain the term 'online service platforms' (2 marks)

[Total: 20 Marks]

END OF PAPER

SUGGESTED SOLUTIONS

SOLUTION ONE

1.1 **C**

1.2 **A**

1.3 **B**

1.4 **D**

1.5 **D**

1.6 **B**

1.7 **C**

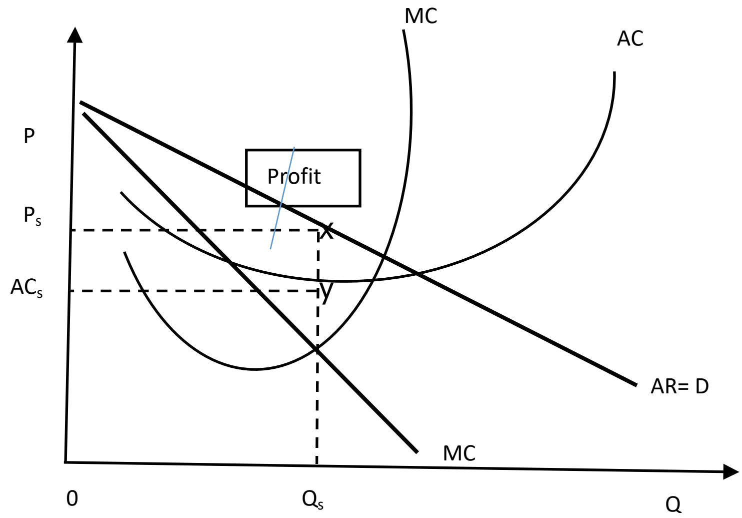
1.8 **B**

1.9 **B**

1.10 **D**

SOLUTION TWO

a) Monopolistic Competition - short-run equilibrium



i) The profit maximizing level of output (where MC=MR) is Q_s and the price Ps

ii) Profits are represented by the rectangle in the diagram above, Ps,X,Y,ACs

iii) AC shifted upwards, it will reduce the size of the rectangle representing profits, holding price and output constant.

iv) ***Productive efficiency***: goods are being produced at the lowest possible average cost. However, in monopolistic competition, the end result of entry and exit is that firms end up with a price that lies on the downward-sloping portion of the average cost curve, not at the very bottom of the AC curve.
Monopolistically competitive firms maximize their profit when they produce at a level where its marginal costs equals its marginal revenues. Because the individual firm's demand curve is downward sloping, reflecting market power, the price these firms will charge will exceed their marginal costs. Due to how products are priced in this market, consumer surplus decreases below the pareto optimal levels you would find in a perfectly competitive market, at least in the short run. As a result, the market will suffer deadweight loss. The suppliers in this market will also have excess production capacity.
Since monopolistically competitive firms have market power, they will produce less and charge more than a firm would under perfect competition. This causes deadweight loss for society, but, from the producer's point of view, is desirable because it allows them to earn a profit and increase their producer surplus.

v) In the long-run, more and more hotels, inns, Bed & Breakfast, will join the industry, attracted by the super normal profits being earned by already existing businesses. The increase in the number of hotels will compete away the abnormal profits, such that, towards the end of the Expo, all firms will earning just normal profits.

b) Aims of a competition policy

- Improve the efficiency in markets through legislation.
- Promote healthy competition between businesses.
- Prevent unfair methods of achieving and exercising market power. Prevent the abuse of market power by, for example, a monopoly.
- Regulate the increase of market power by means of takeovers and mergers of large businesses.
- Prevent restrictive practices, especially price-fixing and collusion by oligopolies
- Protect the consumer against unfair prices and inferior products, for example through the Competition Act.

SOLUTION THREE

a)

i) Complete the table

Output per day	Total cost (K)	ATC	MC	TR	MR
0	50	**-**	**-**	**0**	**-**
1	60	**60**	**10**	**50**	**50**
2	78	**39**	**18**	**100**	**50**
3	105	**35**	**27**	**150**	**50**
4	140	**35**	**35**	**200**	**50**
5	185	**37**	**45**	**250**	**50**
6	264	**44**	**79**	**300**	**50**

ii) At 5 units profit will be maximum at K65.

iii) In the long-run, with more and more firms joining the industry, Sinoma will no longer enjoy abnormal profits. This is because the supply of cement will increase, forcing its price down. Sinoma will now only earn normal profit.

b) Negative externalities occur when production and/or consumption impose external costs on third parties for which no appropriate compensation is paid.

c)

Arguments in favour

- Makes polluters pay external costs of emissions
- Enables greater social efficiency
- Raises revenue which can be spent on mitigating the effects of pollution.
- Encourages firms to consider alternative or eco-friendly activities.
- Reduces environmental costs associated with excess pollution.

Arguments against

- Higher tax can discourage investment
- May encourage tax evasion
- It may be difficult to measure external costs
- Firms may transfer the cost on to the consumer

SOLUTION FOUR

a) **Factors that may shift the supply of pineapples**

- The supply of pineapples may depend on the prices of its substitute goods. If market price of say, oranges rises, Pineapple farmers would be interested in Orange production so that in the next season they can increase the supply of Oranges.

- The price of inputs is also an important determinant of supply. If the price of an input (say, wage bill) rises, the cost of production will surely increase. Consequently, profit will tend to decline. Seeing an unprofitable situation, a firm will reduce the supply of pineapples and will try to switchover to the production of another commodity which is still not unprofitable.
- In the short run, usually the supply of pineapples (since its perishable good) is unresponsive to price change. But, in the long run, its supply tends to be more flexible or fluctuating in response to the changing situation.
- The state of art or the technology has an important bearing on the supply of a commodity. As newer and modern technologies are employed in a concern, production and productivity rise and average costs of production tend to decline. This result in a change in quantity supplied.

b)

i) Equilibrium

Demand = Supply

$500 - 5Q = 100 + 5Q$

$500 - 100 = 5Q + 5Q$

Q = 40, P = 300

ii) If Zambia decides to trade, the revenue from exporting will be low due to the lower price on the world market. If Zambia imports some pineapples, foreign pineapples will be cheaper than domestic pineapples, thereby reducing he demand.

c) Demand for pineapple Juice will reduce as consumers will fear getting sick. This will lead to a further decrease in the demand for pineapples by the producers of juice. It is expected that the demand curve of pineapples will shift to the left, and the price of pineapples will also decrease. Therefore, the new equilibrium point will be at lower quantity and lower price.

d) Measures to encourage pineapple production
- By providing subsidies to pineapple growers so as to reduce their cost of production.
- Reducing or removing duty on imported agricultural technology used for growing pineapples.
- Introducing research and development centers that may focus on developing a new varieties or improving the yield of pineapples.
- Strengthening cooperatives throughout the supply chain to ensure farmers have on-going income.

SOLUTION FIVE

a) The two theories of international trade are:

(i) **Absolute advantage theory** – this theory was put forward by Adam Smith. According to Smith a country has an absolute advantage in a good it can produce using fewer resources than its trading partners. This country should then specialize in the product of good where it has the absolute advantage to produce more than what is was needed domestically and export the excess while importing the good where it was an absolute disadvantage. This will increase the volume of trade and the standard of living in the world over.

(ii) **Comparative advantage theory** – this was given by David Ricardo. A country is said to have a comparative advantage in the good that it can produce relatively cheaply that is at lower opportunity cost than its trading partners. The key to understanding comparative advantage is the concept of opportunity cost.

b) A balance of payments deficit occurs when a country imports are more than it exports

(i) A persistent balance of payment deficit can be financed by either of the following:

- Running down the country's official reserves even to zero
- Selling of the country's external assets
- Selling of domestic assets to foreigners
- Borrowing from international organizations in foreign currencies
- Buying on credit
- Accepting gifts

(ii) The continuous current account deficit can be corrected using one of the following:

- **Allowing the domestic currency to depreciate**: Devaluation of the domestic currency or depreciation encourages exports as domestic goods became cheaper to foreigners while at the same time discouraging imports as they became very expensive to local residents. However, for this policy to work both the elasticity of demand for imports and exports must be elastic, that is, highly responsive to price changes.

- **Using direct measures to restrict imports**: These are the barriers to trade which include tariffs, quota, trade embargoes, VERs, exchange control, etc. These will have a direct effect of reducing imports.
- **Using deflationary measures**: These are the policies that are aimed at reducing inflation in the country. On the fiscal policy side, the government can raise tax rates and reduce its expenditure. On the monetary policy side, the government can restrict credit creation, raise interest rates, restrict increase in money supply and tightly control exchange rates. These policies have a total effect of reducing the purchasing power of local residents for both domestically produced and imported goods. Since demand in the domestic economy should be reduced, many domestic producers will be expected to concentrate on the export market.
- **Raising interest rates to attract foreign exchange**

c) An infant industry is one which is perceived to be too young and fragile to be allowed to compete on an equal footing with well-established foreign companies. The argument is that such industries must be protected from stiff competition until they have matured.

d) This refers to trade in services (intangibles). Examples include financial services, tourism, education

SOLUTION SIX

a) The following are the three (3) objectives of commercial banks:

- **Liquidity**: this means being able to settle daily cash withdrawals from customers and to settle accounts with other commercial banks in the clearing system, but balances for these purposes earn no interest and are unprofitable. This entails that a bank should hold more liquid assets e.g. Cash in tills.
- **Profitability**: A bank must make a profit for its shareholders. A commercial bank's profit is normally obtained from interest charged on assets minus interest paid on liabilities. Commercial banks have to lend for long periods and to high risk customers in order to earn high interest rates. This entails that a bank has to hold less liquid assets.
- **Security**: commercial banks are expected to act prudently to safe guard the interests of depositors and shareholders. This is why banks usually give careful consideration to the reliability of the borrower. Generally, in doubtful cases, they will ask for security for a loan or overdraft. Security means that in the event of a default on a loan repayment by the borrower, the bank can realize the security by selling the secured asset or assets and using the sale proceeds to pay off the debt. Safety consideration reduces opportunities for profit lending, for example where many potential borrowers do not have the acceptable security.

b) Services/products that a client can obtain from a bank branch include:
- Depositing cheques
- Withdrawing cash
- Applying for a loan or advance
- Depositing cash
- Balance Enquiry
- Funds Transfer

c) Service that can be obtained online include:
- Balance Enquiry
- Airtime Top-up
- Bill Payment
- Funds Transfer
- Cash Out
- Statements
- Change of client Detail, such as Personal identification Number

d) Online service platform simply refers to Internet banking, that is, accessing banking services or products using the Internet on Mobile phone or computer.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

KNOWLEDGE LEVEL

CA 1.4: COMMERCIAL AND CORPORATE LAW

FRIDAY 18 SEPTEMBER 2020

TOTAL MARKS – 100; TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading time. Use it to study the examination paper carefully so that you understand what to do in each question.

2. This paper is divided into TWO (2) sections:
   Section A: Ten (10) compulsory multiple choice questions.
   Section B: One (1) compulsory scenario question.
   Plus Four (4) scenario questions. Attempt any Three (3) questions.

3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name must **NOT** appear anywhere on your answer booklet.

4. Do **NOT** write in pencil (except for graphs and diagrams).

5. **Cell Phones** are **NOT** allowed in the Examination Room.

6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.

7. All workings must be done in the answer booklet.

8. Present legible and tidy work.

9. Graph paper (if required) is provided at the end of the answer booklet.

DO NOT OPEN THIS QUESTION PAPER UNTIL YOU ARE INSTRUCTED BY THE INVIGILTOR.

SECTION A – (COMPULSORY)

Attempt all Ten (10) multiple choice questions.

<u>QUESTION ONE</u>

Each of the following questions has only ONE (1) correct answer. Write the LETTER of the correct answer you have chosen in your answer booklet. Marks allocated are indicated against each question.

1.1 Which of the following terms is **not** covered by statutory provisions under the Sale of Goods Act 1893?

A. Title

B. Sale by description

C. Liquidation

D. Sale by sample

(2 marks)

1.2 Identify one (1) of the following which properly distinguishes criminal law from civil law.

A. Criminal law concerns itself with punishment while civil law aims at compensation.

B. Liability for both is determined by the penal code.

C. Civil law aims to punish Criminals.

D. None of the above. (2 marks)

1.3 Which one correctly describes exclusion clauses?

A. Aims at limiting or excluding liability on the party who paced the clause in a contract.

B. It is meant to enrich the aggrieved party

C. It takes aggrieved party to their original position before breach

D. It prevents damage from happening

(2 marks)

1.4 Which of the elements constitute negligence in tort?

A. Breach of an agreement and damage

B. Duty placed by the law, breach of that duty and damage as a result of that duty.

C. Duty, breach of duty and compensation

D. Causation, remoteness and damage

(2 marks)

1.5 Wrongful dismissal is under?

A. A contract of service

B. A contract for services

C. A contract of agency

D. A partnership agreement

(2 marks)

1.6 Which one (1) is not an agent's authority?

A. Implied authority

B. Apparent authority

C. Ostensible authority

D. Estopped authority (2 marks)

1.7 Mabvuto needs an entity to help his community do farming for the benefit of that community. Which of the following entities best describes what Mabvuto wants?

A. Agency

B. A private company limited by shares

C. Sole Proprietor

D. A co-operative

(2 marks)

1.8 Which of the following describes a partner who invests in the partnership, but does not take part in the day-to-day running of the business?

A. Unlimited liability partner

B. A sleeping partner

C. Limited liability partner

D. Limited partner

(2 marks)

1.9 Which one (1) is the amount of capital registered with the Registrar of Companies.

A. Nominal capital

B. Issued capital

C. Subscribed capital

D. Called up capital

(2 marks)

1.10 Which of the following is not an invitation to treat.

A. Auction sale

B. Prospectus

C. Display of goods

D. Reward

(2 marks)

[Total: 20 Marks]

SECTION B

Question Two (2) in this Section is Compulsory and must be attempted.

Attempt any three (3) questions out of the remaining four (4).

<u>QUESTION TWO</u> – (Compulsory Question)

Bwalya has been doing business in his personal capacity for some time. However, a big contract has come his way which requires a company to execute. He has started the process of registering a company but before the company is registered, he has entered into a contract in the name of the yet to be registered company. Making reference to statute and case law, advice Bwalya on the following:

(a) The term used to describe the action he has undertaken. (6 marks)

(b) The liabilities he has from what he has done (7 marks)

(c) The status of the contract is seeing the company had not yet been registered. (7 marks)

[Total: 20 Marks]

<u>QUESTION THREE</u>

(a) Three (3) friends of Chingola went out to a restaurant one Monday afternoon where they each ordered a meal. After having their mushroom soup which was served as an appetizer, one of the friends, Carissa suffered a stomach upset and nausea after discovering a dead cockroach in her soup. When rushed to a clinic nearby, the doctor certified that she had food poisoning. Carissa's parents want to take the matter to court. The restaurant owner has now come to you for advice.

Required:

With reference to the above scenario, advise him as to the defense available to this action. (10 marks)

(b) Agency by ratification by principal can be created or extended with retrospective effect. Ratification may be express or implied.

Required:

(i) Explain the elements needed for the principal to ratify a contract made by the agent. (8 marks)

(ii) Explain the integration test. (2 marks)

[Total: 20 Marks]

QUESTION FOUR

(a) Explain any four (4) sources of Zambian law. (10 marks)

(b) Describe the circumstances under which terms may be implied in contracts. (6 marks)

(c) State any two (2) elements or essentials of a partnership. (2 marks)

(d) Define contract of sale (2 marks)

[Total: 20 Marks]

QUESTION FIVE

(a) A reduction of share capital diminishes creditor's security. Any alteration of share capital can be made after resolution, and the special resolution must be lodged with the Registrar of companies within twenty-one days of being passed. Explain on the powers of the court in reduction of capital. (6 marks)

(b) State any four (4) contents of the Directors Report. (4 marks)

(c) Explain the three (3) main categories of money laundering offences. (6 marks)

(d) Distinguish annual general meeting from extra-ordinary general meeting. (4 marks)

[Total: 20 Marks]

QUESTION SIX

Sashi is an entrepreneur who establishes companies as a hobby some which he sales and others keeps. He prefers to establish companies where he and his wife are the only sponsors and have the companies incorporated as he says it is easier to make decisions and grow the company where there are fewer shareholders. He has set up and incorporated Sashi Investments Ltd and as a means of expanding the company, borrowed K500,000 from Bank of Lusaka. The company has, however, been struggling to pull through in the business that it started defaulting in repayment of the loan to Bank of Lusaka. Bank of Lusaka is concerned that if the situation continues, they may lose their money borrowed by Sashi Investments Ltd. They would like to recover their money while Sashi still has some assets which they may sale in the event that Sashi collapsed. The situation at Sashi investments however deteriorated and Bank of Lusaka would like to have Sashi Investment declared insolvent so that it can be placed under receivership and be paid the monies owed to them following the sale of Sashi's assets. It has however been established that Sashi Investments only has assets amounting to K250,000 but are still owing Bank of Lusaka K900,000. The receivers appointed to liquidate Sashi Investments have demanded from Sashi title deeds to their dwelling house worth K500,000 which they would like to sale and recover the money for Bank of Lusaka.

You are lawyers for Sashi Investments Ltd and they have approached, making reference to examples, advise them on the following:

(a) Whether the Bank of Lusaka has any right to demand for the winding up of Sashi Investments Ltd. (5 marks)

(b) Define a receiver (2 marks)

(c) State any three (3) powers that a receiver has in the scenario above. (3 marks)

(d) State whether it is legal for the liquidator to sale property which belongs to the Sashi family. (10 marks)

[Total: 20 Marks]

END OF PAPER

SUGGESTED SOLUTIONS

SOLUTION ONE

1.1 Which of the following terms are **not** covered by statutory provisions under the Sale of Goods Act 1893?

C. Liquidation

1.2 Identify the one which properly distinguishes criminal law and civil law.

E. Criminal law concerns itself with punishment while civil law aims at compensation

1.3 Which one correctly describes exclusion clauses?

F. Aims at limiting or excluding liability on the party who paced the clause in a contract.

1.4 Which of the elements constitute negligence in tort?

G. Duty placed by the law, breach of that duty and damage as a result of that duty

1.5 Wrongful dismissal is under

A. A contract of service

1.6 Which one is not an agent's authority?

D. Estopped authority

1.7 Mabvuto needs an entity to help his community do farming for the benefit of that community. Which of the following entities best describes what Mabvuto wants?

D. A co-operative

1.8 Which of the following describes a partner who invests in the partnership, but does not take part in the day-to-day running of the business?

B. A sleeping partner

1.9 Is the amount of capital registered with the Registrar of Companies.

A Nominal capital

10.0 Which of the following is not an invitation to treat.

D. Reward

SOLUTION TWO

(a) What Bwalya has done is what in company law is known as pre-incorporation contract. These are contracts that sponsors enter into with a third party in the name of the company that is yet to be registered. The Companies Act 2017 provides for the same.

(b) The Companies Act 2017 imposes a liability and benefits arising from such a contract on the persons entering into such a contract purporting to enter into the contract on behalf of the company yet to be registered. A person or persons that enter into such contracts are therefore entirely liable for breaches arising from that contract but are equally entitled to the benefits arising from the successful performance of the contract.

(c) The law recognizes such contracts to be valid and all the parties are bound to the contract whose breach entitles the aggrieved party to bring an action as though it was a contract with a company that is already in existence. The Companies Act gives power to a company once registered to ratify the contract and once that is done, the benefits that accrued to the persons that entered into the contract in the name of that company then transfer to the company which then would bear all the liabilities and benefits as if it existed at the time the contract was entered into.

SOLUTION THREE

(a) The issue in this case is based on negligence. Negligence is not taking care in particular circumstances as required by the law. Negligence has three main elements, duty of care; breach of duty and resultant damage. For an action in negligence to be successful, all three elements must be present.

In Carissa's case, all three elements were present. A duty of care was owed to Carissa by the restaurant by ensuring that the food they were preparing were fit for human consumption; there was breach of duty when the food that was served to Carissa was found with a cockroach which should not have been there and finally resultant damage was when Carissa was diagnosed with food poisoning. In **Continental Restaurant** and **Casino Limited v Arida Mercy Chulu (2000),** Mrs. Chulu was awarded damages amounting to K85 million after she found a cockroach in the mushroom soup which she was served at the restaurant. The company that owned the restaurant appealed and the appeal was allowed.

In the same way Carissa can take an action in negligence and the defence that can be raised is that not all elements of negligence were present or if there is no proper medical evidence given as stated in the above case.

(b) A contract may be ratified by the principal in the following ways:
- (i) He does so within a reasonable time after the agent has made a contract for him.
- (ii) He ratifies the whole contract and not merely part of it.
- (iii) He is ether fully informed of the terms of the contract or he is prepared to ratify whatever the agent may have agreed to on his behalf.
- (iv) He communicates a sufficiently clear intention of ratifying.

(c) The integration test is a test where the court should consider whether the employee is

so skilled that he cannot be controlled in the performance of his duties, he has nonetheless integrated into the employers organization.

SOLUTION FOUR

Judicial Precedent

Under the doctrine of judicial precedent (*stare decisis*) earlier decisions of higher courts are binding on lower courts dealing with a similar matter at a later date. When a dispute arises between two parties, lawyers on both sides will usually argue the matter in court before a judge. At the end of the arguments, the judge makes a decision usually resolving the matter in favour of the successful party. Before reaching his decision, the judge usually reviews all existing relevant law and then formulates and applies a legal principle to the facts before him. The principle laid down in the case may form a binding or persuasive precedent to be followed by courts in later disputes involving similar issues. This is how common law is created.

(b) Common law is the law as laid down by the judges in deciding cases, though it is always said that judges do not make law – they merely interpret it. The legal principle laid down in the case is known as the *ratio decidendi*. This is what binds later courts dealing with a similar matter. What the judge says in passing is known as *obiter dicta* and is strictly not binding.

(c)Equity

Citizens who could not obtained redress for grievances in the King's common law courts petitioned the King to obtain relief by direct royal intervention. These petitions came before the King in Council. Because the principles on which the Chancellor decided points were based on fair dealing between two individuals as equals, it became known as equity. The system of equity, developed and administered by the Court of Chancery, was not a complete alternative to the common law. It was a method of adding to and improving on the common law; it provided a gloss on the law.

(d) Legislation

Legislation (or statute law) refers to law passed by Parliament in the form of statutes or Acts of Parliament. The bulk of Zambian law is statutory.

(e) The Constitution is the supreme law of the land. It is another source of law. Any law not in line with the constitution is null and void.

(f) Customary law

Zambia is inhabited mainly by various ethnic groups. Each of these tribes has its own customs, traditions and political system. These customs and traditions form the customary law of these tribes. The Local Courts Act Chapter 29 of the Laws of establishes the Local Courts which administer customary law. Customary law is very important in areas such as marriage, succession and land law.

Any four of the above

(b) Implied terms, however, are not actually stated or expressed included in the contract, but are introduced into the contract by implication. In other words the exact meaning and thus the terms of the contract are inferred from its context. Implied terms can be divided into three types.

Terms implied by statute

In this instance a particular piece of legislation states that certain terms have to be taken as constituting part of an agreement, even where the contractual agreement between the parties be itself silent as to that particular provision. Some statutes provide that particular terms are to apply unless the contract in question specifically states otherwise. **Liverpool City Council v Irwin (1977),** it was held that where parts of a building have been let to different tenants and where rights of access over the parts of the building retained by the landlord, e.g. the stairs have been granted to these tenants, then a term could be implied that the landlord keep these parts reasonably safe.

Terms implied by custom or usage

An agreement may be subject to terms that are customarily found in such contracts within a particular market, trade or locality. Once again this is the case even where it is not actually specified by the parties. For example, in **Hutton v Warren (1836)**, it was held that customary usage permitted a farm tenant to claim an allowance for seed and labor on quitting his tenancy.

Terms implied by the courts

Generally it is a matter for the parties concerned to decide the terms of contract, but on occasion the court will presume that the parties intended to include a term which is not expressly stated. They will do so where it is necessary to give business efficacy to the contract. Whether a term may be implied can be decided on the basis of the officious bystander test. Imagine two parties, A and B, negotiating a contract. A third party, C, interrupts to suggest a particular provision. A and B reply that that particular term is understood. In just such a way, the court will decide that a term should be implied into a contract. In **The Moorcock (1889),** the appellants, owners of a wharf, contracted with the respondents to permit them to discharge their ship at the wharf. It was apparent to both parties that when the tide was out the ship would rest on the riverbed. When the tide was out, the ship sustained damage by settling on a ridge. It was held that there was an implied warranty in the contract that the place of anchorage should be safe for the ship. As a consequence, the ship owner was entitled to damages for breach of that term.

(c) The essentials of a partnership are:

(ii) two or more persons
(iii) contribution to a common
(iv) the carrying on of business with the object of making a profit.

(d) A contract of sale is sale where ownership of the goods is to be transferred immediately from the seller to the buyer.

SOLUTION FIVE

(a) The court has been given wide powers under the Act with regard to reduction of share capital. According to section 151:

(1) The court may take an order confirming the reduction of share capital, if satisfied that every creditor of the company who is entitled to object the reduction consented or the creditors debt or claim has been discharged, determined or secured;

(2) The order may require the publication of a notice of the reduction in capital on issue of the replacement certificate of share capital Section 150 (5).

(b) The main contents of the Director's Report are:

- Changes in the business
- Information of the Directors of the company
- Assets
- Share and Debenture issues
- Other disclosures

(c) Money laundering is mainly associated with organised crime and terrorist organisations, but is also used in order to avoid the payment of taxes or to distort accounting information. The three classes of money laundering offences are:

- **Laundering:** Acquisition, possession or use of the proceeds of criminal conduct, or assisting another to retain the proceed of criminal conduct and concealing, disguising, converting, transferring or removing criminal property. This relates to the nature, source, location, disposition or movement of the property.
- **Failure to report by any individual:** Failure to disclose knowledge of suspicion of money laundering.
- **Tipping off:** Disclosing information to any person if disclosure may prejudice an investigation into, drug trafficking, drug money laundering, terrorist relate activities, or laundering the proceeds of the criminal conduct.

(d) The annual general meeting is the meeting which is held within three months of the end of each financial year while an extra ordinary general meeting is the meeting other than the annual general meeting usually convened by the Directors to deal with urgent matters, which cannot await the next general meeting.

SOLUTION SIX

(a) Any person has the right to demand for a company to winding if they are a creditor. Thus, instances when a company may be wound up are:

- provide for wounding up by the courts on an application of the creditors to recover their money for fear of bankruptcy of the debtor company.
- Winding up by the court as provided in 263(1)(a)
- Voluntary winding up moved by members provided in 263(1)(b)(i)
- Voluntary winding up moved by creditors provided in 263(1)(b)(ii)
- Winding by failure to commence trading within year of registration.

(b) A receiver is a person appointed by the court to protect property during the course of liquidation. A receiver is appointed to take into account interests of creditors in liquidation.

(c) The powers of the receiver include:

(i) Power over all the assets of the company in liquidation
(ii) Power to appoint or terminate the appointment of a special manager of the debtor's estate or business in the interest of the creditors according to section 12(1) of the Act
(iii) Power to appoint a duty official receiver
(iv) Power to administer oaths.

(d) Corporate legal personality arises when a company has been incorporated at the Patents and Companies Registration Agency PACRA. Once incorporated, a company assumes legal personality in its own name and right so that the promoters of such company are completely detached from the company. The company once incorporated becomes liable as an artificial person for all contractual breaches, all torts committed and all corporate criminal offences that it may commit. ***Salomon v Salomon and Co*** **(1897)** established this principle. In the case, the House of Lords held that the company had been validly formed under the Companies Act 1862 and, on the terms of that Act, the company was a different person from the subscribers to the memorandum. In *R v Philippou* (1989) here the court held that a sole director and shareholder of a company can be convicted of stealing from their own company as the company and the subscribers regardless of whether one is a sole director and shareholder in the company once the company is incorporated and assumes the status of corporate legal personality.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

KNOWLEDGE LEVEL

CA 1.5: MANAGEMENT THEORY AND PRACTICE

MONDAY 14 SEPTEMBER 2020

TOTAL MARKS – 100; TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading time. Use it to study the examination paper carefully so that you understand what to do in each question.

2. This paper is divided into TWO (2) sections:
   Section A: Ten (10) compulsory multiple choice questions.
   Section B: One (1) compulsory scenario question.
   Plus Four (4) scenario questions. Attempt any Three (3) questions.

3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name must **NOT** appear anywhere on your answer booklet.

4. Do **NOT** write in pencil (except for graphs and diagrams).

5. **Cell Phones** are **NOT** allowed in the Examination Room.

6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.

7. All workings must be done in the answer booklet.

8. Present legible and tidy work.

9. Graph paper (if required) is provided at the end of the answer booklet.

DO NOT OPEN THIS QUESTION PAPER UNTIL YOU ARE INSTRUCTED BY THE INVIGILATOR

SECTION A – (Compulsory)

QUESTION ONE

Attempt all ten (10) multiple choice questions in this section

Each of the following questions has only ONE (1) correct answer. Write the LETTER of the correct answer you have chosen in your answer booklet. Marks allocated are indicated against each question.

1.1 In a Partnership when one (1) has no time to be involved in the day to day running of the business but has some share entrusted in the business, the partnership is known as……

A. Sole Proprietorship with shares
B. General Partnership;
C. Partnership by limited liabilities
D. A Co-operative with shares.

(2 marks)

1.2 Who among the following people made a significant contribution to work flow and job designs?

A. Fredrick W. Taylor
B. Abraham Maslow
C. Elton Mayo
D. David McClelland

(2 marks)

1.3 Which of the following best describes the communication process?

A. Sender, decoder, encoder, receiver feedback
B. Sender, encoder, receiver, decoder, feedback
C. Sender, encoder, decoder, feedback, receiver
D. Sender, decoder, encoder, feedback, receiver

(2 marks)

1.4 Which one (1) of the following is **NOT** one (1) of the ways public sector organizations raise money?

A. Raising taxes
B. Charging for their goods and services
C. Borrowing
D. Receiving subsidies. (2 marks)

1.5 The following is **NOT** an advantage of Performance appraisal.

A. Motivation among the employees
B. Promotes relationship between employees and their supervisors
C. New ideas are shared
D. Employees get to know their salaries

(2 marks)

1.6 The ……………… and ……………**..** are components of the internal environment.

A. Positives, Negatives

B. Opportunities, Threats

C. Markets, Profits

D. Strengths and Weaknesses

(2 marks)

1.7 Which of the following statements is **NOT** true?

A. Corporate Social Responsibility means buying food for the community

B. Corporate Social Responsibility means the company must pay all taxes

C. Corporate Social Responsibility means taking positive and meaningful responsibility towards the community social and environmental issues.

D. Corporate Social Responsibility involves building houses for vulnerable community.

(2 marks)

1.8 Which one (1) of the following statement is true

A. A matrix Organization is a structure where vertical and horizontal lines of authority are combined to form a project team design specifically for a particular project.

B. A matrix Organization is a structure where function authorities are established for a profit.

C. A matrix Organization is a structure where marketing and Accounts department works together.

D. A matrix Organization structure is designed with a budget.

(2 marks)

1.9 Teams are products of effective and goal oriented groups. The following are stages in group formation.

A. Storming – Forming – Norming – Adjourning - Performing

B. Forming – Adjourning – Storming – Norming - Performing

C. Norming – Forming – Storming – Adjourning – Performing

D. Forming – Storming – Norming – Performing – Adjourning

(2 marks)

1.10 Which one is **NOT** the Objective of the Human Resource Management

A. To create and maintain a conducive working environment for all the employees

B. To Motivate the employees through training and Development

C. To Offer high wages and salaries to all employees

D. To develop an employment policy for the organization.

(2 marks)

[Total: 20 Marks]

SECTION B

Question TWO (2) in this Section is Compulsory and must be attempted.

Then attempt any THREE (3) questions from the remaining four.

<u>QUESTION TWO</u> – (COMPULSORY QUESTION)

NAIFWE TUWINEKO is a mining company on the Copperbelt owned by a group of Zambians that threatened to close operations after Government's announcement on Mineral royal Tax. NAIFWE TUWINEKO has engaged in discussions with the Government in the hope of negotiating a mutually acceptable outcome that would allow the company to continue operating. It has further been stated that it employs a lot of fellow Zambians and deserved to be given some concession.

Earlier last week it indicated that it would suspend operations following Government's decision to uphold the revised mineral royalty tax for open cast mines which was increased from 6 per cent to 20 per cent this year.

However, NAIFWE TUWINEKO said it was in the interest of all stakeholders that the mine continued to operate on a sustainable basis hence the engagement with Government. The company issued a statement that it was in the best interest of all parties that the mine continues operating and is willing to reach a mutually acceptable outcome in their discussions.

Meanwhile, upon hearing of the impending closure, the workers protested at NAIFWE TUWINEKO Mine and downed tools. The irate miners blocked the roads leading to the plant with logs to ensure operations were completely paralyzed as they wanted to be assured of their jobs.

Required:

(a) Define a stakeholder. (1 mark)

(b) With examples, explain the role of the following three (3) broad categories of stakeholders:

- (i) Internal (2 marks)
- (ii) Connected (2 marks)
- (iii) External (2 marks)

(c) What is stakeholder conflict? (1 mark)

(d) Given the following stakeholders, state two (2) interests they defend, and explain the problems that may occur if the interests they defend are ignored:

- (i) Government (4 marks)
- (ii) Interest groups/pressure groups (4 marks)
- (iii) Professional bodies (4 marks)

[Total: 20 Marks]

QUESTION THREE

(a) Define Corporate Governance. (2 marks)

(b) Describe the following terms:

(i) Agency relationship (2 marks)
(ii) Accountability (2 marks)
(iii) Fiduciary duty (2 marks)

(c) What two (2) problems potentially arise from Accountability? (2 marks)

(d) Describe the five (5) elements of moral duty.

(10 marks)

[Total: 20 Marks]

QUESTION FOUR

(a) What is Work planning? (2 marks)

(b) State four (4) planning activities performed in Work planning. (8 marks)

(c) Burn and Boyd stated that different leadership styles distinguish Managers from Leaders.

Distinguish the following leadership styles described by Burns and Boyd:

(i) Transactional leader (2 marks)
(ii) Transformational leader (2 marks)

(d) Describe any three (3) areas of skills expected of Transformational leaders according to Burns and Boyd. (6 marks)

[Total: 20 Marks]

QUESTION FIVE

(a) Distinguish between Content theories and Process Theories of Motivation. (4 marks)

(b) Explain three (3) weaknesses of Maslow's Theory (6 marks)

(c) How do Quality Circles (QCs) act as Motivation for staff? (2 marks)

(d) Describe the four (4) consequences that drive behavior in Skinner's Reinforcement Theory. (8 marks)

[Total: 20 Marks]

QUESTION SIX

In the business world, people come together and put up capital to enable them to start one (1) form of business or another. For one to be able to operate a business, they need to have the business registered by the companies registration organization, which is PACRA in Zambia. In this vain, there are four ways in which a company can be formed and registered with PACRA. These four ways are Sole Trader, Partnership, Limited Companies and Co-operatives.

Required:

Describe each of the four (4) concepts of company formation. **[Total: 20 Marks]**

END OF PAPER

SUGGESTED SOLUTIONS

SOLUTION ONE

1	2	3	4	5	6	7	8	9	10
C	A	B	D	D	D	B	A	D	C

SOLUTION TWO

a) Stakeholders of organisations are individuals or groups who have an interest in, or are affected by the goals, activities or operations of the organization or the behavior of the people who work in it. Some stakeholders may be able to influence the decisions that are taken by the Management of the business.

b) With examples, explain the role of the following three broad categories of stakeholders:

(iv) Internal stakeholders usually include employees and Management of the organization. The organization gives them a job or a career. They are able to influence the way the business is run. They are interested in the organisation's continuation and growth. They also have personal interest and goals that are satisfied by the organization such as status and job satisfaction.

The interest they defend include: Jobs/careers, Money, promotion, benefits and job satisfaction.

(v) Connected stakeholders are individuals and other organisations that have a direct interest into the business, but do not work for it.

- Shareholders are important connected stakeholders as they supply the capital needed for reinvestment and expect dividends in return.
- Lenders are important stakeholders as they lend money to the business and expect rapid interest
- Customers are also connected stakeholders because they buy the products and services that the business provide, and they want good quality for a good price.
- Suppliers are also important connected stakeholders as they supply goods and services to the business and they rely on the business for income.

(vi) External stakeholders are groups that do not have any direct involvement with the organization, but which nevertheless have an interest in what the organization does. They include the Central government, local government, pressure groups, the community at large and professional bodies such as ZICA. professional bodies can exert influence when their members are internal stakeholders or connected stakeholders of businesses

c) Stakeholder conflict arises when the interest of different stakeholders widely differs. Each stakeholder may want to defend their interest at the expense of the risk to the continuation or growth of the business; or the impact on other stakeholders' interests, causing potential conflict. Managers must consider the potential conflict when setting policy and they should be prepared to deal with it if it arises in a form that affects the organization.

The shareholders may feel that the business is a Managerial Corporation run for the benefit of managers and employees, without regard for the objectives of the owners. For example, senior managers may want to grow the business and reinvest profits when the shareholders would prefer a higher dividend payment. Managers may want to take big risks to make large profits quickly, when shareholders might prefer managers to pursue lower-risk strategies aimed at longer-term growth with greater business stability.

d) Given the following stakeholders, state two (2) interests they defend, and explain the problems that may occur if the interests they defend are ignored:

(iv) Government
(v) Interest groups/pressure groups
(vi) Professional bodies

External Stakeholder	Interest to defend	Problems if their interest are ignored
Government	• Creation and protection of jobs in the economy • Revenue from taxation of profits and incomes • Profitable businesses are good for the economy	• Tax increases • More regulation • Legal action for breaches of the law
Interest groups/pressure groups	• Protection of the environment • Protection of human rights • Other interests	• Adverse publicity through media • Direct action • Sabotage • Putting pressure to government to take action
Professional bodies	• The ethical conduct of members • The reputation of the profession.	• Imposition of ethical standards • Disciplinary action against members.

(4 Marks each x 3= 12 Marks)

-

[Total 20 m

SOLUTION THREE

a) Corporate Governance is the system by which organisations are directed and controlled
(cadbury report, 1992)

Corporate Governance is a set of relationships between a company's directors, its shareholders and other stakeholders it also provides the structure through which the objectives of the firm are set, and the means of achieving those objectives and monitoring performance, are determined. (OECD, 1998)

b) Describe the following terms:

(iv) Agency relationship- This is a contract under which one or more persons (the principals) engage another person (the agent) to perform some service on their behalf that involves delegating some decision-making authority to the agent. (Jensen and Meckling).
In Corporate Govenance, this usually refers to the shareholder- Auditor agency relationship or the shareholder- Manager relationship. Other examples include factors, brokers, estate agents, bankers and auctioneers.

(v) Accountability- in Agency, Accountability means that the agent is answerable under the contract to his principal. The agency must account for the resources of his principal and the money he has gained by working on his principal's behalf.

(vi) Fiduciary duty- this is a duty imposed upon certain persons because of the position of trust and confidence in which they stand in relation to the other. The duty is more onerous than generally arises under a contractual or Tort relationship. It requires full disclosure of the information held by the fudiciary, a strict duty to account for any profits received as a result of the relationship, and duty to avoid conflicts of interest.

c) Two problems potentially arise from Accountability

a. How does the principal enforce accountability?
b. What if the agent is accountable to more than one parties other than the principal- how does the agent reconcile possibly conflicting duties?

d) Five elements (Cs) of moral duty

a. **Conscience-** intellectual honesty and avoiding conflict of interest.
b. **Care**- directors exercising care in the company's affairs
c. **Competence**- directors having the knowledge and skills required.
d. **Commitment**- directors should be diligent
e. **Courage**- directors should have the courage to take decisions regardless of the risks

SOLUTION FOUR

a) Work planning is about establishing work methods and practices to ensure that predetermined objectives are met. It involves Task sequencing or prioritizing, scheduling, establishing checks and controls, developing contingency plans and co-ordinating.

b) State four (4) planning activities performed in Work planning.
   i. **Task sequencing or prioritization-** Managers put tasks into an order of importance for achieving objectives and meeting deadlines.
   ii. **Scheduling or timetabling tasks**. Tasks should then be allocated to individuals or project teams for completion with given deadline.
   iii. **Establishing checks and controls** to ensure that:
      - Deadlines are being met and work is falling behind schedule
      - Routine tasks are achieving their objectives.
   iv. **Contingency plans**. Managers should make alternative plans to be used in circumstances where the unexpected happens. Contingency plans mean having a 'Plan B' ready, in case 'Plan A' does not work.

c) Distinguish the following leadership styles described by Burns and Boyd:
   (iii) Transactional leader
   These see the relationship between a leader and their followers in terms of a trade; they give followers the rewards they want in exchange for service, loyalty and compliance
   (iv) Transformational leader
   These see their role as inspiring and motivating others to work at levels beyond compliance. Only transformational leadership is said to be able to change team/organizational cultures and create a new direction.

d) Describe any three (3) areas of skills expected of Transformational leaders according to Burns and Boyd.
   i. Vision- the leader will use example and persuasion to convince the group to pursue a new purpose
   ii. Anticipation- the leader will possess foresight
   iii. Value-congruence. The leader will understand and empathise with group member's needs.
   iv. Empowerment-the leader with empower group members, so as to make the group more effective.
   v. Self-understanding. The leader will be aware of their own needs and goals.

SOLUTION FIVE

a) Distinguish between Content theories and Process Theories of Motivation.

   i. Content Theories-

      These ask the questions: "what are the things that motivate people?"

      They assume that human beings have a set of needs or desired outcomes. Maslow's hierarchy of needs and Herzberg's two-factor theory, are the most important approaches in this type.

   ii. Process Theories

      These ask the question: "How can people be motivated?"

      They explore the process through which outcomes become desirable and are pursued by individuals. This approach assumes that people are able to select their goals and choose the paths towards them, by a conscious or unconscious process of calculation. Expectancy theory is an example of this type.

b) Three (3) weaknesses with Maslow's Theory

   i. It is structured on the basis that needs are the same for all people, and that they can be arranged in a hierarchy.
   ii. Many individuals may be motivated by the satisfaction of several different needs at the same time
   iii. There is an underlying assumption that the organization benefits if all individuals are able to satisfy the needs for esteem and so are motivated by the need for Self- actualization. Maslow did not demonstrate proof of any link between self-actualization of individuals an improved organizational performance.
   iv. Maslow did not explain clearly what self-actualization means.

c) Quality Circles (QCs)

   A Quality Circles re cross-functional discussion groups which generally consist of Operational staff who have day-to-day experiences of the processes involved. The aim of the group if to identify any existing problems with quality and to identify possible solutions, which are then put forward to Management.

   By involving operational staff in the decision-making process, more effective and workable solutions are identified and both Management and staff feel valued and therefore have an improved perception of the organisationa and the management team. Staff feel appreciated and staff turnover is reduced.

d) Four (4) consequences that drive behavior in Skinner's Reinforcement Theory.

   i. Positive reinforcement- encourages the employee to repeat the behavior by providing a positive consequence
   ii. Negative reinforcement- encourages the employee to repeat the behavior by removing a negative consequence
   iii. Extinction- discourages am employee from repearing behavior by removing a reinforcement consequence.

iv. Punishment- discourages repeat behavior by delivering a negative consequence.

SOLUTION SIX

Sole Trader - sole trader (also known as a sole proprietorship) is a simple business arrangement, in which one individual runs and owns the entire business. Although many people use the term to refer to businesses that have no other employees aside from the owner, the actual definition of 'sole trader' refers to the legal structure of the business, rather than the number of employees. As such, while a business registered as a sole trader might only consist of the owner, it might also consist of the owner and additional employees.

Partnership - A type of business organization in which two or more individual's pool money, skills, and other resources, and share profit and loss in accordance with terms of the partnership agreement. In absence of such agreement, a partnership is assumed to exit where the participants in an enterprise agree to share the associated risks and rewards proportionately.

Limited Companies - A limited company is a type of business structure that has been incorporated at PACRA as a legal 'person'. It is completely separate from its owners; it can enter into contracts in its own name and is responsible for its own actions, finances and liabilities. The owners of a company are protected by 'limited liability', which means they are only responsible for business debts up to the value of their investments or what they guarantee to the company. Limited by shares companies are owned by one or more shareholders and managed by one or more directors. There are two types of limited companies, Public Limited Companies and Private Limited Companies.

Cooperatives - a cooperative is an organization owned and controlled by the people who use the products or services the business produces. Cooperatives differ from other forms of businesses because they operate more for the benefit of members, rather than to earn profits for investors.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

KNOWLEDGE LEVEL

CA 1.6: BUSINESS COMMUNICATION

WEDNESDAY 16 SEPTEMBER 2020

TOTAL MARKS – 100; TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading time. Use it to study the examination paper carefully so that you understand what to do in each question.

2. This paper is divided into TWO (2) sections:
   Section A: Ten (10) compulsory multiple choice questions.
   Section B: One (1) compulsory scenario question.
   Plus Four (4) scenario questions. Attempt any Three (3) questions.

3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name must **NOT** appear anywhere on your answer booklet.

4. Do **NOT** write in pencil (except for graphs and diagrams).

5. **Cell Phones** are **NOT** allowed in the Examination Room.

6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.

7. All workings must be done in the answer booklet.

8. Present legible and tidy work.

9. Graph paper (if required) is provided at the end of the answer booklet.

DO NOT OPEN THIS QUESTION PAPER UNTIL YOU ARE INSTRUCTED BY THE INVIGILATOR.

SECTION A – (Compulsory)

Attempt all ten (10) multiple choice questions

QUESTION ONE

Each of the following questions has only ONE (1) correct answer. Write the LETTER of the correct answer you have chosen in your answer booklet. Marks allocated are indicated against each question.

1.1. Which of the following is a disadvantage of using computer in an organization.

A. It is old fashioned
B. It is expensive
C. It is difficult to repair
D. It is difficult to install

(2 marks)

1.2 When the computer is turned off, where is most of the data stored?

A. The microprocessor
B. The RAM
C. The BIOS
D. The disk

(2 marks)

1.3 Which of the following IT checks should provide a follow-up on information completeness?

A. batch processing
B. Excel 'If' statement
C. Random check
D. Consistency

(2 marks)

1.4 What is the security control that can be allocated or assigned to a system function or individual file?

A. Batch total
B. Password
C. Hash total
D. Anti-virus

(2 marks)

1.5 A .... facility copies a document from one location to another, without a trace.

A. Cut and paste
B. Copy and paste
C. Trojan horse
D. Move and paste

(2 marks)

1.6 What does the term decode mean in communication?

A. It is a reaction to a message
B. It is the selection of appropriate message
C. It is the conveyance of the message
D. It is the understanding of the message

(2 marks)

1.7 What does the second **'S'** in the mnemonic **KISS** stand for?

A. Short
B. Smart
C. Simple
D. Straight

(2 marks)

1.8 What is a document meant for the members of staff in an organization called?

A. Memorandum
B. Agenda
C. Message
D. Business letter

(2 marks)

1.9 What is an unofficial form of information in a business organization called?

A. Go-slow
B. Grapevine
C. Perjury
D. Leakage (2 marks)

1.10 Which of the following is **NOT** a barrier to communication?

A. Noise
B. Urgency of the message
C. Status
D. Distance

(2 marks)

[Total: 20 Marks]

SECTION B

Question TWO in this section is compulsory and must be attempted.

Attempt any three (3) questions from the remaining four

<u>QUESTION TWO</u> - (COMPULSORY QUESTION)

You were a secretary in the meeting that was held in your accounts department of your organization that you work for. You recorded the following during the meeting deliberations. This was your first meeting as a result some items of a standard agenda was not applicable in this case. Nothing was also recorded under any other business.

- The meeting was held in the conference room
- 3 computers and a laser printer to be procured
- Stationary – automated system to reduce activities that require more stationary
- Backup records – some information has no backup records. Need to create new information to have a record.
- In house staff training - to take care of skills gaps in certain areas of concern
- The issue of date collection was taken as any other business. Need to address it aggressively.

Required:

(a) Using notes from the scenario above and creating your own content related to the scenario given; write **resolution minutes** of the meeting where you took the role of a secretary. (14 marks)

(b) State any six (6) established matters to be considered when conducting formal meetings as annual general meetings or board meetings. (6 marks)

[Total: 20 Marks]

QUESTION THREE

The organization you work for recently sent you for a one day Information Technology awareness seminar. Your seminar also covered aspects of Data processing.

Upon your return, you are asked to share with your work mates what you learnt from the seminar presentations.

Required:

(a) Explain the difference between:

(i) Validation tests and file checks. (2 marks)

(ii) Batch processing and online processing (2 marks)

(b) List and explain four (4) security issues related to personal websites that can be harmful to both organizations and employees. (8 marks)

(c) Briefly explain the role of management information in a business organization. (4 marks)

(d) The Information Technology (IT) infrastructure can be separated into two layers: "IT platform" and "IT services and data management".

Distinguish between the two. (4 marks)

[Total: 20 Marks]

QUESTION FOUR

Databases and application software have been critical in the development of information systems.

(a) List any five (5) common uses of spreadsheets (5 marks)

(b) Explain clearly any four (4) components of information system. (8 marks)

(c) Windows operating system is the mostly widely used in business today.

Give five (5) features of Windows operating system. (5 marks)

(d) Explain one difference between Centre justification and full justification. (2 marks)

[Total: 20 Marks]

QUESTION FIVE

Feedback is essential in communication so as to know whether the recipient has understood the message in the same terms as intended by the sender and whether he agrees to that message or not. Receivers are not just passive absorbers of messages; they receive the message and respond to them.

Required:

(a) Explain how a message moves from the time the sender originates the idea to the time the receiver responds. (10 marks)

(b) Explain five reasons why feedback is an essential component of the communication process. (10 marks)

[Total: 20 Marks]

QUESTION SIX

Your company offered financial services to Bibusa Holdings worth K2,500,000. They made an initial payment of K1,000,000 but they have defaulted on the remaining two (2) installments of K750,000 each for three (3) months. The head of finance at your company is concerned by this. He would like you to draft a letter reminding Bibusa Holdings to pay your company the money they are owing. He would like you to draft the letter to the manager of Bibusa Holdings in his name.

Required:

(a) Write a letter on behalf of the head of finance to Bibusa Holdings informing them to pay the money they owe or risk legal action. (14 marks)

(b) Explain three (3) disadvantages of written communication. (6 marks)

[Total: 20 Marks]

END OF PAPER

SUGGESTED SOLUTIONS

SOLUTION ONE

1.1. B
1.2. D
1.3. D
1.4. B
1.5. A
1.6 D

1.7 C

1.8 A

1.9 B

1.10 B

SOLUTION TWO

(a) Resolution Minutes of the Departmental Meeting Held on Friday (Any date during exam time in the conference room at 10:00 hours)

Members present

Mr. J. Machayi	Finance Managers Chairperson
Mr. P. Mwanza	Assistant accountant secretary
Mr. E. Bwalya	Systems Administrator
Mrs J. Tembo	Cashier
Ms .M. Simuyandi	Accounts Clerk

The following resolutions were made during the meeting:

1.0 Back up records

That there was need to check or confirm the existing records as it was reported that some important financial records were not available. Therefore, it was resolved that information would be created concerning the missing pieces of it and be sent to the bank as a backup measure.

2.0 Equipment

That new equipment (3 computers and 1 laser printer) be procured so that service delivery would be enhanced.

3.0 Stationary

That the new automated system be used to full capacity in order to reduce paper work be as much as possible.

4.0 In housing training staff

That an in-house workshop be conducted in order to address the skills gaps of the new automated systems and that all staff should confirm their details with the It department.

5.0 Any other business

That letters should be written to defaulting customers and follow-up phone calls be made to defaulters, and that an aggressive debt collection strategy be adopted to increase the debt collection rate.

Sign	Sign
Chairperson	Secretary
Date ____________________________	Date_____________________

(b) Matters for consideration at the AGM/Board meeting:

i) Apologies
ii) Minutes of the Previous Meeting
iii) Matters Arising
iv) Chairperson's Report
v) Financial Report
vi) Elections
vii) Any Other Business.

SOLUTION THREE

(a) The difference between:

(i) **Validation tests and file checks** - validation checks are designed to check that data is processed correctly while file checks are designed to ensure the integrity of the file structure is maintained.

(ii) **batch processing and online processing** – in batch processing, a large number of transactions are processed at the same time while in online processing, transactions are input to the computer system from a user's terminal and the input is done at a convenient time without gathering transactions into batches.

(b) Security issues related to personal websites that can be harmful to both organizations and employees:

(i) **Loss of confidential information**: employees may be privy to confidential or sensitive information which if made public can cause the employer to lose competitive advantage. Such information can spread very quickly across a social network if released accidentally or deliberating.
(2 marks)

(ii) **System damage**: viruses or malicious software can be downloaded into the employee's or organization's systems through use of the social network.

(iii) **Identity theft**: information posted on social networks such as dates of birth and phone numbers is of use to identity thieves who pose as their victims in order to obtain money or goods.

(iv) **Damage to reputation**: organizations and users must protect their social network accounts from hackers or unauthorized individuals who may attempt to gain access in order to ruin their reputation.

(c). **Role of management information**

- It enables them to use resources at their disposal more effectively and efficiently
- It's necessary for managers to perform the management functions of planning, staffing, organizing, directing and controlling
- Shared data and the free flow of information have increased workers and managers awareness about the different functions and activities of the organisation
- The accessibility and availability of information enables management at all levels to make more well-informed decisions.

IT platform – refers to the hardware architecture and software framework (including application frameworks), that allows software to run. Operating systems, programming languages and program development systems

IT services – organisations require people to run and manage their IT infrastructure, including training employees to use the technologies. Most organisations have an Information Systems department to perform at least part of this role, others may use external agencies for consultancy to help in this task

SOLUTION FOUR

a) Common applications of spreadsheets :

- Management accounts
- Cashflow analysis and forecasting
- Reconciliations
- Revenue analysis and comparison
- Cost analysis and comparison
- Budgets and forecasts

B) Components of an information system include:

Computer hardware – these are all the hardware involved in the system
Computer software – this is the software used in the system
People – all the people involved in the work of the organisation
Databases – data is at the centre of every organisation's information system
Procedures – these are all the rules, regulations and policies governing the work of the IS

C) Five (5) features of Windows Operating System

- Speed
- Compatibility
- Hardware requirements
- Search and organization
- Management
- Interface and desktop
- Taskbar/Start menu

D)

Each line is positioned in center of the page in center justification while full justification forces both right and left margins to be even and aligned.

SOLUTION FIVE

(a) Communication Process

The communications process refers to the sender's transmission of information or message through a chosen channel to the recipient overcoming obstacles affecting its speed. The communication process is cyclical as it starts with the sender and finishes in the form of feedback with the sender.

1. Sender

   The sender is the originator of the message. This is the first stage through which information is transmitted. During this stage, the sender’s main task is to compose the message and identify the target recipient.

2. Encode

   The second stage in communication is encoding, here the message goes through the encoding process which means the message is symbolically represented in terms of words, images, gestures etc, to suit the target recipient.

3. Channel and Medium

   Channel refers to the way or mode the message flows or is transmitted. The sender needs to send the message either direct or through an intermediary that is effective and convenient to the receiver. The message may be oral or written and it may be transmitted through a memo, email, telephone, apps or television.

4. Receiver

   The receiver is the person or group to whom the message is intended. He could be a listener or a reader or a viewer. Some error on the receiver's part will make the contact ineffective. The recipient must understand the message sent in the best possible way, so that the communication's true intent is accomplished.

5. Decode

   Decoding refers to the translating of a message into a language that one can understand. That is, it means understanding the word. The recipient interprets the message and tries to explain it in the best way possible.

6. Feedback

After the receiving point, the receiver sends some kind of information that shows that the receiver has in fact received and understood the message. The response and feedback stage is very important as it shows whether or not communication has been effective.

(b) Importance of Feedback

Feedback is the reaction of the audience which indicates whether or not your message has been received and understood. It can range from a smile or frown to an email giving confirmation or seeking clarification, or a person taking action you have requested.

Feedback is very important because;

a. It completes the process of communication and makes it ongoing.
b. It sustains communication
c. It makes one know if communication is making sense
d. It is the basis for measuring the effectiveness of communication
e. It is a good basis for planning on what next to be done
f. Feedback paves the way for new ideas
g. It shows courtesy

SOLUTION SIX

(a) Demand Letter for Payment

J & M Financial Institution

P.O Box 22

Lusaka

Ref: J M/ 01/ 20

21st January, 2020.

The Manager,

Bibusa Holdings,

Private Bag 15,

Lusaka.

Dear Sir / Dear Madam,

PAYMENT OF OUTSTANDING BALANCE – K1, 500,000

This letter serves as a formal demand for payment of your outstanding balance with J & M Financial Institution in the amount of K1, 500,000.

On August 25, 2019, you received financial services worth K2, 500,000. You made an initial payment of K1, 000,000 on September 3, 2019. The other two (2) instalments of K750,000 were due on October 5 and November 3, 2019. As of the date of writing this letter, your outstanding balance is 2 months late. A copy of the original invoice detailing the balance is attached to this document.

Unless you contact us immediately to discuss how your outstanding balance will be paid, we will be forced to pursue legal action to recover the debt which may leave you liable to pay attorney's fees, filing costs, and your credit history may be affected. Please note this letter may be presented in court as evidence of your failure to pay.

Prompt attention to this matter would be appreciated.

Yours faithfully,

Peter Kalumbu
Finance Manager
J & M Financial Institution.

(b) Disadvantages of Written Communication

a. Can easily be leaked, i.e. difficult to maintain secrecy or confidentiality
b. Lacks flexibility: Since writing documents cannot be changed easily at any time.
c. Only good for people who are literate. Illiterate people would lose out in communication as they cannot decode the message.
d. Expensive compared to other types of communication such as oral.
e. Lacks immediate feedback. It takes longer to receive feedback when using written communication.
f. Easily used as incriminating evidence.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

APPLICATION LEVEL

CA 2.1: FINANCIAL REPORTING

MONDAY 14 SEPTEMBER 2020

TOTAL MARKS – 100; TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading time. Use it to study the examination paper carefully so that you understand what to do in each question. You will be told when to start writing.

2. This paper is divided into TWO (2) sections:
   Section A: One (1) Compulsory scenario question.
   Section B: Four (4) Optional Questions. Attempt any Three (3) questions.

3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name must **NOT** appear anywhere on your answer booklet.

4. Do **NOT** write in pencil (except for graphs and diagrams).

5. **Cell Phones** are **NOT** allowed in the Examination Room.

6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.

7. All workings must be done in the answer booklet.

8. Present legible and tidy work.

9. Graph paper (if required) is provided at the end of the answer booklet.

DO NOT OPEN THIS QUESTION PAPER UNTIL YOU ARE INSTRUCTED BY THE INVIGILATOR.

SECTION A

This question is compulsory and must be attempted.

QUESTION ONE

Pemba Plc acquired 2,400 million K1 ordinary shares in Sinda Plc on 1 January 2017 on the following terms:

(a) an immediate cash payment of K8,600 million ;and
(b) a share exchange of two shares in Pemba for every three shares in Sinda.

Pemba incurred K1 million directly attributable (due diligence) costs on acquisition of Sinda. This amount was included in the carrying amount of the investment in Sinda in Pemba's own statement of financial position.

The stock market price of Pemba's shares at 1 January 2017 was K10 per share. At that date Sinda had retained earnings of K21,000 million credit balance.

The immediate payment has been recorded in Pemba's financial statements, but the share issue has not been recorded.

As part of the business strategy, Pemba also acquired 1,000 million K1 ordinary shares in Ndola on 1 July 2017 at a cost of K4.4 per share when the retained earnings of Ndola stood at K8,000 million credit balance. Pemba has significant influence over the operations of Ndola.

Group policy is to measure non-controlling interests at the date of acquisition at fair value. The non-controlling interests on the acquisition of Sinda were measured at their fair value of K8 per share.

The following are the summarised financial statements for Pemba, Sinda and Ndola for the year ended 31 December 2019.

Income Statements for the year ended 31 December 2019

	Pemba	Sinda	Ndola
	K'm	K'm	K'm
Revenue	144,000	56,000	38,000
Cost of sales	(100,000)	(40,000)	(26,000)
Gross profit	44,000	16,000	12,000
Operating expenses	(14,000)	(4,000)	(2,000)
Profit before tax	30,000	12,000	10,000
Income tax expense	(8,000)	(4,000)	(3,000)
PROFIT FOR THE YEAR	22,000	8,000	7,000

Statements of financial position as at 31 December 2019

	Pemba K'm	Sinda K'm	Ndola K'm
Non-current assets			
Property, plant and equipment	46,000	31,200	20,800
Investments	14,000	–	–
	60,000	31,200	20,800
Current assets	35,000	16,800	9,200
Total assets	95,000	48,000	30,000
Equity			
Share capital – ordinary shares of K1 each	14,000	4,000	4,000
Retained earnings	62,000	38,000	20,400
	76,000	42,000	24,400
Non-current liabilities	10,000	3,000	2,000
Current liabilities	9,000	3,000	3,600
Total equity and liabilities	95,000	48,000	30,000

The following information is relevant:

1. Incomes and expenses should be deemed to accrue evenly throughout the year and no dividends were paid by either Sinda or Ndola in the year ended 31 December 2019.

2. The fair value of Sinda's assets were equal to their book values at the date of acquisition with the exception of its plant which had a fair value of K4,000 million in excess of its book value. The remaining life of the plant had been 5 years at the date of acquisition and this period has not changed as a result of the acquisition. Depreciation of plant is on the straight line basis and charged to cost of sales. Sinda has not adjusted the value of its plant as a result of the fair value exercise. Ignore any deferred tax impact of fair value adjustment.

3. During the year Sinda sold goods to Pemba with a selling price of K16,000 million. These sales were made at a profit margin of 25%. At 31 December 2019 one quarter of these goods were still in the inventories of Pemba, but they have already been paid for.

4. During the year Ndola sold goods to Pemba for K3,600 million. These goods were sold at a mark-up on cost of 20%. At 31 December 2019 Pemba still held all of these goods in its inventories.

5. At 31 December 2019 the directors of Pemba carried out an impairment review and determined that the recognised goodwill in Sinda had been impaired by K400 million.

6. During the year ended 31 December 2019, Ndola Plc lost five (5) key customers and the directors of Pemba carried out an impairment review and discovered that the investment in Ndola was impaired by K1,000 million.

Required:

(a) Briefly explain the meaning of control and significant influence based on relevant International Financial Reporting Standards (IFRSs). (5 marks)

(b) Prepare a consolidated income statement for the year ended 31 December 2019 and a consolidated statement of financial position at that date for the Pemba Group. (30 marks)

(c) Explain why the fair value of a company's assets is used in the preparation of consolidated financial statement. (5 marks)

[Total: 40 Marks]

SECTION B

Attempt any three (3) questions in this section

QUESTION TWO

(a) **IFRS 16 *Leases* was issued by the International Accounting Standards Board (IASB) on 13 January 2016.** Leasing provides an important and flexible source of financing for many businesses. Most businesses lease at least some assets and under IAS 17 *Leases,* which contained a distinction between finance leases and operating leases, there was a tendency to treat leases as operating leases, so that they did not have to be included on the statement of financial position, in order to reduce gearing. IFRS 16 introduces a single model for lessees to remedy the non-recognition of liabilities for assets held under operating leases.

Required:

Explain the accounting treatment of leases under IFRS 16'*Leases*' in the financial statements of **both lessor and lessee**. (10 marks)

(b) IFRS 15 *Revenue from Contracts with Customers* was issued in 2014 and replaces the previous international financial reporting standard relating to revenue. The IFRS 15 sets out a five-step model, which applies to revenue earned from a contract with a customer with limited exceptions, regardless of the type of revenue transaction or the industry. Lindaboni limited company commenced construction of a bridge on the Pambashe River on 1 January 2019 for an agreed price of K4.8 million. The bridge is expected to be completed on 30 June 2021 and the customer controls the bridge as it is constructed. The following information relates to bridge construction as at 31 December 2019.

	K'000
Costs incurred to date	4,000
Estimated costs to complete construction	840
Progress payment received	4,240

Lindaboni limited recognises revenue from contracts with customers based on costs incurred to date as a proportion of total costs (Input method).

(i) Identify and briefly explain the five steps which need to be followed by entities when recognising revenue in accordance with IFRS 15. (6 marks)

(ii) Explain how the construction of the bridge will be accounted for in the financial statements of Lindaboni limited for the year to 31 December 2019. (4 marks)

[Total: 20 Marks]

QUESTION THREE

The following trial balance relates to Mundia Ltd at 31 March 2020

	K'000	K'000
Equity shares of 50 Ngwee each		50,000
Share premium		20,000
Retained earnings at 1 April 2019		11,200
Land and buildings –at cost (Land K10 million) (Note (i))	60,000	
Plant and Equipment – at cost (Note i)	94,500	
Accumulated depreciation at 1 April 2019: Buildings		20,000
Plant and equipment		24,500
Research and development expenditure (note (iv)	50,000	
Inventory at 31 March 2020	43,700	
Receivables	42,200	
Bank		6,800
Deferred tax (Note (iii))		6,200
Trade payables		35,100
Revenue (note (ii))		600,000
Cost of sales	411,500	
Distribution costs	21,500	
Administrative expenses	30,900	
Dividends paid	20,000	
Bank interest	700	
Current tax (Note (iii))		1,200
	775,000	775,000

The following notes are relevant:

(i) Non current assets:
On 1 April 2019, the directors of Mundia Ltd decided that the financial statements would show an improved position if the land and buildings were revalued to fair value. At that date, an independent valuer valued the land at K12 million and the buildings at K35 million for the first time and these valuations were accepted by the directors. The remaining life of the buildings at that date was 14 years. Mundia Ltd does not make a transfer to retained earnings for excess depreciation. Ignore deferred tax on revaluation surplus.

Plant and equipment is depreciated at 20% per annum using the reducing balance method and time apportioned as appropriate. All depreciation is charged to cost of sales, but none has yet been charged on any non-current assets for the year ended 31 March 2020.

On 31 March 2020, an impairment review on plant was conducted and revealed that the plant had value in use of K52 million and fair value less costs of K48 million.

(ii) On I April 2019, Mundia Ltd sold one of its products for K50 million (included in revenue figure in the above trial balance). The sale agreement required Mundia Ltd to provide on going servicing of the product until 31 March 2022. All of servicing value is included in revenue in above trial balance. The estimated cost to Mundia Ltd of the servicing is K3 million per annum. Mundia Ltd makes a gross profit margin on such servicing of 20%. Ignore discounting.

(iii) Mundia Ltd estimates that an income tax provision of K27.2 million is required for the year ended 31 March 2020 and at that date, the liability to deferred tax is K9.4 million. The movement on deferred tax should be taken to profit or loss. The balance on current tax in the trial balance represents the under/over provision of the tax liability for the year ended 31 March 2019.

(iv) Research and Development expenditure included in the above trial balance comprise of the following?

- K10 million Research cost spent by Mundia Ltd on investigating potential use of new system in its operations.

- K40 million Development expenditure spent on development of system's software that will enable Mundia Ltd reduce its operating expenses. Mundia Ltd's expects the system to be in operation for the next 5 years. Commercial use of it began on 31 December 2019.

(v) Any amortization to be taken to administrative expenses.

Required:

(a) Prepare the statement of profit or loss and other comprehensive income for Mundia Ltd for the year ended 31 March 2020. (10 marks)

(b) Prepare the statement of financial position of Mundia Ltd as at 31 March 2020. (10 marks)

[Total: 20 Marks]

<u>QUESTION FOUR</u>

On 24 July 2014, the IASB issued the final version of IFRS 9 Financial Instruments. One of the matters addressed in IFRS 9 – *Financial Instruments* is the initial and subsequent measurement of financial assets. The way financial assets and financial liabilities are accounted for in the financial statements depends on their classification. IFRS 9 requires that financial assets are initially measured at their fair value at the date of initial recognition. However, subsequent measurement of financial assets depends on their classification for which IFRS 9 identifies three (3) possible alternatives. IFRS 9 in conjunction with IFRS 13 *Fair value measurement* defines fair value and requires the initial measurement of financial instruments to be at fair value.

The difference between debt and equity in an entity's statement of financial position is not easily distinguishable for preparers of financial statements. Some financial instruments may have both features, which can lead to inconsistency of reporting. The International Accounting Standards Board (IASB) has agreed that greater clarity may be required in its definitions of assets and liabilities for debt instruments. It is thought that defining the nature of liabilities would help the IASB's thinking on the difference between financial instruments classified as equity and those classified as liabilities.

Required:

(a) Discuss the main principles of fair value measurement as set out in IFRS 13. (6 marks)

(b) Discuss the key classification differences between debt and equity under International Financial Reporting Standards. (4 marks)

(c) The Directors of Mukapasa, a public limited company would like advice on accounting for the following two transactions within the financial statements for the year ended 31 May 2020.

(i) Mukapasa issued one million convertible bonds on 1 June 2017. The bonds had a term of three years and were issued with a total fair value of K100 million which is also the par value. Interest is paid annually in arrears at a rate of 6% per annum and bonds, without the conversion option, attracted an interest rate of 9% per annum on 1 June 2017. The company incurred issue costs of K1 million. If the investor did not convert to shares they would have been redeemed at par. At maturity all of the bonds were converted into 25 million ordinary shares of K1 of Mukapasa. No bonds could be converted before that date. The directors are uncertain how the bonds should have been accounted for up to the date of the conversion on 31 May 2020 and have been told that the impact of the issue costs is to increase the effective interest rate to 9.38%. (8 marks)

(ii) Mukapasa issued a K25,000, 6% loan on 1 June 2019. Issue costs were K1,000. Interest cost is paid annually on 31 May each year. The loan will be redeemed on 31 May 2023 at a premium which gives an effective interest on the loan of 8%. (2 marks)

Required:

Discuss with relevant computations, how the above financial instruments should be accounted for in the financial statements for the year ended 31 May 2020.

[Total: 20 Marks]

QUESTION FIVE

(1) The Conceptual Framework for Financial Reporting provides a frame of reference that outlines generally accepted theoretical principles for financial accounting.

(a) Explain briefly the purpose of the Framework. (6 marks)

(b) A friend who has not studied accountancy has read the Conceptual Framework and is confused by some of the terms and definitions discussed within. Prepare a note setting out your understanding of three (3) of the following four (4) terms:

(i) Going concern
(ii) Accruals
(iii) Asset
(iii) Liability

(6 marks)

(2) Define "Accounting Policies" and outline the circumstances under which an accounting policy should be changed. (4 marks)

(3) Define "Accounting Estimates" and give examples of three (3) items which are usually the subject of accounting estimates. (4 marks)

[Total: 20 Marks]

END OF PAPER

SUGGESTED SOLUTION

SOLUTION ONE

(a) According to IFRS 10 consolidated financial statement an investor controls an investee when: The investor is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee

IFRS 10 therefore identifies three elements of control namely:
- power over the investee;
- exposure, or rights, to variable returns from involvement with the investee; and
- the ability to use power over the investee to affect the amount of the investor's returns.

IAS 28 *Investments in associates* provides the accounting rules for dealing with associates, an Investment where the parent doesn't have control but has significant influence. An associate is an entity over which an investor has significant influence. Significant influence is the power to participate in the financial and operating policy decisions of the investee but is not control or joint control over those policies.

(b) Consolidated income statement for the year ended 31 December 2019

	K'm
Revenue (144,000 + 56,000 – (W3) 16,000)	184,000
Cost of sales (100,000 + 40,000 – (W3) 16,000 + (W3) 1,000 + (W2) 800)	(125,800)
Gross profit	58,200
Impairment of goodwill	(400)
Operating expenses (14,000 + 4,000)	(18,000)
Share of profit of associate ((7,000 x 25%) – (W3) 150-1000)	600
Profit before tax	40,400
Income tax expense (8,000 + 4,000)	(12,000)
PROFIT FOR THE YEAR	28,400
Profit attributable to:	
Owners of the parent	26,080
Non-controlling interests [(8,000 – (W3) 1,000 – (W2) 800) x 40%] - (W7)160	2,320
	28,400

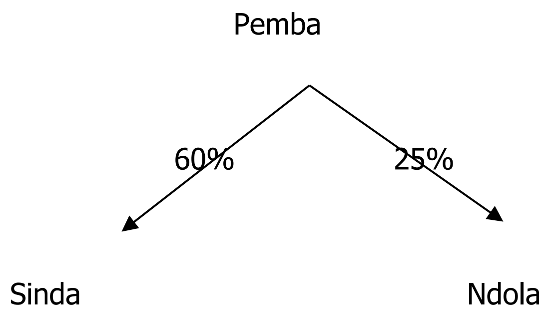
Pemba Group

Consolidated statement of financial position as at 31 December 2019

	K'm
Non-current assets	
Property, plant and equipment (46,000 + 31,200 + (W2) 1,600)	78,800
Goodwill (W4)	8,000
Investment in associate (W5)	6,350
	93,150
Current assets (35,000 + 16,800 – (W3) 1,000)	50,800
	143,950
Equity attributable to owners of the parent	
Share capital – ordinary shares of K1 (14,000 + W1 600)	15,600
Share premium W4	14,400
Retained earnings (W6)	70,870
	100,870
Non-controlling interests (W7)	18,080
	118,950
Non-Current liabilities (10,000 + 3,000)	13,000
Current liabilities (9,000 + 3,000)	12,000
	143,950

Workings

1) Group structure



2. Fair value adjustments

	Acquisition	Movement	Year end
	K'm	K'm	K'm
Plant	4,000	*(2,400)	1,600
	4,000	(2,400)	1,600

* 4,000m/5 years = K800m per annum x 3 years

3. Intragroup trading

Cancel intragroup sale/purchase:

	K'm
DR Group revenue	16,000
CR Group cost of sales	16,000

Eliminate unrealised profit:

	K'm
DR Cost of sales/retained earnings of Sinda (16,000 x 25% x 1/4)	1,000
CR Group inventories	1,000

	K'm
DR Share of Associate's Profit/Group ret'd earnings (3,600 x 20%/120% x 25% share)	150
CR Investment in Associate	150

4.Goodwill in Sinda

	K'm	K'm
Consideration transferred		
Cash		8,600
Shares (2/3x2,400mx10)		16,000
Non-controlling interests (1,600m shares x K8)		12,800
Fair value of identifiable net assets at acq'n:		37 400
Share capital	4,000	
Retained earnings	21,000	
Fair value adjustment (W2)	4,000	
		(29,000)
Goodwill at acquisition		8,400
Less: impairment loss		(400)
Goodwill at year end		8,000

Share issue will be recorded as follows (in Pemba's books)	K'm
DR Investment	16,000
CR Share capital (2/3x 2,400 x 1)	1,600
CR Share premium (2/3x 2,400 x 9)	14,400

5. Investment in associate

K'm

Cost of associate	4,400
Group share of post acquisition profits (W6)	3,100
Shar of Unrealised Profits (W3)	(150)
	7,350
Impairment loss	(1,000)
	6,350

6. Retained earnings

	Pemba	Sinda	Ndola
	K'm	K'm	K'm
Per question	62,000	38,000	20,400
Provision for unrealised profit (W3)	(150)	(1,000)	
Fair value movement (W2)		(2,400)	
Pre-acquisition retained earnings		(21,000)	(8,000)
		13,600	12,400
Group share of post acq'n ret'd earnings:			
Sinda (13,600 x 60%)	8,160		
Ndola (12,400 x 25%)	3,100		
Due diligence	(1,000)		
Impairment loss (60%x400 +1000)	(1,240)		
	70,870		

7.Non-controlling interests

	K'm
NCI at acquisition (W4)	12,800
NCI share of post acq'n ret'd earnings (13,600 W6 x 40%)	5,440

NCI share of goodwilll impairment (400x 40%)	(160)
	18,080

(c)
Fair values are used in the preparation of the consolidated financial statements as:
(i) They represent the cost to the group of the acquired company. Both the consideration for the acquisition and the assets acquired are stated at their fair value.
(ii) It allows the amount of goodwill included in the acquisition to be accurately measured.
(iii) It ensures consistency of calculation from acquisition to acquisition.
(iv) Use of fair values ensures that groups are unable to benefit from post-acquisition profits on subsequent sales of assets included in books at carrying amount rather than fair value.

By including non-current assets at their fair value, the group depreciation charge will be adjusted accordingly so that the group accounts are charged with a realistic level of depreciation.

Assist users to predict future cash flows of an entity, since fair value measurement represents the PV of future cash flows. They help to show directly the potential contribution of an asset to future cash flows or the claim on future cash flows in the case of a liability

SOLUTION TWO

a) **Accounting for leases under IFRS 16'Leases'**

Accounting by lessee

Upon lease commencement a lessee recognizes a right-of-use asset and a lease liability. The right-of-use asset is initially measured at the amount of the lease liability plus any initial direct costs incurred by the lessee. Adjustments may also be required for lease incentives, payments at or prior to commencement and restoration obligations or similar obligations.

After commencement of lease, of a lessee shall measure the right-of-use asset using a cost model, unless:

i) the right-of-use asset is an investment property and the lessee recognizes its investment property at fair value under IAS 40; or

ii) the right-of-use asset relates to a class of PPE to which the lessee applies IAS 16's revaluation model, in which case all right-of-use assets relating to that class of PPE can be revalued.

Under the cost model a right-of-use asset is measured at cost less accumulated depreciation and accumulated impairment.

The lease liability is initially measured at the present value of the lease payments payable over the lease term, discounted at the rate implicit in the lease if that can be readily determined. If that rate cannot be readily determined, the lessee shall use their incremental borrowing rate.

Variable lease payments that depend on an index or a rate are included in the initial measurement of the lease liability and are initially measured using the index or rate as at the commencement date. Amounts expected to be payable by the lessee under residual value guarantees are also included.

Variable lease payments that are not included in the measurement of the lease liability are recognised in profit or loss in the period in which the event or condition that triggers payment occurs, unless the costs are included in the carrying amount of another asset under another Standard.

The *lease* liability is subsequently re-measured to reflect changes in:

- the lease term (using a revised discount rate);
- the assessment of a purchase option (using a revised discount rate);
- the amounts expected to be payable under residual value guarantees (using an unchanged discount rate); or
- future lease payments resulting from a change in an index or a rate used to determine those payments (using an unchanged discount rate).

The re-measurements are treated as adjustments to the right-of-use asset.

Lease modifications may also prompt re-measurement of the lease liability unless they are to be treated as separate leases.

Accounting by lessor

Lessors shall classify each lease as an operating lease or a finance lease.

A lease is classified as a finance lease if it transfers substantially all the risks and rewards incidental to ownership of an underlying asset. Otherwise a lease is classified as an operating lease. Upon commencement of the lease, a lessor shall recognise assets held under a finance lease as a receivable at an amount equal to the net investment in the lease.

A lessor recognises finance income over the lease term of a finance lease, based on a pattern reflecting a constant periodic rate of return on the net investment.

At the date of commencement, a manufacturer or dealer lessor recognises selling profit or loss in accordance with its policy for outright sales to which IFRS 15 applies.

A lessor recognises operating lease payments as income on a straight-line basis or, if more representative of the pattern in which benefit from use of the underlying asset is diminished, another systematic basis.

Conclusion

IFRS 16 specifies how an entity will recognise, measure, present and disclose leases. The standard provides a single lessee accounting model, requiring lessees to recognise assets and liabilities for all leases unless the lease term is 12 months or less or the underlying asset has a low value. Lessors continue to classify leases as operating or finance, with IFRS 16's approach to lessor accounting substantially unchanged from its predecessor, IAS 17.

(b)

(i) Accounting requirements for revenue - The five-step model framework

The core principle of IFRS 15 is that an entity will recognise revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. Under the IFRS 15 the transfer of goods and services is based on upon the transfer of control (i.e. rights to consideration following transfer of goods or services), rather than the transfer of risks and rewards as in IAS 18. Control of an asset is the ability to direct the use of, and obtain substantially all the remaining benefits from, the asset. For straight retail transactions IFRS 15 will have little, if any, effect on the amount and timing of revenue recognition. This core principle is delivered in a five-step model framework:

1. **Identify** the contract(s) with a customer.
2. **Identify** the performance obligations in the contract
3. **Determine** the transaction price
4. **Allocate** the transaction price to the performance obligations in the contract
5. **Recognise** revenue when (or as) the entity satisfies a performance obligation.

Application of this guidance will depend on the **facts and circumstances** present in a contract with a customer and will require the exercise of judgment.

Step 1: Identify the contract (s) with the customer

A contract with a customer will be **within the scope of IFRS 15 if all** the following conditions are met:

a) the contract has been **approved** by the parties to the contract and are **committed** to carrying it out;
b) Each party's **rights** in relation to the goods or services to be transferred can be **identified**;
c) The payment **terms** for the goods or services to be **transferred can be identified**;
d) The contract has **commercial substance;** and
e) It is **probable** that the consideration to which the entity is **entitled** to in exchange for the goods or services will be **collected**.

If a contract with a customer **does not yet** meet all of the above criteria, the entity will continue to **re-assess** the contract going forward to determine whether it subsequently meets the above criteria. From **that point**, the entity will **apply IFRS 15** to the contract.

The standard provides detailed **guidance** on how to account for approved **contract modifications**. If certain conditions are met, a contract modification will be accounted for as a separate contract with the customer. If not, it will be accounted for by modifying the accounting for the current contract with the customer. Whether the latter type of modification is accounted for prospectively or retrospectively depends on whether the remaining goods or services to be delivered after the modification are distinct from those delivered prior to the modification.

Step 2: Identify the separate performance obligations in the contract

The key point is **distinct** goods or services. A contract includes **promise** to provide goods or services to a customer. Those promises are called **performance obligations**. At the **inception** of the contract, the entity should assess the goods or services that have **been promised** to the customer, and identify as a **performance obligation**: a good or service (or bundle of goods or services) that is **distinct;** or a **series** of distinct goods or services that are **substantially the same** and that have the **same pattern of transfer** to the customer. A company would account for performance obligation **separately** only if the promised good or service is **distinct**. A good or service is **distinct if both** of the following criteria are met: the customer can **benefit** from the good or services on its own or in conjunction with other readily available resources; and the entity's promise to transfer the good or service to the customer is **separately identifiable** from other promises in the contract.

A good or service is **distinct if i**t is sold separately or if it could be sold separately because it has got a **distinct function** and a **distinct profit margin**. **Factors** for consideration as to whether a promise to transfer the good or service to the customer is **separately identifiable** include, but are not limited to:

a) The entity does not provide a **significant service of integrating** the good or service with other goods or services promised in the contract.
b) The good or service does **not significantly modify or customise** another good or service promised in the contract.
c) The good or service is not **highly interrelated with or highly dependent** on other goods or services promised in the contract.

A **series of distinct** goods or services is transferred to the customer in the **same pattern** if both of the following criteria are met: each distinct good or service in the series that the entity promises to transfer consecutively to the customer would be a performance obligation that is satisfied **over time**; and a **single method of measuring progress** would be used to measure the entity's progress towards complete satisfaction of the performance obligation to transfer each distinct good or service in the series to the customer.

Step 3: Determine the transaction price

The transaction price is the amount to which an entity expects to be entitled in exchange for the transfer of goods and services. When making this determination, an entity will consider **past customary business practices**. The transaction price would reflect the company's **probability-weighted estimate** of variable consideration (including reasonable estimates of contingent amounts) in **addition** to the effects of the customers' **credit risk and the time value of money** (if material). Where a contract contains elements of **variable consideration**, the entity will **estimate** the amount of variable consideration to which it will be entitled under the contract. Variable contingent mounts are **only included** where it is **highly probable** that there will **not be a reversal** of revenue when any uncertainty associated with the variable consideration is resolved. Variable consideration can arise, for example, as a result of **discounts, rebates, refunds, credits, price concessions, incentives, performance bonuses, penalties or other similar items.** Variable consideration is also present if an entity's right to consideration is contingent on the **occurrence of a future event**.

The standard deals with the uncertainty relating to variable consideration by limiting the amount of variable consideration that can be recognised. Specifically, variable consideration is only **included in the transaction price if, and to the extent that, it is highly probable that its inclusion will not result in a significant revenue reversal in the future when the uncertainty has been subsequently** resolved. However, a different, more restrictive approach is applied in respect of sales or usage-based royalty revenue arising from licences of intellectual property. Such revenue is recognised only when the underlying sales or usage occur.

Step 4: Allocate the transaction price to the performance obligations in the contracts

Where a contract has multiple performance obligations, an entity will allocate the transaction price to the performance obligations in the contract by reference to their relative standalone selling prices. If a standalone selling price is not directly observable, the entity will need to estimate it. IFRS 15 suggests various methods that might be used, including: Adjusted market assessment approach, Expected cost plus a margin approach and Residual approach (only permissible in limited circumstances).

Any overall discount compared to the aggregate of standalone selling prices is allocated between performance obligations on a relative standalone selling price basis. In certain circumstances, it may be appropriate to allocate such a discount to some but not all of the performance obligations.

So, if any entity sells a bundle of goods and or services which it also supplies unbundled, the separate performance obligations in the contract should be priced in the same proportion as the unbundled prices. This would apply to mobile phone contracts where the handset is supplied 'free'. The entity must look at the stand-alone price of such a handset and some of the consideration for the contract should be allocated to the handset.

Where consideration is paid in advance or in arrears, the entity will need to consider whether the contract includes a significant financing arrangement and, if so, adjust for the time value of money. A practical expedient is available where the interval between transfer of the promised goods or services and payment by the customer is expected to be less than 12 months.

Step 5: Recognise revenue when (or as) the entity satisfies a performance obligation

The entity satisfies a performance obligation by transferring control of a promised good or service to the customer. Revenue is recognised as control is passed, either over time or at a point in time. Control of an asset is defined as the ability to direct the use of and obtain substantially all of the remaining benefits from the asset. This includes the ability to prevent others from directing the use of and obtaining the benefits from the asset. The benefits related to the asset are the potential cash flows that may be obtained directly or indirectly. These include, but are not limited to: using the asset to produce goods or provide services; using the asset to enhance the value of other assets; using the asset to settle liabilities or to reduce expenses; selling or exchanging the asset; pledging the asset to secure a loan; and holding the asset.

An entity recognises revenue over time if one of the following criteria is met:

a) The customer simultaneously receives and consumes the benefits as the entity performance takes place;
b) The entity's performance creates or enhances an asset that the customer controls as the asset is created or enhanced;
c) or the entity's performance does not create an asset with an alternative use to the entity and the entity has an enforceable right to payment for performance completed to date.

The amount of revenue recognized is the amount allocated to that performance obligation in step 4. Any entity must be able to reasonably measure the outcome of a performance obligation before the related revenue can be recognized. In some circumstances, such as in the early stages of a contract, it may not be possible to reasonably measure the outcome of a performance obligation, but the entity expects to recover the costs incurred. In these circumstances, revenue is recognisedonly to the extent of costs incurred.

If an entity does not satisfy its performance obligation over time, it satisfies it at a point in time. Revenue will therefore be recognised when control is passed at a certain point in time. Factors that may indicate the point in time at which control passes include, but are not limited to: the entity has a present right to payment for the asset; the customer has legal title to the asset; the entity has transferred physical possession of the asset; the customer has the significant risks and rewards related to the ownership of the asset; and the customer has accepted the asset.

(ii)
The contract price is K4.8 million and there is a single performance obligation, being to construct a bridge. The performance obligation will be satisfied over time and therefore revenue is recognised as the contract progresses.
The percentage of completion based on input method is 83% (4,000,000/4,840,000), therefore the revenue of K3, 984,000 (83% x K4.8 million) will be recognised. Also costs incurred to date of K4, 000,000 will be recognised giving an overall loss of K16, 000.
Overall the project is expected to make a loss of K40, 000 (K4.8 million – K4.84 million) including future expected loss of K24, 000 which must be recognised as a provision at the year end, provide the contract meets the IAS 37 definitions of an onerous contract.
In the statement of financial position, a contract liability of K280, 000 is recognised, which represents the excess of progress payments received (W 1).

Working 1.

	K'000
Cost incurred to date	4, 000
Less overall loss	(40)
	3,960
Less payments/Billing	(4,240)
Contract liability	280

SOLUTION THREE

a) Mundia's statement of profit or loss for the year ended 31 March 2020

	K'000
Revenue (600,000 – 7,500)	592,500
Cost of sales (w5)	(432,000)
Gross profit	160,500
Administrative expenses (w5)	(42,900)
Distribution costs	(21,500)
Operating profit	96,100
Finance cost	(700)
Profit before tax	95,400
Income tax (26,000 + 3,200) w3	(29,200)
Profit for the year	66,200
Other comprehensive income:	
Revaluation surplus (w1)	7000
Totatl comprehensive income	73,200

b) Mundia Ltd statement of financial position as at 31 March 2020

	K'000	K'000
Non current assets		
Tangible NCA		
PPE (w1)	96,500	
Intangible NCA		
Development expenditure (w4)	38,000	
Total NCA		134,500
Current assets		
Inventory	43,700	
Receivables	42,200	
Total CA		85,900
Total assets		**220,400**
Equity and liabilities		
Equity	50,000	
Share premium	20,000	
Revaluation reserve	7,000	
Retained earnings (11,200+66,200 –20,000)	57,400	
Total equity		134,400
Non current liabilities		
Deferred tax	9,400	
Deferred revenue	3,750	
TNCL		13,150
Current liabilities		
Trade payables	35,100	
Deferred revenue	3,750	
Tax payable	27,200	
Bank Overdraft	6,800	

TCL	72,850
Total equity and liabilities	**220,400**

Workings

1. Property, plant and equipment

	Land	buildings	P and E	Total
	K'000	K'000	K'000	K'000
Cost b/f	10,000	50,000	94,500	154,500
Less accumulated depreciation	-	(20,000)	(24,500)	(44,500)
Carryin amount b/f	10,000	30,000	70,000	110,000
Revaluation surplus (balance)	2,000	5,000	-	7,000
Revalued at 1 April 2019	12,000	35,000	70,000	117,000
Depreciation expense	--------	(2,500)	(14,000)	(16,500)
Carrying amount at 31.3.2020 before Impairment loss	12,000	32,500	56,000	100,500
Impairment loss (balance)			(4,000)	(4,000)
Carrying amounts to report at 31.3.2020	12,000	32,500	52,000*	96,500

*Carrying amount to report is Recoverable amount as this has fallen below the carrying amount computed normally. The asset has been impaired. An impairment loss must b recognized in accordance with IAS 36.

2. Revenue

Sales value of servicing

K3 million x 3 yrs x 100/80 = 11,250/ 3 years
=servicing value per annum 3,750

Current liability = 3,750
Non current liability = 3,750

Dr Revenue 2 years servicing value	7,500
Cr liability	7,500

3. Income tax

Current tax	
Provision for the year	27,200
Less over provision	(1,200)
To profit and loss	26,000

Deferred tax	
Balance c/f	9,400
Less balance b/f	(6,200)
To profit and loss	3,200

Total to P/L (26,000 + 3,200) 29,200

4. Research and development

Research cost of 10,000 to be expensed

Development expenditure of 40,000 capitalized and amortized for 3 months from January to much only

Cost	40,000
Amortization (40,000/5 years x 3/12	(2,000)
Carrying amount	38,000

5. Operating expenses

	Cost of sales	Administrative	Distribution
	K'000	K'000	K'000
Per question	411,500	30,900	21,500
Depreciation:			
Building 35000/14	2,500		
Plant	14,000		
Plant impairment	4,000		
Amortization of Dev exp		2,000	
Research cost	--------	10,000	
	432,000	42,900	21,500

SOLUTION FOUR

(a) (**IFRS 13 principles of fair value measurement**

IFRS 13 *Fair value measurement* defines fair value as 'the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.'

The previous (old) definition used in IFRS was 'the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction'.

The price which would be received to sell the asset or paid to transfer (not settle) the liability is described as the 'exit price', the definition also used in US GAAP. Although the concept of the 'arm's length transaction' has now gone, the market-based current exit price retains the notion of an exchange between unrelated, knowledgeable and willing parties.

Fair value is a **market-based measurement,** not an entity-specific measurement. It **focuses on assets and liabilities and on exit (selling) prices**. It also takes into account market conditions at the measurement date. In other words, it looks at the amount for which the holder of an asset could sell it and the amount which the holder of a liability would have to pay to transfer it. It can also be used to value an entity's own equity instruments. Because it is a market-based measurement, fair value is measured using the assumptions that market participants would use when pricing the asset, taking into account any relevant characteristics of the asset.

It is assumed that the transaction to sell the asset or transfer the liability takes place either:

(1) In the **principal market** for the asset or liability; or

(2) In the absence of a principal market, in the **most advantageous market** for the asset or liability.

The **principal market** is the market which is the **most liquid** (has the greatest volume and level of activity for that asset or liability). In most cases the principal market and the most advantageous market will be the same.

Fair value is **not adjusted for transaction costs.** Under IFRS 13, these are **not a feature of the asset or liability,** but may be taken into account when **determining the most advantageous market.**

Fair value measurements are based on an asset or a liability's **unit of account**, which is specified not by IFRS 13, but by each IFRS where a fair value measurement is required. For most assets and liabilities, the unit of account is the individual asset or liability, but in some instances may be a group of assets or liabilities.

IFRS 13 acknowledges that when **market activity declines**, an entity must use a **valuation technique** to measure fair value. In this case the emphasis must be on whether a transaction price is based on an orderly transaction, rather than a forced sale.

The IFRS identifies **three valuation approaches**.

(1) **Market approach.** A valuation technique that uses prices and other relevant information generated by market transactions involving identical or comparable (ie similar) assets, liabilities or a group of assets and liabilities, such as a business.

(2) **Cost approach.** A valuation technique that reflects the amount that would be required currently to replace the service capacity of an asset (often referred to as current replacementcost).

(3) **Income approach.** Valuation techniques that convert future amounts (eg cash flows or income and expenses) to a single current (ie discounted) amount. The fair value measurement is determined on the basis of the value indicated by current market expectations about those future amounts.

For **non-financial assets** the fair value measurement looks at the use to which the asset can be put. It takes into account the ability of a market participant to generate economic benefits by using the asset in its **highest and best use**.

IFRS 13 three-level hierarchy for fair value measurement

IFRS 13 states that valuation techniques must be those which are appropriate and for which sufficient data are available. Entities should maximise the use of relevant **observable inputs** and minimise the use of **unobservable inputs**. The standard establishes a three-level hierarchy for the inputs that valuation techniques use to measure fair value:

Level 1 **Quoted prices** (unadjusted) in active markets for identical assets or liabilities that the reporting entity can access at the measurement date. If there is a quoted price in an active market, an entity uses that rice without adjustment to measure fair value. An example is prices on a stock exchange. Active markets are ones where transactions take place with sufficient frequency and volume for pricing information to be provided.

Level 2 **Inputs other than quoted prices** included within Level 1 that are observable for the asset or liability, either directly or indirectly, eg quoted prices for similar assets in active markets or for identical or similar assets in non-active markets or use of quoted interest rates for valuation purposes.

Level 3 **Unobservable inputs** for the asset or liability, ie using the entity's own assumptions about market exit value. For example, cash flow forecasts may be used to value an entity that is not listed.

Each fair value measurement is categorized based on the lowest level input that is significant to it.

Entities may use more than one valuation technique to measure fair value in a given situation.

(b)

IAS 32 *Financial Instruments: Presentation* establishes principles for presenting financial instruments as liabilities or equity. To determine whether a financial instrument should be classified as debt or equity, IAS 32 uses principles-based definitions of a financial liability and of equity. In contrast to the requirements of generally accepted accounting practice in many jurisdictions around the world, IAS 32 does not classify a financial instrument as equity or financial liability on the basis of its legal form. The key feature of debt is that the issuer is obliged to deliver either cash or another financial asset to the holder. The contractual obligation may arise from a requirement to repay principal or interest or dividends.

Such a contractual obligation may be established explicitly or indirectly through the terms of the agreement. For example, a bond which requires the issuer to make interest payments and redeem the bond for cash is classified as debt. In contrast, equity is any contract which evidences a residual interest in the entity's assets after deducting all of its liabilities. A financial instrument is an equity instrument only if the instrument includes no contractual obligation to deliver cash or another financial asset to another entity and if the instrument will or may be settled in the issuer's own equity instruments. For example, ordinary shares, where all the payments are at the discretion of the issuer, are classified as equity of the issuer. The classification is not quite as simple as it seems. For example, preference shares required to be converted into a fixed number of ordinary shares on a fixed date or on the occurrence of an event which is certain to occur, should be classified as equity.

A contract is not an equity instrument solely because it may result in the receipt or delivery of the entity's own equity instruments. The classification of this type of contract is dependent on whether there is variability in either the number of equity shares delivered or variability in the amount of cash or financial assets received. A contract which will be settled by the entity receiving or delivering a fixed number of its own equity instruments in exchange for a fixed amount of cash or another financial asset is an equity instrument. However, if there is any variability in the amount of cash or own equity instruments which will be delivered or received, then such a contract is a financial asset or liability as applicable.

For example, where a contract requires the entity to deliver as many of the entity's own equity instruments as are equal in value to a certain amount of cash, the holder of the contract would be indifferent whether it received cash or shares to the value of that amount. Thus this contract would be treated as debt.
Other factors, which may result in an instrument being classified as debt, are:

- redemption is at the option of the instrument holder
- there is a limited life to the instrument
- redemption is triggered by a future uncertain event which is beyond the control of both the holder and issuer of the instrument.
- dividends are non-discretionary

Similarly, other factors, which may result in the instrument being classified as equity, are whether the shares are non-redeemable, whether there is no liquidation date or where the dividends are discretionary.

(c) (i) **Convertible bond**
Some financial instruments contain both a liability and an equity element. In such cases, IAS 32 requires the component parts of the instrument to be **classified separately**, according to the substance of the contractual arrangement and the definitions of a financial liability and an equity instrument.
One of the most common types of compound instrument, as here, is **convertible debt**. This creates a primary financial liability of the issuer and grants an option to the holder of the instrument to convert it into an equity instrument (usually ordinary shares) of the issuer. This is the economic equivalent of the issue of conventional debt plus a warrant to acquire shares in the future.

Although in theory there are several possible ways of calculating the split, the following method is recommended:
(1) Calculate the value for the liability component.
(2) Deduct this from the instrument as a whole to leave a residual value for the equity component.
The reasoning behind this approach is that an entity's equity is its residual interest in its assets amount after deducting all its liabilities.
The **sum of the carrying amounts** assigned to liability and equity will always be equal to the carrying amount that would be ascribed to the instrument **as a whole**.
The **equity component is not re-measured**. However, the **liability component** is measured at amortised cost using an **effective interest rate** (here 9.38%).
It is important to note that the issue costs (here K1million) are allocated in proportion to the value of the liability and equity components when the initial split is calculated.
Step 1 Calculate liability element
A 9% discount rate is used, which is the market rate for similar bonds without the conversion rights:

Present value of interest at end of:	
Year 1 (31 May 2018) (K100m × 6%) × 0.9174	5,505
Year 2 (31 May 2019) (K100m × 6%) × 0.8417	5,050
Year 3 (31 May 2020) (K100m + (K100m × 6%)) × 0.7722	81,852
Total liability component	92,407
Total equity element	7,593
Proceeds of issue	**100,000**

Step 2 Allocate issue costs

	Liability	*Equity*	*Total*
	K'000	K'000	K'000

Proceeds	92,407	7,593	100,000
Issue cost	(924)	(76)	(1,000)
	91,483	**7,517**	**99,000**

The double entry is:

	K'000	K'000		K'000	K'000
DEBIT Cash	100,000		CREDIT Cash		1,000
CREDIT Liability		92,407	DEBIT Liability	924	
CREDIT Equity		7,593	DEBIT Equity	76	

Step 3 Re-measure liability using effective interest rate

	K'000
Cash – 1.6.2017 (net of issue costs per Step 2)	91,483
Effective interest to 31.5.2018 (9.38% x 91,483)	8,581
Coupon paid (6% x K100m)	(6,000)
At 31.5.2018	94,064
Effective interest to 31.5.2019 (9.38% x 94,064)	8,823
Coupon paid (6% x K100m)	(6,000)
At 31.5.2019	96,887
Effective interest to 31.5.2020 (9.38% x 96,887)	9,088
Coupon paid (6% x K100m)	(6,000)
At 31.5.2020	100,000*

Step 4 Conversion of bond

On conversion of the bond on 31 May 2020, Mukapasa will issue 25 million ordinary shares. The consideration for these shares will be the original equity component (net of its share of issue costs) together with the balance on the liability.

	K'000
Share capital – 25 million at K1	25,000
Share premium	82,517
Equity and liability components (100,000 + 7,593 – 76)	**107,517**

(c) (ii) **6% loan note**

The finance cost of the loan is charged at the **effective interest rate of 8%** applied to the carrying amount of the loan. The issue costs of the loan should be deducted from the proceed of the loan, this gives an **initial carrying amount of K24, 000**. **A finance cost** of **K1, 920** (K24, 000 x 8%) should be charged to profit or loss. Therefore the **Carrying amount** of the non-current liability (loan) **K24, 420** (24,000 +1,920-1500)

SOLUTION FIVE

1) **Brief explanation of purpose of the Conceptual Framework**

The Financial Reporting Council (FRC) developed the Conceptual Framework to provide guidance for the application of generally accepted accounting principles (GAAPs) to financial transactions. The principles of the framework form the basis for the development of new accounting standards and the assessment and revision where necessary of existing ones. The Framework is not an accounting standard; however, new standards issued following the publication of the Framework must be in line with the principles of the Framework. Going forward, the incidents of conflict between the Framework and accounting standards will reduce thus leading to increased harmonisation in financial accounting regulations. However, as the Framework is not an accounting standard, it cannot override the principles of an existing accounting standard, where a conflict exists; the principles as laid out in the standard must be complied with.

The framework also provides very important definitions which were not previously defined, including the definitions of such frequently used terms as asset and liability. This eliminates the need to provide such definitions in each standard thereby decreasing the time it takes to develop and publish new standards.

Overall, the Framework promotes a more consistent regulatory environment which should help not only standard setting bodies but also preparers of financial statements and users of such financial information.

(upto 6 marks for appropriate explanation of purpose of the Conceptual Framework) 1 mark for each valid explanation

2. **Definitions**

Going concern
Financial statements are normally prepared on the assumption that an entity is a going concern and will continue in operation for the foreseeable future. Foreseeable future is considered to be twelve months from the date the financial statements are signed. In the event that management decide that it is no longer appropriate to prepare the financial statements on a going concern basis this must be disclosed.

Accruals
Financial statements, with the exception of the cash flow statement, are prepared on the accruals basis of accounting where transactions are recognised in the period in which they occur (are earned or accrued) irrespective of when the cash flow arising from these transactions occurs.

Asset
An asset is a present economic resource controlled by an entity as a result of past events. Examples of assets include premises, equipment, and receivables etc.

Liability
A liability is a present obligation of the entity to transfer an economic resource as a result of past events. Examples of liabilities include payables, finance lease obligations, accruals etc.

(ii) Definition of Accounting Policies and when an Accounting Policy can be changed

IAS 8 defines Accounting Policies as "the specific principles, bases, conventions, rules and practices applied by an entity in preparing financial statements."

An entity should change an accounting policy only if the change:

- is required by a Standard or an Interpretation, or
- results in the financial statements providing reliable and more relevant information about effects of transactions, other events or conditions on the entity's financial position, financial performance or cash flows.

3. Definition of Accounting Estimates plus examples of 3 areas of Accounting Estimates

Accounting estimates involve judgments on the uncertainties inherent in business activities which cannot be measured with precision but only estimated.

Examples of items may which require accounting estimates are:

a. Allowance for receivables
b. Inventory obsolescence
c. Useful life of depreciable assets

END OF THE SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

APPLICATION LEVEL

CA 2.2: MANAGEMENT ACCOUNTING

TUESDAY 15 SEPTEMBER 2020

TOTAL MARKS – 100; TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading time. Use it to study the examination paper carefully so that you understand what to do in each question. You will be told when to start writing.

2. This paper is divided into TWO (2) sections:

   Section A: One (1) Compulsory scenario question.
   Section B: Four (4) Optional scenario Questions. Attempt any Three (3) questions.

3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name must **NOT** appear anywhere on your answer booklet.

4. Do **NOT** write in pencil (except for graphs and diagrams).

5. **Cell Phones** are **NOT** allowed in the Examination Room.

6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.

7. All workings must be done in the answer booklet.

8. Present legible and tidy work.

9. Graph paper (if required) is provided at the end of the answer booklet.

DO NOT OPEN THIS QUESTION PAPER UNTIL YOU ARE INSTRUCTED BY THE INVIGILATOR.

SECTION A

This Question is compulsory and MUST be attempted

QUESTION ONE

Mfuwe Lodges (ML) is a grouping of guest houses in Livingstone's Malota Township that are very popular with overseas tourists. The guest houses are frequently advertised on the major national television stations just before the main news and immediately after the news. A politician popularly known as Baba Nguzu owns the guest houses. The facilities offer clean and highly competitive budget accommodation. There is a standard charge per room per night with each room accommodating up to two (2) guests. For each guest house there is a cafeteria facility that specialises in indigenous Zambian matebeto foods. You are a ZICA Application level student and you have been recruited as a Management Accountant Trainee to help with the introduction of a budgetary control system.

You established that sometime in the early 2019, Baba Nguzu's ex-employee, Ms Beauty Kasuba started implementing a budgetary control system but did not complete the exercise as she had been accepted for a degree programme at the Mukuba University in Kitwe.

Operating statement of Mfuwe Lodges for week 4 of 2019

	Budget	**Budget**	**Actual results**
Room occupancy	**65%**	**100%**	**80%**
	K	K	K
Sales:			
Guest room sales	39,000	60,000	55,000
Cafeteria sales	12,480	19,200	11,600
Total sales	51,480	79,200	66,600
Guest Room costs:			
Laundry	2,250	3,000	2,750
Cleaning	4,800	6,200	6,800
Wages	5,200	5,200	5,000
Total Guest Room costs	12,250	14,400	14,550
Cafeteria cost:			
Food and beverages	7,200	9,600	9,400
Wages	3,800	3,800	3,950
Total Cafeteria costs	11,000	13,400	13,350
General costs:			
Building maintenance	3,400	3,400	3,300
Management salaries	2,600	2,600	2,600

Total general fixed costs	6,000	6,000	5,900
Operating profit	**22,230**	**45,400**	**32,800**

Additional operating information:

- The guest houses have 100 rooms in total and all have the same price per night. Occupancy is expressed as a percentage of full capacity.
- The guest houses and cafeteria opens for 7 nights a week and 52 weeks per year.
- Budgeted cafeteria sales are assumed to be a fixed percentage of the guest house sales.
- Costs are either fixed or variable, except for cleaning, which is semi-variable**.**

Required:

(a) (i) Calculate the number of room nights sold per week for 100%, 80%, and 65% occupancy levels. (3 marks)

- Using the budgeted figures prepared by Ms Beauty Kasuba as a basis, calculate.

  - The variable cost per room-night for cleaning (3 marks)

  (2) The fixed cost per week for cleaning (1 mark)

- Prepare a flexed budgeted profit statement for the guest rooms and cafeteria for week 4 for an occupancy level of 80% showing the following:

  - The budgeted contribution for each profit centre
  - The budgeted *attributable profit* for each profit centre
  - The budgeted profit for the guest rooms and cafeteria in total

  (10 marks)

- Based on your flexed budget in (iii) above and any other information you deem necessary, calculate the budgeted break-even sales value for the guest rooms profit centre. (2 marks)

- Calculate, for the cafeterias only, the total variances between the actual results for week 4 and the flexed budget figures you have calculated in part (iii). Comment on the performance of the cafeteria. (7 marks)

- State any two potential benefits for both the absorption costing methods and the marginal costing method of accounting may have for Baba Nguzu's business. (4 marks)

(b) Baba Nguzu makes a cream of chicken soup (CCS) in his Cafeteria by mixing two (2) ingredients materials, A and B. The standard material cost of the CCS is as follows:

Material A 24 litres @ K5 per litre

Material B 36 litres @ K6 per litre

In quarter 3, the actual mix was 1,968 litres of A and 2,460 litres of B. The actual output was 72 units of CCS.

Required:

Calculate the total mix and the total yield variances for quarter 3. (4 marks)

(c) Baba Nguzu uses the economic order quantity model (EOQ) to purchase one of the ingredients used in the preparation of meals in his Cafeteria. The following data relates to this ingredient:

Purchase price	K30 per unit
Carriage costs	K50 per order
Ordering costs	K5 per order
Storage costs	10% of purchase price plus K0.40 per unit per annum.
Annual demand is 8,000 units	

Required:

- Calculate the EOQ (to the nearest whole unit). (2 marks)

- Calculate the number of orders that Baba Nguzu should place with his suppliers. (1 mark)

(d) Baba Nguzu attended a seminar on cost volume profit analysis at Hotel Edinburgh in Kitwe and was impressed with the colourful pictorial presentation.

Required:

Explain the usefulness of break-even- analysis to the senior management of a small company like that of Mfuwe lodges. (3 marks)

[Total: 40 Marks]

SECTION B

Attempt any Three (3) out of Four (4) Questions.

QUESTION TWO

(a) The analysis of total cost into its behavioural elements is essential for effective budgetary planning and control purposes;

Required:

Comment on the classification of cost by behaviour and explain how it is useful for budgetary planning and control. (4 marks)

(b) Total costs incurred at various output levels for a manufacturing operation has been measured as follows:

Output (units)	Total cost (K)
10,500	101,476
11,000	98,730
12,500	106,263
13,000	108,021
13,500	110,727
14,500	114,708

Required:

Using the high low method, calculate the variable cost per unit and the fixed cost component of the operation. (5 marks)

(c) Assuming a selling price of K12.00 per unit, a budgeted sales level of 12,500 units and the fixed and variable costs calculated in (b) above, define and calculate the break- even point and the margin of safety (in units) for the operation. (5 marks)

(d) Using the information in (b) above, determine how many units should be sold to achieve a target profit of K20,000. (3 marks)

(e) State three (3) key assumptions that are made in the use of cost volume profit analysis techniques. (3 marks)

[Total: 20 Marks]

QUESTION THREE

Kabompo Limited (K Ltd) is a processing company that uses process costing to produce products A, B, C and D in various quantities. These products are produced from a common process (P1) but could be further processed using dedicated processing mechanisms. The products A, B, C and D could be further processed into AA, BB, CC and DD.

Details of the processing information are given below;

Common process (P1)

This process takes in 12,500 Kg and 13,750 litres of raw materials with the following total costs;

Materials	K247,500
Labour	K148,500
Overheads	K99,000

The above are the only input related costs in P1. However, during the process, there are some losses expected as a result of evaporation and pilferage. These losses are collected and sold as scrap for K10 per Kg and K8 per litre.

The output from P1 is given below;

Product	A	B	C	D
Units produced	6,000 Kg	8,000 litres	4,000 Kg	3,000 litres
Selling price per unit	K28	K18	K32	K40

Details of further processing:

	AA	BB	CC	DD
Additional costs per unit processed	K6/Kg	K4/L	K7/Kg	K9/L
Expected loss in process	10%	15%	10%	15%
Selling price of final product	K35	K27	K45	K52

Required:

(a) Using an appropriate basis (stating clearly your reason), apportion the common P1 costs to each of the products and calculate the profits for the products before further processing. (8 marks)

(b) Advise Management of B Ltd on the optimal processing of the products to maximise profit, clearly explaining the relevant and irrelevant costs. (10 marks)

(c) Explain two (2) examples of relevant costs in decision making other than those identified in (b) above. (2 marks)

[Total: 20 Marks]

QUESTION FOUR

Zambezi Limited (Z Ltd) manufactures three (3) types of products X, Y and Z. The company uses standard absorption costing to charge production overheads to the products and keeps no inventory. The following information is available on the products;

	X	Y	Z
Labour hours per unit (hrs)	3	2	4
Machine hours per unit (hrs)	2	4	3
Material per unit (Kg)	4	5	3
Selling price per unit (K)	54	66	60
Production units	15,000	20,000	10,000

Labour is currently paid at K6 per hour and material costs K5 per Kg. The above costs will remain constant per unit. Production overheads amount to K825,000, and are currently absorbed into the products based on the intensity of the level of activity between labour and machines. This method of charging overheads to the products has been largely criticised and the company is considering changing to an Activity Based Costing (ABC) approach. In this regard, the overheads have been analysed as follows:

- 20% of the overheads are caused by machine running time;
- 30% of the overheads are caused by production set ups;
- 25% of the overheads are caused by material order processing; and
- 25% of the overheads are caused by customer order processing.

The following information is also available:

	X	Y	Z
Batch size (units)	150	1,000	100
Set ups per batch	25	15	30
Material orders per batch	50	50	50
Customer order batch size (units)	100	100	100
Customer order processing per batch	2	3	1

Required:

(a) Calculate the profit per unit for each product and the total profit for Zambezi Ltd using the current costing method. (6 marks)

(b) Calculate the profit per unit for each product and the total profit for Zambezi Ltd using the proposed Activity based costing method. (10 marks)

(c) Explain why Zambezi Ltd should consider changing to an ABC approach. (4 marks)

[Total: 20 Marks]

QUESTION FIVE

Clear-tech (CT) Ltd makes and sells laptop computers. The company has a functional structure and currently operates an incremental budgeting system. CT Ltd has a budget committee that is comprised entirely of members of the senior management team.

No other personnel are involved in the budget-setting process.

A new Finance Director, who previously held a senior management position in a 'not for profit' health organisation, has recently been appointed. Whilst employed by the health service organisation, the new Finance Director had been the manager responsible for the implementation of a zero-based budgeting system which proved highly successful.

Required:

(a) Identifies six (6) factors to be considered when implementing a system of zero-based budgeting within CT Ltd. (6 marks)

(b) Explain behavioural problems that the management of CT Ltd might encounter in implementing a system of zero-based budgeting. (10 marks)

(c) Explain how the implementation of a zero-based budgeting system in CT Ltd may differ from the implementation of such a system in a 'not for profit' health organisation. (4 marks)

[Total: 20 Marks]

END OF PAPER

SUGGESTED SOLUTIONS

SOLUTION ONE

(a)

- Number of Room Nights sold per week

Occupancy Rate	65%	100%	80%
Room Nights –maximum .			
100 rooms X 7 nights	700	700	700
Room nights sold			
700 X 65%/100%/80%	455	700	560

- Variable cost per Room Night for cleaning

$$\frac{K6{,}200 - K4{,}800}{700 - 455}$$

$$= \frac{K1{,}400}{245 \text{ room nights}}$$

= K5.71 per room night

- Fixed cost per week for cleaning

Total costs - variable cost= fixed cost

K6, 200- K5.71 X 700

= K2, 203

- Flexed Budgeted profit statement for week 50 at 80% occupancy level

	Guest room	Cafeteria	Total
Sales			
(80% X K60, 000/K19, 200)	48,000	15,360	63,360
Variable costs			
Laundry (80% X K 3,000)	2,400		2,400

Cleaning K5.71 X560	3,197.6		3,197.6
Food and beverages (80% X K 9,600)		7,680	7,680.0
Contribution	42,402.40	7,680	50,082.40
Specific fixed costs			
• Cleaning	2,203	-	2,203
• Staff	5,200	3,800	9,000
Attributable profit	34,999.40	3,880	38,879.4
General fixed costs			
Building maintenance			(3,400)
Management salaries			(2,600)
Operating profit			32,879.40

- Break even sales value for Guest Room profit centre

B.E.P = Total Fixed Costs / Contribution sales ratio

= K2, 203 + K5,200 / (42,402.40 / 48,000)

= K7, 403 / 0.883

= K8, 380

Flexed Budgetary control statement

	Flexed Budget 80%	Actual results 80%	Variance
	(K)	(K)	(K)
Cafeteria sales	15,360	11,600	3,760(A)

Cafeteria costs			
• Food and beverages (A)	7,680	9,400	1,720
• Wages (A)	3,800	3,950	150
Operating profit/ (loss)	(3,880)	(1,750)	

Comment

- There is a significant adverse variance in Cafeteria sales. Either the budgeted quantity of the meals is not being achieved (volume) or actual prices of meals are below budgeted. In the case of volume, tourists may not be fully acquainted with the meals and hence opting to eat out. In the case of prices there could be competition with nearby food outlets. In either case there may be a need to review menus or offer only breakfast and let the residents have lunch and supper elsewhere.
- There is a small variance in food and beverages. This could be a result of inefficiencies in preparing dishes – excessive spoilage, poor management of recipes, etc.
- An insignificant variance was recorded in wages. If this is a once off occurrence due to under budgeting for such payroll on cost, etc – a correction will be needed the next time around. If this, however, is a results of over payment of wages in overtime entitlements – corrective action is needed.

Absorption costing

- It is the traditional method and the way accounting is usually done (in financial statements)
- There will be relevant accounting packages available.
- There is no inventory in the business. This benefit will not be fully utilised.

Marginal costing

- Cost will be clearly identified.
- Exercise of control (via Budgets) will be improved.
- Decision making process will be a lot easier.

(b)(i) Total Material Mix variances

Standard	Actual	Variance	Price	Variance

	Mix (Litres)	Mix (Litres)	(litres)	per litre (K)	K
A (40%)	1,771.2	1,968	196.8 (A)	K5	984(A)
B (60%)	2,656.8	2,460	196.8 (F)	K6	1,180.8 (F)
	4,428	4,428			196.8 (F)

(ii) Total Material Yield Variance

Standard yield 4,428 ÷60 litres should have yielded 73.8 units
Actual yield 4,428 litres yielded 72.0 units

1.8(A)
X
K336
= K604.8 (A)

(C)(i) EOQ

=

=

=

= 509 units

(ii) Number of orders to be placed.

$$\frac{\text{Annual Demand}}{\text{EOQ}} = \frac{8{,}000}{509} = \underline{16 \text{ orders}}$$

(d) Usefulness of Break Even Analysis

The usefulness or purpose of break-even analysis is to show the profit achievable at various levels of sales. It is, in a way, a graphical representation of information which would be shown in some tabular form in a flexible budget. The key feature of the break-even chart, namely the break-even point, indicates that level of sales that must be attained for the business to break-even. The break-even point is calculated as the fixed cost for a period divided by the contribution per unit sold. Having determined the break-even point, this can be compared with the budgeted level of sales to indicate the business margin of safety. These features can be found for both manufacturing and retailing businesses.

The main problem associated with break-even point analysis is that it is often difficult to forecast and separate out the fixed and variable elements of cost. Both fixed costs and unit variable costs are likely to change with the level of activity and one might have to consider adjusting unit selling prices to achieve different levels of sales. If the business has several products then either some product mix needs to be assumed or else separate break-even calculations may need to be made for each product which may have directly attributable fixed costs. The profit figures calculated will be affected by inventory valuations.

SOLUTION TWO

a. Total costs can be classified by behaviour into the following classifications;

Fixed cost: This is a cost that does not vary with changes in the levels of activity.

Variable cost: this is a cost which tends to vary in direct correlation with the changes in the levels of activity.

Semi- fixed cost: this is a cost which is a mixture of fixed and variable components.

Step cost: this is a cost which is fixed in nature but only within certain levels activity.

Cost behavior is useful for planning and budgetary control in that it enables better planning by providing a more reliable basis for estimating costs for budgetary planning and control purposes.

b. Output (units) Cost K

Highest	14,500	114,708
Lowest	10,500	101,476
Increase in output	4,000	13,232

Variable cost per unit = K13,232/4000 units = **K3.308 per unit.**

Fixed cost therefore = K114,708 – (K3.308 × 14,500) = **K66,742**

c.

	K
Selling price per unit	12.00
Variable cost per unit	3.31
Contribution per unit	8.69

The break even point is the level of output or sales at which the operation makes no profit and no loss.

Break – even point = fixed cost/contribution per unit.

= K66,742/8.69

= 7680 units.

The margin of safety is the extent by which budgeted sales can reduce by before the operation makes starts to make a loss.

Margin of safety = 12,500 – 7680 = 4820 units.

d. To achieve a target profit of K 20,000.

Profit = contribution – fixed cost

K20,000 = contribution - K66,742

Required contribution = (20,000 + 66,742) = K86,742 (1 mark)

Number of units to achieve required contribution = K86,742/K8.69 = 9,982 units.

e. CVP analysis Assumptions

- Costs can be accurately split between fixed and variable elements.
- Total costs and total revenues are linear functions of output.
- Profits are calculated on a variable cost basis.
- The analysis applies to a short term time horizon only.

SOLUTION THREE

(a)

The product produced from the common process P1 have different unit measure, therefore, the quantity method of apportioning the common costs could not be used. The most appropriate basis would be the sales revenue prior to further processing. The scrap value of the losses from P1 can be offset against the common process costs before apportioning.

Total P1 costs is K495,000 (Material + labour + overheads)

The loss in Kg is 2,500 Kg (input – output)

The loss in L is 2,750 L (input – output)

Total value of losses is K47,000

Therefore, net cost is K448,000 (K495,000 – K47,000)

	A	B	C	D	Total
Revenue (K'000)	168	144	128	120	560
Apportionment: K448,000/K560,000 = 0.8 per revenue					
Costs (K'000)	(134.4)	(115.2)	(102.4)	(96)	(448)
Profit (K'000)	33.6	28.8	25.6	24	112

(b)

Common process costs and profits prior to further processing are irrelevant in the decision to further process the products as the costs are sunk and notional respectively. The relevant costs are the incremental revenues and additional costs of further processing.

The further processing will result in changes in the price and quantities produced; therefore, the decision is based on the incremental revenue compared with the additional costs of further processing. The additional costs are based on the units processed not the output produced.

	AA	BB	CC	DD
Revenue from P1 (K'000)	168	144	128	120
Revenue after further process (K'000)	189	183.6	162	132.6
Incremental revenue	21	39.6	34	12.6
Additional costs of processing	(36)	(32)	(28)	(27)
Net benefit/ (cost) of further processing	(15)	7.6	6	(14.4)
Decision to further process	No	Yes	Yes	No

In order to maximising the profit, B Limited should further process products B and C into BB and CC respectively and sell A and D without further processing.

(c)

Relevant costs are future incremental cash flows, other examples include;

Opportunity cost – this relates to the next best option forgone as a result of making a choice. For example to the decision to scrap off materials not regularly used or use it as an alternative to another material in not in inventory would result in an opportunity costs, hence the decision with the lowest opportunity cost would be undertaken.

Differential cost – this is the difference in the various possible alternatives in both benefits and costs. The decision with the highest differential benefits is selected.

SOLUTION FOUR

(a)

Total labour hours (15,000units x 3hrs) +(20,000units x 2hrs) +(10000units x 4hrs)

= 125,000 hrs

Total machine hours (15,000units x 2hrs)+(20,000units x 4hrs)+(10000units x 3hrs)

= 140,000 hrs

There are more machine hours than labour, therefore work is machine intensive.

OAR = K825,000/140,000 = K5.89 per machine hour

	X	Y	Z
	K/unit	K/unit	K/unit
Selling price	54	66	60
Labour cost	(18)	(12)	(24)
Material cost	(20)	(25)	(15)
Contribution	16	29	21
Production Ohds	(11.78)	(23.56)	(17.67)
Profit	**4.22**	**5.44**	**3.33**

Total profit (15,000units x K4.22)+(20,000units x K5.44)+(10000units x K3.33)

= K205,400

(b)

Calculation of rates per cost driver

Details	X	Y	Z	Total Activity	Cost Pool	Rate
No. of Batches	100	20	100			
Production Set ups	2,500	300	3,000	8,500	K247,500	K42.67
Material orders	5,000	1,000	5,000	11,000	K206,250	K18.75
No. of customer batches	150	200	100			
Customer orders	300	600	100	1,000	K206,250	K206.25
Machine hours	30,000	80,000	30,000	140,000	K165,000	K1.18

Tracing costs to products

Details	X	Y	Z
Production set up costs	K106,675	K12,801	K128,010

Material order costs	K93,750	K18,750	K93,750
Customer order costs	K61,875	K123,750	K20,625
Machine running costs	K35,400	K94,400	K35,400
Total overheads	K297,700	K249,701	K277,785
Units	15,000	20,000	10,000
Ohd cost per unit	(K19.85)	(K12.48)	(K27.78)
Contribution	K16	K29	K21
Profit(Loss) per unit	(K3.85)	K16.52	(K6.78)

Total profit (15,000units x –K3.85)+(20,000units x K16.52)+(10000units x –K6.78)

= K204,850

(c)
The current method has been criticized and assumes all overheads are caused by machine hours. This has resulted in the wrong product costing in that more overheads are charged to products that use more machine time. The change to ABC should be considered as this method produces more accurate cost information. One could argue that total company profit remains the same, but individual product profitability analysis can better be managed using ABC. For example cost control and reduction measures could be instituted for products X and Z as they are loss making by managing the cost drivers.

SOLUTION FIVE

(a) Zero-based budgeting was developed to overcome the short comings of the technique of incremental budgeting. The implementation of a zero-based budgeting would require each manager within CT Ltd to effectively start with a blank sheet of paper and a budget allowance of zero. The managers would be required to defend their budget levels at the beginning of each and every year. Thus, past budget decisions would as part of the process of zero-based budgeting need to be re-evaluated each year.

The implementation of a system of zero-based budgeting will require a consideration of the following:

- The need for major input by management;
- The fact that it will prove extremely time consuming;
- The need for a very high level of data capture and processing;
- The subjective judgement inherent in its application;
- The fact that it might be perceived as a threat by staff;
- Whether its adoption may encourage a greater focus upon the short-term to the detriment of longer-term planning.

(b) Implementation of zero-based budgeting will require a major planning effort by our personnel. It is through the planning process that important guidelines and directions are provided for the development and ranking of the decision packages. Also, the planning process will enable managers to prepare for the uncertainty of the future. Long-range planning allows managers to consider the potential consequences of current decisions over an extended timeframe.

Zero-based budgeting addresses and supports comprehensive planning, shared decision-making, the development and application of strategies and allocation of resources as a way of achieving established goals and objectives. In addition, zero-based budgeting supports the added processes of monitoring and evaluation.

Zero-based budgeting, when properly implemented, has the potential to assist the personnel of an organisation to plan and make decisions about the most efficient and effective ways to use their available resources to achieve their defined mission, goals and objectives.

There is no doubt that the process of zero-based budgeting will consume a great deal more management time than the current system of budgeting does. This will certainly be the case in implementation of the system because managers will need to learn what is required of them. Managers may object that it is too time-consuming to introduce zero-based budgeting, however, it could be introduced on a piece-meal basis. As regards the imposition upon management time, managers may object that they simply do not have the necessary time in order to undertake an in-depth examination of every activity each year. However, if this proves to be the case then we could consider the establishment of a review cycle aimed at ensuring that each activity is reviewed on at least one occasion during every two or three years.

(c)The application of zero-based budgeting within CT Ltd might prove most fruitful in the management of discretionary costs where it is difficult to establish standards of efficiency and where such costs can increase rapidly due to the absence of such standards.

A large proportion of the total costs incurred by CT Ltd will comprise direct production and service costs where the existence of input: output relationships that can be measured render them more appropriate to traditional budgeting methods utilising standard costs.

Since the predominant costs incurred by a not for profit health organisation will be of a discretionary nature, one might conclude that the application of zero-based budgeting techniques is more appropriate for service organisations such as the not for profit health organization than for a profit-seeking manufacturer of electronic office equipment.

A further difference lies in the fact that the ranking of decision packages is likely to prove less problematic within an organisation such as CT Ltd which is only involved in the manufacture and marketing of electronic office equipment. By way of contrast, there is likely to be a much greater number of decision packages of a disparate nature, competing for an allocation of available resources within a not for profit health organisation.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

APPLICATION LEVEL

CA 2.3: AUDITING PRINCIPLES AND PRACTICE

THURSDAY 17 SEPTEMBER 2020

TOTAL MARKS – 100; TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS TO CANDIDATES

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8. Present legible and tidy work.
9. Graph paper (if required) is provided at the end of the answer booklet.

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SECTION A

This question is compulsory and must be attempted.

QUESTION ONE

You are a Manager in the Audit Firm of Mwalusaka & Co; and this is the first time you are working on one (1) of the firm's established clients, Investec Ltd. The main business activity of Investec Ltd is the provision of investment advice to individuals on saving for retirement, purchase of shares and securities and investing in tax efficient saving schemes. Investec Ltd is regulated by the Securities and Exchange Commission (SEC).

Investec Ltd has been operating for fifteen (15) years and has recently listed its shares on the Lusaka Securities Exchange (LuSE). The company maintains a small internal audit department. The Directors feel that the team needs to increase in size and specialist skills are required, but they are not sure whether to recruit more internal auditors, or to outsource the whole function to their external auditors, Mwalusaka & co.

Investec Ltd is required to comply with corporate governance principles if it has to maintain its listed status; hence the Director of Finance, Jessie Mole, has undertaken a review of whether or not the company complies with the corporate governance principles.

Jan Mumbu is the Chairman of Investec Ltd and was the Chief Executive Officer (CEO) until last year. Jan Mumbu is unsure if his company needs more Non-Executive Directors (NEDS) as there are three (3) NEDS out of the eight (8) board members. He is considering appointing one of his close friends, who is a retired Chief Executive Officer (CEO) of a Construction company, as a NED.

Jessie Mole decides on the remuneration of each director. All directors' remuneration is performance based in the form of an annual bonus based on profits. Jessie Mole is considering setting up an Audit Committee, but has not done this yet. A new Director of Sales and Marketing was appointed eight (8) months ago. He is yet to undertake his board training as this is normally provided by the Chief Executive Officer (CEO) and this position is currently vacant.

There are many shareholders and therefore the directors believe that it is impractical and too costly to hold an Annual General Meeting (AGM). Instead, the Board of Directors has suggested sending out the financial statements and any voting would be through email.

You are about to start the planning for this audit. Paul Nyirenda has been the Engagement Partner for Investec Ltd, for the previous nine (9) years and he has excellent knowledge of the client.

Paul Nyirenda has informed you he would like his daughter Zangi who is studying for her first set of application level papers of the CA Zambia qualification to be part of the audit team this year. Paul Nyirenda also informs you that Fulani, the Audit Senior, received investment advice from Investec Ltd during the year and intends to do the same next year.

In an initial meeting with Jessie Mole, you learn that the audit team will not be entertained on Investec Ltd.'s luxurious taxis for a holiday on the Samfya Beach this year as this could appear to be an attempt to influence the opinion of the audit. Instead, she has arranged a flight with a local aviation company known as Makumbi Air costing less than one-tenth of the expense of using the luxurious taxis and hopes this will be acceptable. Jessie Mole states that the fee for taxation services this year should be calculated on the basis of a percentage of tax saved and trusts that your firm accepts a fixed fee for representing Investec Ltd in a dispute with the taxation authorities regarding the amount of VAT payable.

Jessie Mole has also hinted to you that she might request your firm to undertake a non-audit assurance engagement later in the year. She has informed you that she has read about review engagements. However, she is unsure how these engagements differ from an external audit and how much assurance would be gained from this type of engagement.

Required

(a) Explain three (3) criterions you will use to evaluate the internal audit department of Investec Ltd. (6 marks)

(b) Identify and explain five (5) corporate governance weaknesses and provide a recommendation to address each weakness**.** (10 marks)

(c) Explain the benefits to Investec Ltd of establishing an Audit Committee. (4 marks)

(d) Explain five (5) statutory rights of an auditor. (5 marks)

(e) Explain the purpose of review engagements and how these differ from external audits. (3 marks)

(f) Explain six (6) ethical threats which Mwalusaka & Co. may have to face in the audit of Investec Ltd. (6 marks)

(g) For each threat in (f) above, suggest suitable safeguards that should be applied. (6 marks)

[Total: 40 Marks]

SECTION B

Attempt any THREE (3) questions in this section.

QUESTION TWO

Your firm is the Auditor of Kalabo Ltd, which is involved in processing of cashew nuts. It is located in the Western Province. The company has been operating for over ten (10) years. The company is owned by a rich family and it has experienced significant expansion over the years. It currently employs four hundred (400) permanent workers.

The company's traditional functional based organizational structure has remained the same since inception. The company has a Board of six (6) Directors and four (4) of the Directors are Non-Executive. To streamline the operations and ensure efficiency, the Chairman of the Board of Directors is also the Chief Executive Officer (CCEO).

The company is profitable, although the Board of Directors appears to be ineffective in querying the decisions of the Chief Executive Officer. He is not a qualified accountant but personally assists the finance function in the preparation of the financial statements. He does not like laziness and demands hard work from all employees. Family members always get highly paying jobs in the company.

In the audit planning meeting, the CCEO commented that, too much attention was given to the evaluation of internal control systems. He reminded the Engagement Partner that the aim of the statutory external audit is to examine the financial statements and then come up with an opinion on whether the financial statements show a true and fair view.

Last year, the Audit Manager discovered, from a detailed analysis of the payments, that K20,000 was paid to a tax officer in appreciation of the assistance rendered in resolving a personal tax dispute for the CCEO. This was disguised under miscellaneous payments. Kalabo Ltd has a policy document on integrity and ethical values but Senior Managers are ignorant about its existence.

Human resource issues in Kalabo Ltd are such a contentious issue that the Human Resources Director was even dismissed for failing to develop acceptable human policies and procedures. All human resources issues are currently handled by the CCEO using his discretion. He recommended to the Board of Directors that the human resources function be disbanded because it does not add any value to the company. In order to retain expertise within the company, he recently unilaterally awarded a 30% salary increase to all qualified Production Personnel.

Kalabo Ltd sells 60% of its processed cashew nuts locally and 40% is exported to Tanzania and Rwanda. To ensure accountability and transparency, the internal auditors are responsible for the export sales. Export earnings are used to cover importation of foreign goods and technical services.

Required:

(a) Explain the importance of evaluating internal control systems of audit clients. (3 marks)

(b) Identify and explain six (6) deficiencies in the controls in Kalabo Ltd. (9 marks)

(c) Suggest controls that Kalabo Ltd could adopt to overcome the deficiencies you have identified in (b) above. (6 marks)

(d) Recommend two (2) audit procedures you would perform to test the effectiveness of the controls in Kalabo Ltd. (2 marks)

[Total: 20 Marks]

QUESTION THREE

(a) You are an Audit Assistant in Chela Chartered Accountants. You have been assigned to the audit of Giraffe Ltd and you are preparing to perform audit procedures on the receivables figure.

You have been given the previous year audit working papers and in the section on confirmation (circularization) of receivables you come across the following confirmation letter.

Giraffe Ltd
Plot 200 Ibex Hill
Lusaka

23 April 2019

The Finance Manager
C Customer Ltd
Chilanga

Dear Sir,

CONFIRMATION OF BALANCE

In accordance with the request by our auditors, Chela Chartered Accountants, we ask you to confirm the balance due to us as at 31 March 2019 which according to our records amounted to K105 million.

We enclose for your reference a copy of the statement of account.

We request you to complete the tear-off below to confirm the balance and in the event that you do not agree with the balance, please provide us with details of the balance according to your records. We request you to respond directly to our auditors using the enclosed pre-stamped envelope.

Yours Faithfully,

Chief Accountant.

Required:

(i) Explain the above form of confirmation (circularization) that was used in the last audit and state two (2) advantages. (4 marks)

(ii) Explain the alternative form of confirmation (circularization) that could be used in the audit of the receivables figure of Giraffe Ltd and state two (2) disadvantages. (4 marks)

(b) Kudu Plc. is one of your firm's audit clients and you are the Audit Senior in the audit of the financial statements for the year ended 31 March 2019.

Kudu Plc. is in the chemical industry, which is highly regulated. At the time of being engaged as auditor of Kudu Plc., you discussed with Management on their duty to prepare the financial statements and this is one of the terms of the engagement contained in the engagement letter.

During the course of the audit, you came across an actual case of fraud involving inventory whereby the company was made to pay for supplies and materials not received.

At the beginning of the year under review, the Government lifted the ban on the importation of chemicals. This has significantly affected Kudu Plc.'s operations because the imported chemicals are cheaper. The liquidity position for Kudu Plc. has worsened and the going concern status of the company seems questionable. In your discussions with the Chief Executive Officer CEO) of Kudu Plc., he informed you that the company intends to obtain a five-year loan from a bank in order to start importing chemicals in the following year.
The Engagement Partner wants the audit team to obtain all the necessary written representations.

Required:

(i) Explain the meaning of written representations required by the auditors. (2 marks)

(ii) Identify and explain four (4) issues for which you should request for written representations from the Management of Kudu Plc. (6 marks)

(iii) Explain the action you will take in the event that the Management of Kudu Plc. does not provide the requested written representations. (4 marks)

[Total: 20 Marks]

QUESTION FOUR

You are an Audit Senior in Kafue Associates, a firm of ZICA Chartered Accountants. You are dealing with the following matters:

1. **Matter one.**
   The Managing Partner is concerned that the latest quality control review report shows that Audit Trainees do not understand a number of basic concepts in auditing. You have been asked to provide training sessions to Audit Trainees to cover a number of areas. He has requested you to start with the elements of an assurance engagement performed by a practitioner and risk assessment.

   The Audit Trainees are aware that audit firms provide a number of services but others, like compilations, are not assurance engagements.

   The Managing Partner has mentioned that after the training, Audit Trainees should be able to identify high risk and low risk clients.

   You are aware that in order to obtain assurance about whether the financial statements are free from material misstatements, the auditor needs to consider how and where misstatements are most likely to arise. A risk assessment under the International Standards on Auditing helps the auditor to ensure the key areas more susceptible to material misstatement are adequately investigated and tested during the audit.

2. **Matter two.**
   Mwelwa Plc, a company listed on the Lusaka Securities Exchange (LuSE) is involved in buying and selling electronic equipment. It has strong internal controls and its long-term prospects are good. The company uses significant debt to operate profitably. The high gearing is not considered to be a problem since the company has competent Management. A number of institutional investors have expressed interest in investing in Mwelwa Plc.

   You are responsible for the audit of the financial statements for Mwelwa Plc for the year ended 31 March 2019. The field work has been completed and the Engagement Partner has requested you to draft the audit report. You have been told that last year's audit opinion was unmodified.

   The draft financial statements show profit before taxation of K9 million and total assets of K100 million. On 6 May 2019, fire destroyed inventory worth K300,000. No amendments or disclosures have been made in the financial statements. The inventory destroyed has no impact on the going concern ability of Mwelwa Plc.

   Required:

   (a) Explain the five (5) elements of an assurance engagement. (5 marks)

   (b) List five (5) possible indicators of low risk clients and explain whether Mwelwa Plc is a high risk client or not. (5 marks)

   (c) Distinguish between unmodified and modified opinions. (4 marks)

(d) Discuss the impact on the auditor's report, including whether or not the audit opinion should be modified, using the information given in the audit of Mwelwa Plc. (6 marks)

[Total: 20 Marks]

QUESTION FIVE

You are the Audit Senior in charge of the audit of Jump Ltd for the year ending 31 December 2019 and you are currently planning the year-end audit. Jump Ltd operates supermarkets in different parts of Zambia. Last year, the Finance Director expressed concern with the drop in sales that the company experienced in the recent tough economic climate and he believes the supermarkets need to have enough working capital if they are to take advantage of the likely upturn in the economy that is expected next year. At the beginning of the year, the Board of Directors authorized the Finance Director to raise the required funds at very competitive rates.

The Audit Manager has given you the management accounts for the months of October, November and December 2019. He wants you to analyse the bank balances and inventory balances in detail.

In October 2019, Jump Ltd obtained a bank loan of K12 million to acquire land for future developments and increase its working capital. One (1) of the conditions attached to the loan is that the company should maintain a current ratio of at least 4:1. Company policy states that all receipts must be banked not later than the following day and cheques dispatched are recorded in a register.

You have carried out a detailed analysis of the cash and bank balances and you have noticed that the liquidity position is healthy. The current ratios for the months of October, November and December 2019 are 4:1, 4.5: 1 and 6:1 respectively. The Audit Manager suspects that the liquidity position could be overstated. He has advised that detailed cut-off tests must be carried out.

Jump Ltd's operates an elaborate Inventory Re-order policy which is supported by an e-procurement system which was introduced during the year. This has significantly assisted in eliminating stock-outs. A comparison of the inventory balance in October and December show an increase of 30%. The Audit Manager has directed that the audit staff who attended the inventory count last year should also be used this year. He was impressed by their knowledge, commitment and skill. However, he was not particularly impressed with the audit procedures carried out after the inventory count.

Required:

(a) Explain why cut-off audit tests will be particularly important when auditing bank balances for Jump Ltd. (6 marks)

(b) Describe two (2) cut-off tests for bank balances which should be performed. (4 marks)

(c) Explain why the audit of inventory normally poses problems for the auditors.

(4 marks)

(d) Recommend six (6) audit procedures that could be performed on the inventory after the inventory count of Jump Ltd. (6 marks)

[Total: 20 Marks]

END OF PAPER

SUGGESTED SOLUTIONS

SOLUTION ONE

a) Evaluation of the internal audit department:

- The extent to which internal audit department's objectivity is supported by its organizational status, relevant policies and procedures. The reporting structure will be an important consideration to take into account in the evaluation of the internal audit department since there is no Audit Committee in Investec Ltd.
- The level of competence of the internal audit department. It will be extremely important to consider whether there are established policies for hiring and training of internal auditors in Investec Ltd.
- Whether the internal audit department applies a systematic and disciplined approach (including quality control). Mwalusaka & Co. should evaluate the activities related to planning, supervising, reviewing and documenting assignments.

b) Corporate governance weaknesses & recommendations:

- Jan Mumbu is Chairman and until last year, he was Chief Executive Officer (CEO). The Chairperson should be an independent Non-Executive Director (NED). The role of Chairperson and CEO are both very important positions and carry significant responsibilities and separating them prevents too much power residing in the hands of one person.

  Jan Mumbu should return to his role as CEO as this will also fill the vacant. An independent NED should be recruited to fill the role of Chairperson.

- The Board of Directors is composed of five (5) Executives Directors (EDs) and only three (3) NEDs.

  There is need for an appropriate balance of EDs and NEDs for more objective decisions in the interests of the shareholders. At least half of the Board of Directors should comprise NEDs and so there is need to recruit more NEDs to balance off.

- A close friend to Jan Mumbu will not be independent as a NED. Moreover, he lacks the experience of the industry.

  There is need to appoint an independent and experienced NED.

- The setting of remuneration by the Director of Finance is not acceptable. There is need for a fair and more transparent criteria. All directors' remuneration is in the form of annual bonus based on profits. This pay may not motivate directors to focus on long term growth.

  Remuneration should be restructured and focus on long term company performance and should perhaps include share options in the package.

- There is no Audit Committee in place. The quality of financial reporting in Investec Ltd could be questionable.

An Audit Committee should be set up and must comprise at least three (3) NEDs, with one of them having relevant financial experience.

- There are no plans for an Annual General Meeting (AGM). The suggestion of sending out the financial statements and any voting by email is not a bad idea as it is more cost effective.

  The company should hold an AGM in order to be fair to all shareholders, especially those who may not have to access to reliable internet facilities.

c) Benefits of Audit Committee to Investec Ltd:

- The Audit Committee will bring considerable external experience to the Board of Director as well as challenging the decisions of EDs and contributing to independent judgements.
- The Director of Finance will benefit in that she will be able to raise concerns and discuss accounting issues with the Audit Committee.
- It will help to improve the quality of the financial reporting of the company; whilst the company already has a Director of Finance, the Audit Committee will assist by reviewing the financial statements.
- The establishment of an Audit Committee can help to improve the internal control environment of Investec Ltd. The Audit Committee is able to devote more time and attention to areas such as internal controls.
- Since Investec Ltd has an internal audit department, then establishing an Audit Committee will also improve the independence of internal audit department.

d) Rights of auditors

- Right of access to the company's books and records at any reasonable time to collect the evidence necessary to support the audit opinion.

- Right to require from the company's officers the information and explanations the auditor considers necessary to perform their duties as auditors.

- Right to receive notice of and attend meetings of the company in the same way as any member of the company.

- Right to speak at General Meetings on any matter affecting the auditor or previous auditor.

- Where the company uses written resolutions, a right to receive a copy of those resolutions.

e) **Review engagements and External audits**

Review engagements are often undertaken as an alternative to an audit, and involve a practitioner reviewing financial data, such as six-monthly figures.

This would involve the practitioner undertaking procedures to state whether anything has come to their attention which causes the practitioner to believe that the financial data is not in accordance with the financial reporting framework.

A review engagement differs to an external audit in that the procedures undertaken are not as comprehensive as those in an audit, with procedures such as analytical review and enquiry used extensively. In an external audit, the auditor provides a high, but not absolute level of assurance while in a review; the practitioner provides limited level of assurance.

f) Ethical threats

- Mr. Paul Nyirenda, the Engagement Partner has been involved with the client for the last nine (9) years. This means he may be too familiar with the client to be able to make objective decisions due to this long association.
    - There is no ethical rule which stops Mr. Paul Nyirenda recommending Zangi for the audit, or letting Zangi take part in the audit. However, there may be the impression of lack of independence as Zangi is related to the Engagement Partner. Zangi could be tempted not to identify errors in case this prejudiced her father's relationship with Investec Ltd.
    - As long as Fulani paid a full fee to Investec Ltd for the investment advice, then there is no ethical threat. This would be a normal commercial transaction and Fulani would not gain any benefit.
      However, continued use of Investec Ltd.'s services could imply a lack of independence especially if Fulani is not paying a full fee and therefore receiving a benefit from Investec Ltd.
    - The audit team has been offered a flight with Makumbi Air the end of the audit.
      Acceptance of gifts from a client, unless of an insignificant amount, is not allowed. The fact that the flight costs less than the luxurious taxi expense is irrelevant, independence could still be impaired.
    - Agreeing to accept taxation work on a percentage of the tax saved is essentially accepting a contingent fee.
      There will be pressure to gain the highest tax refund for the client and this could tempt the audit firm to suggest illegal tax avoidance schemes or even tax evasion.
    - Representing Investec Ltd in court could be seen as an advocacy threat – that is the audit firm is promoting the position of the client.
      Objectivity could be compromised because the audit firm is seen to take the position that the client is correct, affecting judgement on the tax issue.

g) Mitigation of the threats (Safeguards)

- Mr. Paul Nyirenda should be rotated from being Engagement Partner. He can still contact the client but should not be in the position of signing the audit report.
- Zangi's work must be appropriately reviewed by the Audit Manager.
- To show independence from the client, Fulani could be asked not to use the services of Investec Ltd again unless this is first agreed with the Engagement Partner.
- The flight should not be accepted. Investigations would also be needed to find out why hospitality was accepted in previous years.
- Mwalusaka & Co. must confirm that assistance with taxation work is acceptable, although the fee must be based on time and experience for the job, not the contingent fee.
- To remain independent, the audit firm should decline to represent the client in court.

SOLUTION TWO

(a) **Why auditors usually evaluate internal control systems of audit clients:**

An understanding of internal control assists the auditor in identifying types of potential misstatements and factors that affect the risks of material misstatement, and in designing the nature, timing and extent of further audit procedures.

Initially, gaining an understanding of internal control assists the auditors to determine which are relevant to the audit. ISA 315 (Revised) *Identifying and assessing the risks of material misstatements through understanding the entity and its environment* points out that there is a direct relationship between an entity's objectives and the controls it implements to provide reasonable assurance about their achievement. Many of these controls will relate to financial reporting, operations and compliance, but not all of the entity's objectives and controls will be relevant to the auditor's risk assessment.

Having determined which controls are relevant, and are adequately designed to aid in the prevention of material misstatements in the financial statements, the auditor can then decide whether it is more efficient to seek reliance on those controls and perform tests of controls in that area, or to perform substantive testing over that area.

If the controls are not operating effectively, the auditor needs to perform sufficient substantive testing over that financial statement area in light of the apparent lack of control and increased risk. Any deficiencies are noted and, where appropriate, these will be communicated to management through a letter of weakness.

(b) & (c) **Deficiencies in the controls and suggested controls**

Deficiencies	**Suggested controls**
(1) Management's philosophy and operating style – The Chairman of the Board of Directors and Chief Executive Officer (CCEO) is not a qualified accountant but personally assists the finance function in the preparation of the financial statements. This provides a significant opportunity for the manipulation of the entire financial reporting process including the resulting financial statements.	Preparation of the financial statements and activities involved in the financial reporting processes including the related information processing must be done solely by the finance function. The finance function must ensure the financial statements show a true and fair view. The CCEO must not be involved.
(2) Commitment to competence – Family members always get highly paid jobs in the company. The family may not have required competence levels.	Management must consider the competence levels for particular jobs and how those levels translate into requisite skills and knowledge.
(3) Organizational structure – The company's traditional functional based organizational structure has remained the same since inception. This could be affecting the company's ability to achieve the set objectives.	The organizational structure must be reviewed on a regular basis in order to provide the framework within which an entity's activities for achieving its objectives are planned, executed, controlled and reviewed.

(4) Communication and enforcement of integrity and ethical values – Last year, the Audit Manager discovered from a detailed analysis of the payments that K20,000 was paid to a tax officer in appreciation of the assistance rendered in resolving a personal tax dispute for the CCEO. This is a clear case of corruption which should not be encouraged. Kalabo Ltd has a policy document on integrity and ethics but Senior Managers are ignorant about its existence. This simply means communication and enforcement of such important issues is poor.	Kalabo Ltd must publicise the policy document on integrity and ethical value. Copies should be distributed to all employees and seminars/workshops should be held to train all staff in such matters. The company website can also be used to communicate integrity and ethical matters. Anyone who fails to comply with the guidelines should be disciplined.
(5) Participation by those charged with governance – To streamline the operations and ensure efficiency, the Chairman of the Board of directors is also the Chief Executive Officer (CCEO). The board of directors is not independent from management and is therefore unable to scrutinize the activities of management. It is stated that the Board of Directors appears to be ineffective in querying the decisions of the CCEO.	The positions of Chairperson of the Board of Directors and Chief Executive Officer must be held by two different persons. The Chairperson of the Board of Directors must be a Non-Executive Director (NED).
(6) Assignment of authority and responsibility – To ensure accountability and transparency, the internal auditors are responsible for the export sales. The internal auditors may be faced with a serious self-review threat. In addition, they must not be cable of competently handling the task.	Proper policies and procedures must be developed for assignment of authority and responsibility.
(7) Human resource policies and practices – All human resources issues are currently handled by the CCEO using his discretion. The company currently employs 400 permanent workers. Without proper human resource policies and practices, the company could contravene the Employment Laws and Regulations.	The company should employ a competent Human Resources Director who must develop and implement appropriate human resource policies and practices covering recruitment, orientation, training, evaluating, counselling, promoting, compensation and remedial actions.

(d) **Audit procedures**

These include a combination of:

- Inquire of management regarding the existence of the elements of the control environment in Kalabo Ltd.
- During the risk assessment stage of the audit, observe the processes that relate to the control environment and assess their validity.
- Inspect any documentation that are relevant to controls such as the manual of standard procedures.

SOLUTION THREE

(a) (i) Explanation of method of confirmation (circularization):

The method of confirmation (circularization) that was used during the previous year audit is the positive form of confirmation (circularization). In this form of confirmation (circularization), the receivables confirmed (circularized) are expected to respond to the request whether or not they agree with the balance being confirmed.

The letter clearly states that the receivables should confirm their agreement to balance being confirmed and that in the event that they do not agree with the balance, they should give details of the balance as per their records.

Advantages of positive form of confirmation (circularization):

- There is evidence of the responses from the receivables confirmed (circularized) in the working papers of the auditor which is written evidence.
- The receivables are required to respond whether or not they agree with the balance. This is more reliable evidence.

(ii) Alternative method of confirmation (circularization):

The alternative form of confirmation (circularization) that may be used in the confirmation (circularization) of receivables balances is the negative form of confirmation (circularization).

Under this method the receivables are required to respond to the confirmation letter only if they do not agree with the balance being confirmed.

Disadvantage of negative method:

- Non-response is taken to mean agreement with the balance and yet it the non-response could have been because of other reasons such as the letter not reaching the receivable or the receivable simply did not respond despite not agreeing with the balance.
- The auditor does not have any written evidence of the confirmation in the case where no responses have been received.

(b) (i) **Meaning of written representations:**

Written representations are written statements that are given by Management and provided to the auditor to confirm certain matters or to support other audit evidence.

Written representations do not include the financial statements, assertions or supporting books and records.

(ii) Matters for which auditors of Kudu Plc. could request for written representations:

The auditors of Kudu Plc. could request for written representations in the following instances:

1. Confirmation by Management of Kudu Plc. that the company has complied with the laws and regulations applicable to its operations. ISA 250 *Consideration of laws and regulations in an audit of financial statements* specifically requires that this should be done.
2. ISA 240 *The auditor's responsibilities relating to fraud in an audit of financial statements* requires that the auditors should obtain written representations in specified situations.
   In this case the auditors of Kudu Plc. could request Management to provide written representations that it has disclosed to the auditors their knowledge of fraud or suspected fraud that involving Staff or Management. In view of the fraud that happened the auditor can request management to provide written representations in accordance with the provisions of ISA 240.
3. Management is responsible for assessing the ability of companies to continue operating as going concern according to ISA 570 *Going concern.*
   The auditors could request Management to provide written representation concerning their assessment of the ability of Kudu Plc. as a going concern.

4. Auditors of Kudu Plc. will obtain written representations from Management of Kudu Plc. confirming that management acknowledges its responsibilities concerning the preparation of financial statements and that management has provided the auditor with all relevant evidence agreed upon in the terms of the engagement.

(iii) Auditor's action in the event Management does not give the representation:

In the event that the management of Kudu Plc. refuses or does not provide the requested written representations, the following will be done:

- Will discuss the matter with Management and request that they provide the requested representations because they form part of the evidence.
- Consider if at all it is possible to obtain sufficient appropriate evidence using other means.
- If the above is not possible, communicate with Those Charged with Governance and bring this matter to their attention and seek their help to get the requested representations.
- Re-evaluate the integrity of the Management of Kudu Plc. and evaluate the effect this non-provision of requested representations will have on the reliability of evidence in general.
- Finally, take appropriate action including consideration of the impact this may have on the auditor's report.

SOLUTION FOUR

(a) **Elements of an assurance engagement**

An assurance engagement performed by a practitioner will consist of the following elements:

(i) A three party relationship – the three parties are the intended user, the responsible party and the practitioner.

Intended users are the individuals, organizations or groups thereof that the practitioner expects will use the assurance report.

The responsible party is the person (or persons) responsible for the underlying subject matter.

The practitioner is the auditor who performs the audit.

(ii) A subject matter – this is the phenomenon to be evaluated that has been prepared by the responsible party. It can take many forms including financial performance (e.g. historical financial information), non-financial performance (e.g. key performance indicators), processes (e.g. internal control) and behavior (e.g. compliance with laws and regulations).

(iii) Suitable criteria – the subject matter information is evaluated or measured against benchmarks in order to reach an opinion, for example, the provisions of the Companies Act.

(iv) Evidence – sufficient appropriate evidence needs to be gathered to support the required level of assurance.

(v) An assurance report – a report containing the practitioner's opinion is issued to the intended user.

(b) **Possible indicators of low risk clients:**

- Good long-term prospects
- Well-financed
- Strong internal controls
- Conservative, prudent accounting policies
- Competent, honest management
- Few unusual transactions

Mwelwa risk status:

Mwelwa Plc has strong internal controls and its long-term prospects are good. A number of institutional investors have expressed interest in investing in Mwelwa Plc. In addition, its high gearing is being managed properly by competent, honest Management. The company is therefore not high risk.

(c) **Unmodified and modified opinions**

An unmodified opinion is the opinion expressed by the auditor when the auditor concludes that the financial statements are prepared, in all material respects, in accordance with the applicable financial reporting framework.

ISA 700 (Revised) *Forming an opinion and reporting on financial statements* states that the auditor shall express an unmodified opinion when the auditor concludes that the financial statements are prepared, in all material respects, in accordance with the applicable financial reporting framework.

On the other hand, if the auditor concludes that the financial statements as a whole are not free from material misstatement or cannot obtain sufficient appropriate audit evidence to make this conclusion, the auditor must modify the opinion in accordance with ISA 705 (Revised) *Modifications to the opinion in the independent auditor's report.*

The standard identifies three possible types of modifications as follows:

- A qualified opinion
- An adverse opinion
- A disclaimer of opinion

(d) **Impact on the auditor's report of inventory destroyed:**

The destruction of the inventory of Mwelwa Ltd after the period end is an example of a subsequent event since it was destroyed after the year end (31 March 2019). IAS 10 *Events after the reporting period* deals with the treatment in the financial statements events while ISA 560 *Subsequent events* gives auditing guidance.

Subsequent events can either be adjusting or non-adjusting events. The destruction of the inventory in Mwelwa Plc is a non-adjusting event since it is indicative of conditions that arose after the reporting period. This will require disclosure if material.

The inventory destroyed by fire of K300,000 represents 3.3% (300,000/9,000,000 X 100%) of profit before tax and 0.3% (300,000/100,000,000 X 100%) of total assets. This is not material and therefore the audit opinion will be unmodified.

SOLUTION FIVE

(a) **Importance of cut-off tests for bank balances:**

Cut-off audit tests involves checking whether transactions have been recorded in the correct period. The cut-off audit tests are used in the audit of bank balances to ensure that there is no window dressing.

Window dressing in the context of bank balances is usually manifested as an attempt to overstate the liquidity of the company by:

- Keeping the cash book open to take credit for remittances actually received after the year-end, thus enhancing the balance at bank and reducing receivables.
- Recording cheques paid in the period under review which are not actually dispatched until after the year-end, thus decreasing the balance at bank and reducing liabilities.

A combination of the two can contrive to present an artificially healthy looking current ratio. It is therefore possible that Jump Ltd could be involved in window dressing activities in order to satisfy the bank's condition. Cut-off audit tests must therefore be carefully planned, to ensure that Jump Ltd.'s bank balances are fairly stated in the financial statements.

(b) Cut-off tests for bank balances:

- Obtaining a list of outstanding lodgments and checking whether these are reflected on the bank statement in the first week of January 2020. For those lodgments not reflected, the auditors should examine the dates on the deposit slips.

- Obtaining a list of unpresented cheques and if there appears to be a particularly large number of outstanding cheques at the year-end, this could indicate the possibility of window dressing. The auditors should check whether these were cleared within January 2020. If not, this may indicate that dispatch occurred after the year-end and the auditor should check the dispatch dates in the register.

(c) Why the audit of inventory normally poses problems for the auditors

The audit of inventory can pose problems for auditors due to the following:

(i) The nature of the inventory, especially in supermarkets, since the inventory consist of a variety of items. Measurement and verifying condition of the inventory may require expert assistance and could also be time-consuming.

(ii) Inventory is usually a material value in the statement of financial position. An assessment of the internal controls in place must be conducted by an experienced auditor since this will determine the audit approach to take.

(iii) Closing inventory is not part of the double entry bookkeeping system and it may not be possible for the auditors to use directional testing.

(iv) Inventory is susceptible to theft and the inventory balance may include items which do not exist. Extra care is therefore required especially when attending inventory count.

(v) Inventory in the year-end financial statements is the value of inventory that exists at the period end. There is a risk that cut off is not properly carries out around the year end.

(d) Audit procedures after the inventory count:

(i) Trace items that were test counted during the inventory count to final inventory sheets.

(ii) Observe whether all count records have been included in final inventory sheets.

(iii) Inspect final inventory sheets to ensure they are supported by count records.

(iv) Ensure that inventory records have been adjusted to the amounts physically counted or measured, and that differences have investigated.

(v) Confirm cut-off by using details of the last serial number of goods inwards and outwards notes and details of movements during the count.

(vi) Review replies from third parties about inventory held by or for them.

(vii) Confirm Jump Ltd.'s final valuation of inventory has been calculated correctly according to IAS 2 *Inventory* guidelines.

(viii) Follow up queries and notify problems to management.

END OF SOLUTIONS

CHARTERED ACCOUNTANT ZAMBIA

APPLICATION LEVEL

CA 2.4: TAXATION

THURSDAY 17 SEPTEMBER 2020

TOTAL MARKS – 100 TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes planning time. Use it to study the examination paper carefully so that you understand what to do in each question.

2. This paper is divided into TWO (2) sections:

   Section A: ONE (1) Compulsory Question.
   Section B: Four (4) Optional Questions. Attempt any THREE (3) questions

3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name **MUST** not appear anywhere on your answer booklet.

4. Do NOT write in pencil (except for graphs and diagrams).

5. **Cell phones** are **NOT** allowed in the examination room.

6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.

7. All workings must be done in the answer booklet.

8. Present legible and tidy work.

9. Graph paper (if required) is provided at the end of the answer booklet.

10. A Taxation table is provided from page 2 to page 6 of the question paper.

DO NOT OPEN THIS QUESTION PAPER UNTIL YOU ARE INSTRUCTED BY THE INVIGILATOR.

Taxation table for paper CA 2.4 – Taxation (2020 Examinations)

Income Tax

Standard personal income tax rates

Income band	Taxable amount	Rate
K1 to K39,600	first K39,600	0%
K39,601 to 49,200	next K9,600	25%
K49,201 to K74,400	next K25,200	30%
Over K74,400		37.5%

Income from farming for individuals

K1 to K39,600	first K39,600	0%
Over K39,600		10%

Company Income Tax rates

On income from manufacturing and other	35%
On income from farming	10%
On income of Banks and other Financial Institutions	35%
On income from mineral processing	30%
On income from mining operations	30%
On income from manufacture of products made out of copper cathodes	15%

Mineral Royalty

Mineral Royalty on Copper

Range of Norm Price	Mineral Royalty Rate
Less than US$4,500	5.5% of norm value
From US$4,500 to less than US$6,000	6.5% of norm value
From US$6,000 to less than US$7,500	7.5% of norm value
From US$7,500 to less than US$9,000	8.5% of norm value
From US$9,000 and above	10% of norm value

Mineral Royalty on other minerals

Type of mineral	Mineral Royalty Rate
Base Metals (Other than Copper, Cobalt and Vanadium)	5% of norm value
Cobalt and Vanadium	8% of norm value
Energy and Industrial Minerals	5% of gross value
Gemstones	6% of gross value
Precious Metals	6% of norm value

Capital Allowances

Implements, plant and machinery and commercial vehicles:

Wear and Tear Allowance –	Plant used normally	25%
	Used in Manufacturing and Leasing	50%
	Used in farming and agro-processing	100%
	Used in mining operations	20%

Non- commercial vehicles

Wear and Tear Allowance	20%

Industrial Buildings:

Wear and Tear Allowance	5%
Initial Allowance	10%
Investment Allowance	10%

Low Cost Housing **(Cost up to K20,000)**

Wear and Tear Allowance	10%
Initial Allowance	10%

Commercial Buildings

Wear and Tear Allowance	2%

Farming Allowances

Development Allowance	10%
Farm Works Allowance	100%
Farm Improvement Allowance	100%

Presumptive Taxes

Turnover Tax 4%

Presumptive Tax for Transporters

Seating capacity	**Tax per annum**	**Tax per day**
	K	K
From 64 passengers and over	10,800	29.60
From 50 to 63 passengers	9,000	24.70
From 36 to 49 passengers	7,200	19.70
From 22 to 35 passengers	5,400	14.80
From 18 to 21 passengers	3,600	9.90
From 12 to 17 passengers	1,800	4.90
Less than 12 passengers and taxis	900	2.40

Property Transfer Tax

Rate of Tax on Realised Value of Land, Land and Buildings and shares	5%
Rate of Tax on Realised Value on a transfer or sale of a mining right	10%
Rate of Tax on Realised Value on a transfer of Intellectual Property	5%

Value Added Tax

Registration threshold	K800,000
Standard Value Added Tax Rate (on VAT exclusive turnover)	16%

Customs and Excise duties on used motor vehicles

	Aged below 5 years		Aged 5 years and over	
Motor vehicles for the transport of ten or more persons, including the driver	**Customs duty**	**Excise duty**	**Customs duty**	**Excise duty**
	K	**K**	**K**	**K**
Sitting capacity of 10 but not exceeding 14 persons including the driver	17,778	22,223	8,889	11,112
Sitting capacity exceeding 14 but not exceeding 32 persons	38,924	0	13,840	0
Sitting capacity of 33 but not exceeding 44 persons	86,497	0	19,462	0
Sitting capacity exceeding 44 persons	108,121	0	43,248	0

	Aged below 5 years		Aged 5 years and over	
Motor cars and other motor vehicles principally designed for the transport of persons including station wagons and racing cars	**Customs duty**	**Excise duty**	**Customs duty**	**Excise duty**
	K	**K**	**K**	**K**
Sedans				
cylinder capacity not exceeding 1000 cc	12,490	10,824	7,136	6,185
Cylinder capacity exceeding 1000 cc but not exceeding 1500 cc	16,058	13,917	8,564	7,422
Cylinder capacity exceeding 1500 cc but not exceeding 2500 cc	16,545	21,508	8,423	10,950
Cylinder capacity exceeding 2500 cc but not exceeding 3000 cc	18,049	23,463	10,528	13,687
Cylinder capacity exceeding 3000 cc	22,561	29,329	12,032	15,642
Hatchbacks				
cylinder capacity not exceeding 1000 cc	10,705	9,278	7,136	6,185
Cylinder capacity exceeding 1000 cc but not exceeding 1500 cc	14,274	12,371	8,564	7,422
Cylinder capacity exceeding 1500 cc but not exceeding 2500 cc	15,041	19,553	8,423	10,950
Cylinder capacity exceeding 2500 cc but not exceeding 3000 cc	16,545	21,508	10,523	13,687
Cylinder capacity exceeding 3000 cc	19,553	25,419	12,032	15,642
Station wagons				
cylinder capacity not exceeding 2500 cc	16,545	21,508	9,024	11,731
Cylinder capacity exceeding 2500 cc but not exceeding 3000 cc	18,049	23,463	13,357	17,598
Cylinder capacity exceeding 3000 cc but not exceeding 2500 cc	22,561	29,329	18,049	23,463

SUVs				
Cylinder capacity not exceeding 2500 cc	21,057	27,374	9,024	11,732
Cylinder capacity exceeding 2500 cc but not exceeding 3000 cc	24,065	31,284	13,357	17,598
Cylinder capacity exceeding 3000 cc	28,577	37,150	18,049	23,463
	Aged below 5 years		**Aged 5 years and over**	
Motor vehicles for the transport of goods -with compression-ignition internal combustion piston engine (diesel or semi-diesel):	**Customs duty**	**Excise duty**	**Customs duty**	**Excise duty**
	K	**K**	**K**	**K**
Single cab				
GVW exceeding 1.0 tonne but not exceeding 1.5 tonnes	21,926	9,501	8,770	3,801
GVW exceeding 1.5 tonnes but not exceeding 3.0 tonnes	26,311	11,402	15,348	6,651
GVW exceeding 3.0 tonnes but not exceeding 5.0 tonnes	30,697	13,302	17,541	7,601
Double cabs GVW exceeding 3 tonnes but not exceeding 5 tonnes	30,274	0	24,119	10,452
Double cabs GVW exceeding 3.0 tonnes but not exceeding 5.0 tonnes, **with spark ignition internal combustion piston engine**	30,697	13,302	24,119	10,452
Panel Vans				
GVW exceeding 1.0 tonne but not exceeding 1.5 tonnes	15,348	6,651	8,770	3,801
GVW exceeding 1.5 tonnes but not exceeding 3.0 tonnes	17,541	7,601	15,348	6,651
GVW exceeding 3.0 tonnes but not exceeding 5.0 tonnes	21,926	9,501	17,541	7,601
Trucks				
GVW up to 2 tonnes	21,926	9,501	10,963	4,751
GVW exceeding 2.0 tonnes but not exceeding 5.0 tonnes	28,504	12,352	13,156	5,701
GVW exceeding 5.0 tonnes but not exceeding 10.0 tonnes	24,724	18,955	10,817	8,293
GVW exceeding 10.0 tonnes but not exceeding 20.0 tonnes	30,905	23,694	11,744	9,004
GVW exceeding 20 tonnes	51,898	0	19,461	0
GVW exceeding 20 tonnes, **with spark ignition internal combustion piston engine**	37,086	28,432	13,907	10,662

Surtax

On all motor vehicles aged more than five (5) years from year of manufacture	K2,000

Customs and Excise on New Motor vehicles

Duty rates on:

1. Motor cars and other motor vehicles (including station wagons) principally designed for the transport of less than ten persons, including the driver:

Customs Duty:	
Percentage of Value for Duty Purposes	30%
Minimum Specific Customs Duty	K6,000
Excise Duty:	
Percentage of Value for Duty Purposes for Excise Duty Purposes	
Cylinder capacity of 1500 cc and less	20%
Cylinder Capacity of more than 1500 cc	30%

2. Pick-ups and trucks/lorries with gross weight not exceeding 20 tones:

Customs Duty	
Percentage of Value for Duty Purposes	15%
Minimum specific Customs Duty	K6,000
Excise Duty:	
Percentage of Value for Duty Purposes for Excise Duty Purposes	10%

3. Buses/coaches for the transport of more than ten persons

Customs Duty:	
Percentage of Value for Duty Purposes	15%
Minimum Specific Customs Duty	K6,000
Excise Duty:	
Percentage of Value for Duty Purposes for Excise Duty Purposes	
Seating Capacity of 16 persons and less	25%
Seating Capacity of 16 persons and more	0%

4. **Trucks/lorries with gross weight exceeding 20 tonnes**

Customs Duty:	
Percentage of Value for Duty Purposes	15%
Excise Duty:	
Percentage of Value for Duty Purposes for Excise Duty Purposes	0%

SECTION A

This question is compulsory and MUST be attempted.

QUESTION ONE

Kamuchanga Manufacturing Company (KMC) plc is a Zambian resident company engaged in manufacturing operations which is registered for Value Added Tax. The company listed its shares on the Lusaka Securities Exchange two (2) years ago when it offered 25% of the ordinary shares to indigenous Zambians. In March 2020, the company issued a further 20% of its ordinary shares to indigenous Zambians and as a result 45% of the shares of the company are now held by indigenous Zambians.

KMC plc made a profit for the year, as per accounts, of K5,702,080 for the year ended 31 December 2020. This profit figure was arrived at after taking into account the following:

(1) Investment income comprising rental income of K180,000, royalties amounting to K136,000, dividends from shares of non-mining companies listed on the LuSE amounting to K124,000, fixed deposit interest K23,800 and management and consultancy fees of K289,000. These were the actual amounts received in each case, withholding tax was deducted at source and paid on the appropriate due dates.

(2) Staff costs which included an annual salary for the Marketing Director of K650,000 who is accommodated in a company owned house for which he does not pay rent, employee training costs of K160,000, employee relocation costs of K340,000, loans to employees written off amounting to K380,000, employees golf club subscriptions of K18,000, employees professional subscriptions of K60,000, wages for casual workers of K56,000, fines of K25,000 for breaching labour laws and other employee's salaries of K29,274,000.

(3) Legal fees which included legal fees in connection with issue of ordinary shares to indigenous Zambians of K13,800, legal fees for trade debt collection of K14,400, legal fees for recovery of loans from former employees of K10,500, a premium paid to acquire the right of use of a popular brand name for a period of 20 years, amounting to K300,000 and legal fees incurred on the renewal of a lease of business premises of K18,500.

(4) Bad debts expenses which included:

	K
Trade debts written off	88,000
Increase in specific provision	16,000
Decrease in general provision	(36,800)
Trade debts previously written off subsequently recovered	(17,500)
	49,700

(5) Miscellaneous operating expenses which included:

	K
Selling and marketing expenses	275,600
Theft of money by the finance director	320,000
Theft of goods by the company's security guards	50,000
Depreciation of tangible non-current assets	168,000
Loss on disposal of assets	60,000
Christmas gifts to employees (food hampers costing K180 each)	18,000
Gifts to customers of Kamuchanga plc's branded wall clocks (costing K250 per customer)	30,000
Provisional income tax	2,023,000
	2,944,600

The provisional income tax is the amount of provisional income tax paid during the tax year 2020.

Other information:

Implements, plant and machinery

On 1 January 2020, company held the following implements, plant and machinery which were acquired at the following VAT inclusive costs and brought into use on the following dates:

Date	Asset	VAT inclusive cost
		K
10 March 2017	Delivery van (2,000cc)	104,400
20 April 2017	Old manufacturing equipment	928,000
16 October 2018	General plant and equipment	580,000
19 March 2019	Pool car (1,600cc)	127,600

During the year ended 31 December 2020, the following purchases and disposals of assets took place:

Date		VAT inclusive Cost/(Proceeds)
		K
4 March 2020	Purchased Toyota Camry car (1,700cc)	174,000
16 July 2020	Purchased Toyota Fortuner motor car (2,600cc)	270,000
18 August 2020	Purchased new manufacturing Plant	1,044,000
12 October 2020	Sold the delivery van	(58,000)
15 November 2020	Sold old Manufacturing equipment	348,000
20 Dec 2020	Sold pool car	150,600

The Toyota Camry car is the Human Resources Manager's personal to holder motor car and the Toyota Fortuner motor car is the Marketing Director's personal to holder motor car.

Buildings

On 1 February 2020 the company completed the construction of a building at VAT exclusive cost of K5,000,000 which was brought into use immediately. The building comprised the following items:

	K
Land	1,500,000
Engineering drawing office	400,000
Showroom	200,000
Factory	2,600,000
Administration offices	300,000
	5,000,000

Required:

(a) Calculate the maximum capital allowances claimable by Kamuchanga plc on the following assets held in the tax year 2020:

(i) The capital allowances on implements, plant and machinery (12 marks)

(ii) The capital allowances on buildings (6 marks)

(b) Compute the final taxable business profit after capital allowances for Kamuchanga Plc for the tax year 2020. (14 marks)

(c) Compute the income tax payable by the company for the charge year 2020. (8 marks)

[Total: 40 Marks]

SECTION B

There are FOUR (4) questions in this section. Attempt Any THREE (3) questions.

QUESTION TWO

Keziah Chakaba is employed as an Information Technology Technician at Itex Solutions (Z) Ltd, a Zambian resident subsidiary of DeltexCorp, a foreign based Multinational entity. She is engaged on a three (3) year renewable fixed term contract which commenced on 1 January 2018 and will end on 31 December 2020.

From the commencement of her contract, her monthly basic salary has always been K12,000 per month. However, from 1 April 2020, Keziah was awarded a salary increment of 20% of her basic salary, which was effected that month. She is entitled to gratuity of 30% of her basic salary which is payable on the expiry of her contract. Her contract of employment additionally provides for the following:

(1) A monthly housing allowance of 25% of her monthly basic salary and a monthly transport allowance of 5% of her monthly basic salary. The company further pays Keziah's monthly life assurance scheme premiums of K300 each month.

(2) The company provides her with free meals from the company's staff canteen, which costs the company K2,000 per month.

(3) In January 2020, she was provided with a laptop which the company acquired at a cost of K10,500. She uses the laptop both for employment purposes and private purposes. It has been agreed that her private use of the laptop is 30%.

(4) In February 2020, the company paid her an educational grant of K25,000, to help her pursue a Master's Degree in Computer Science.

(5) In March 2020, the company provided her with an interest free staff loan of K36,000, to help her finance the purchase of a residential plot. The loan is repayable in twelve equal monthly instalments commencing on 31 March 2020,

(6) The company made employer's NAPSA contributions amounting to K897 per month on her behalf in the tax year 2020.

(7) On the expiry of her contract on 31 December 2020, the company paid her cash in lieu of leave amounting to K19,200, as well as her gratuity. Her contract with Itex Solutions (Z) Ltd was renewed for a further three (3) years starting from 1 January 2021.

(8) During the year to 31 December 2020, the company made the following monthly deductions from her gross earnings:

- Trade Union contributions of K200 per month.
- Monthly loan deductions of K3,000 in relation to the staff loan.
- Employee's NAPSA contributions amounting to K897 per month.
- Pay As You Earn totalling K62,790, relating to the tax year 2020.

(9) Keziah made the following additional payments from her gross earnings in the tax year 2020:

- University tuition fees of K35,000.
- Donations to approved public benefit organisations amounting to K6,000,
- Monthly subscription fees of K350 to a local fitness gym.

Other income:

(1) During the tax year 2020, Keziah received the following income from the investments she has made in Zambian resident companies:

- Copy right royalties of K21,250 (net)
- Fixed deposit interest amounting to K6,000 (gross)
- Dividends from companies listed on the LuSE of K12,750 (gross).

(2) Shortly after joining Itex Solutions (Z) Ltd, Keziah had made investments in the shares and debentures of the foreign based parent entity, DeltexCorp. In December 2020 dividends of K12,000 and debenture interest income of K18,000 were deposited into her bank account in respect of these investments.

The dividends were net of withholding tax at the rate of 40% deducted at source in the foreign country in which DeltexCorp operates, whilst the debenture interest was net of withholding tax at the rate of 20% deducted at source in the same foreign country.

There is no double taxation treaty between Zambia and the foreign country in which DeltexCorp operates and any double taxation relief available is given by means of unilateral credit relief.

Required:

Calculate the amount of income tax payable by Keziah in the tax year 2020. **You should clearly indicate in your computation, by the use of a zero (0), any benefits provided to Keziah in the tax year 2020, which are not taxable.**

[Total: 20 Marks]

QUESTION THREE

Mulundu Mining Corporation (MMC) Plc is a Zambian resident company engaged in the extraction of copper on the Copperbelt Province of Zambia. The following is the statement of profit or loss for the year ended 31 December 2020:

		K
Revenue	Note 1	46,000,000
Cost of sales	Note 2	(25,300,000)
Gross profit		20,700,000
Operating expenses	Note 3	(10,420,000)
Interest expenses	Note 4	(2,460,000)
Other income	Note 5	600,000
Profit before tax		8,420,000
Income tax expense	Note 6	(2,526,000)
Profit for the year		5,894,000

Additional information

1. The amount of revenue in the statement of profit or loss is the norm value for mineral royalty tax purposes. The copper prices as quoted by the London Metal Exchange averaged US$5,800 per tonne throughout the tax year 2020.
2. Cost of sales include mineral royalty tax, Depreciation charges K1,400,000 and amortization of intangible assets K300,000. The balance consists of revenue expenses which are all allowable for tax purposes.
3. The operating expenses include the following:

	K
Salaries and wages	4,689,000
Entertaining customers and suppliers	400,000
Construction of link road within mine township	1,800,000
Construction of community hospital within mine township	2,600,000
Other revenue tax allowable expenses	931,000
	10,420,000

4. The interest expenses were incurred on loans from Zambian financial institutions which are not related to MMC Plc. The interest expenses amounted to 20.53% of the profit before interest, tax, depreciation and amortization.
5. Other income include profit on disposal of old mining equipment K120,000, royalties K340,000 (net) and dividends from Zambian non-mining companies K140,000 (net). Withholding tax has been deducted at source where appropriate.
6. The amount of income tax expense represents the provisional income tax paid during the year ended 31 December 2020.
7. On 1 January 2020, MMC plc had a tax adjusted loss incurred during the year ended 31 December 2019 amounting to K3,600,000.

8. On 1 January 2020, MMC Plc held the following assets qualifying for capital allowances. All of the assets were acquired locally from Zambian suppliers:

	Income Tax Value at 1 January 2020	Original cost
	K	K
Old mining equipment	480,000	2,400,000
Haulage Trucks	2,360,000	4,720,000
Toyota Fortuner car (3000cc)	240,000	600,000
Toyota Prado car (2600cc)	270,000	450,000

During the year ended 31 December 2020, the company entered into the following capital transactions:

	Cost/(proceeds)
	K
Bought office building at	5,000,000
Sold old mining equipment for	(780,000)
Bought new mining equipment	4,000,000

The Toyota Fortuner car and Toyota Prado car are used by the Chief Executive Officer and Operations Director respectively on personal-to-holder basis. The private usage in the motor cars is estimated to be 45% by each individual.

9. The following are the Bank of Zambia average mid-rates:

Year	ZMW/US$1
2019	13.80
2020	14.40

10. The following indexation formula may be used where applicable:

$$\left(1 + \frac{(R2 - R1)}{R1}\right)$$

Required:

(a) Compute the taxable mining profits for MMC plc for the tax year 2020. (16 marks)

(b) Calculate the amount of company income tax payable by MMC Plc for the tax year 2020. (4 marks)

[Total: 20 Marks]

QUESTION FOUR

You are employed in the Tax department of a firm of Chartered Accountants. The tax manager has presented you with the following information that has been extracted from the files of the following clients of your firm:

Brian Ntebeka

Ntebeka, a sole trader, imported a second-hand panel van with a gross vehicle weight (GVW) of 2.5 tonnes, for exclusive use in his business in February 2020. The van was manufactured in Japan in January 2010. The cost of the van was $3,700 (free on board). He incurred insurance costs of $400, transportation costs of $900 in transit up to the port of Dar es salaam where clearing and forwarding costs of $200 were incurred. He incurred further incidental costs of transporting the vehicle from Nakonde border post to Kapiri Mposhi amounting to $1,200. In Kapiri vehicle registration fees were K1500, whilst motor car insurance costs were K3,500.

The exchange rate provided by the Commissioner General at the time of importation of the vehicle was K14.50 per US$; however the exchange rates quoted in a local Bureau De Change was K14.80 per US$

Cactus Ltd

Cactus Ltd, is a VAT registered company making zero rated, standard rated and exempt supplies. During the month of February 2020, the company made zero rated sales of K630,000 which represented 15% of the total sales made in the month, standard rated sales represented 65% of the total sales made in the month and the remainder of the sales were exempt supplies.

The following expenditure was incurred during the month of February 2020:

- Total purchases were K2,088,000 comprising standard rated purchases of K1,670,400 (VAT inclusive) and exempt purchases of K417,600.
- Purchase of office furniture at a cost of K40,600 (VAT inclusive)
- Purchase of a pool car for K150,800 (VAT inclusive)
- Purchase of a personal to holder motor car (with 50% private use by the Managing Director) at a cost of K162,400 (VAT inclusive)
- Overheads of K165,418 (VAT inclusive). These comprised petrol for the personal to holder motor car of K18,560, petrol for pool cars of K20,880, diesel for the company's vehicles of K34,800, entertainment expenses for employees of K5,338, electricity bills for the managing director's accommodation of K4,640 and other general business overheads of K81,200.

Other Information:

(1) The input VAT on the overheads cannot be attributed directly to neither taxable nor exempt supplies.

(2) Unless stated otherwise all of the above figures are exclusive of VAT.

Required:

(a) Calculate the customs value of the panel van and the total import taxes paid by Ntebeka on the importation of the van. (8 marks)

(b) Compute the value added tax payable by Cactus Ltd for the month of February 2020. **You should clearly indicate in your computation, by the use of a zero (0), any items on which VAT is not chargeable or not recoverable.** (12 marks)

[Total: 20 Marks]

QUESTION FIVE

You are employed in the Tax department of a firm of Chartered Accountants. Your firm is preparing a training workshop for newly recruited trainee accountants. The Tax Manager has asked you to develop notes including enough details on the following topics which will be used in a training workshop for newly recruited trainee accountants which your firm will be conducting soon.

(1) The qualities of a good taxation system

(2) The criteria used to determine the residence of taxable persons

The Tax Manager has additionally asked you to deal with the tax affairs of Kaoma limited, a new client of your firm. The Directors of Kaoma Ltd wish your firm to represent the company in an income tax dispute with the ZRA, which is before the Tax Appeals Tribunal. The company appealed against the Commissioner General's revised income tax assessment for the tax year 2019. You have just discovered that the Managing Director of Kaoma Limited, Mulisha Chishala is a close friend of yours. Mulisha has suggested that if Kaoma Limited wins the case the company will pay you a personal token of appreciation of K70,000, for the work you will do on the assignment.

Required:

(a) Prepare notes to be used in the training workshop:

(i) Explaining any four (4) qualities of a good taxation system. (4 marks)

(ii) Explaining the criteria used to determine the residence of both individuals and companies for tax purposes. (5 marks)

(b) In relation to Kaoma Ltd:

(i) Explain the fundamental principle of objectivity and discuss how it will apply in the provision of the services requested by Kaoma Limited. (5 marks)

(iii) Explain the threats to compliance with the fundamental principle of objectivity you may face in the provision of services requested by Kaoma Limited. (6 marks)

[Total: 20 Marks]

END OF PAPER

SUGGESTED SOLUTIONS

SOLUTION ONE

(a) (i) KAMUCHANGA PLC

COMPUTATION OF CAPITAL ALLOWANCES ON IMPLEMENTS

	K	K
Delivery Van		
Cost (K104,400 x 25/29)	90,000	
Less total allowances (K90,000 x 25% x 3)	(67,500)	
Income Tax Value b/f	22,500	
Proceeds (K58,000 x 25/29)	(50,000)	
Balancing charge	(27,500)	(27,500)
Old Manufacturing equipment		
Income Tax Value b/f	Nil	
Proceeds (K348,000 x 25/29)	(300,000)	
Balancing charge	(300,000)	(300,000)
General Plant		
Wear and tear allowance		
(K580,000 x 25/29) x 25%		125,000
Pool car		
Cost	127,600	
Less capital allowances (K127,600 x 20%)	(25,520)	
Income Tax Value b/f	102,080	
Proceeds (restricted to original cost)	(127,600)	
Balancing charge	(25,520)	(25,520)
Toyota Camry		
Wear and tear allowance		
(K174,000 x 20%)		34,800
Toyota Fortuner		
Wear and tear allowance		
(K270,000 x 20%)		54,000
New Manufacturing Plant		
(K1,044,000 x 25/29) x 50%		450,000
Total capital allowances		310,780

(ii) KAMUCHANGA PLC

COMPUTATION OF CAPITAL ALLOWANCES ON BUILDINGS

Computation of the qualifying cost for IBA purposes

Total cost	5,000,000
Less cost of land	(1,500,000)
	3,500,000

10% of K3,500,000	350,000

The total cost of the non-qualifying part, comprising the showroom and the administration offices of K500,000 (K200,000 + K300,000) exceeds K350,000 and therefore will not qualify for Industrial building allowances and will be classified as commercial buildings.

COMPUTATION OF ALLOWANCES ON BUILDINGS

Engineering drawing office	K
Wear and tear allowance	
K400,000 x5%	20,000
Initial allowance	
K400,000 x 10%	40,000
Investment allowance	
K400,000 x 10%	40,000
Factory	
Wear and tear allowance	
(K2,600,000 x 5%)	130,000
Initial allowance	
K2,600,000 x 10%	260,000
Investment allowance	
K2,600,000 x 10%	260,000
Showroom	
Wear and tear allowance	
K200,000 x 2%	4,000
Administration offices	
Wear and tear allowance	
(K300,000 x 2%)	6,000
Total capital allowances	760,000

(b) KAMUCHANGA PLC

COMPUTATION OF TAXABLE BUSINESS PROFIT FOR THE TAX YEAR 2020

	K	K
Profit for the year		5,702,080
Add:		
Accommodation benefit		
(K650,000 x 30%)	195,000	
Loans to former employees written off	380,000	
Fines for breach of labour laws	25,000	
Legal fees for issue of shares	13,800	
Legal fees for recovery of loans from former employees	10,500	
Premium paid for use of brand name		
[K300,000 – (K300,000/20 years)	285,000	
Theft of money by the Finance Director	320,000	
Depreciation	168,000	
Loss on disposal of assets	60,000	
Gifts of wall clocks to customers	30,000	

Provision income tax	2,023,000	
Personal to holder motor car benefit		
- HRM's Toyota Camry (1,700cc)	18,000	
- Marketing Manager's Fortuner (2,600cc)	30,000	
		3,558,300
		9,260,380
Less:		
Rental income	180,000	
Royalties	136,000	
Dividends	124,000	
Fixed deposit interest	23,800	
Management and consultancy	289,000	
Decrease in general provision	36,800	
Capital allowances on Implements Plant & Machinery	310,780	
Capital allowances on buildings	760,000	
		(1,860,380)
Taxable profits		7,400,000

(c) KAMUCHANGA

COMPANY INCOME TAX COMPUTATION FOR THE TAX YAER 2020

	K
Taxable profits	7,400,000
Royalties	
(K136,000 x 100/85)	160,000
Fixed deposit interest	
(K23,800 x 100/85)	28,000
Management and consultancy	
(K289,000 x 100/85)	340,000
Total Taxable profits	7,928,000
Company income tax	2,378,400
(35% - 5% = 30% x K7,928,000)	
Less Tax already paid:	
Provisional income tax	(2,023,000)
WHT on:	
- Royalties (K160,000 x 15%)	(24,000)
- Fixed deposit interest (K28,000 x 15%)	(4,200)
- Management and consultancy (K340,000 x 15%)	(51,000)
Final Company income tax payable	276,200

SOLUTION TWO

KEZIAH
PERSONAL INCOME TAX COMPUTATION FOR THE TAX YEAR 2020

	K	K
Employment Income		
Salary		
(K12,000 x 3) + (K14,400 x 9)		165,600
Housing allowance		
(K165,600 x 25%)		41,400
Transport allowance		
(K165,600 x 5%)		8,280
Cash in lieu of leave		19,200
Life assurance premiums (K300 x 12)		3,600
Free meals to staff canteen		0
Provision of lap top		0
Educational grant		0
Interest free loan		0
Employer's NAPSA contribution		0
Gratuity		0
Gross emoluments		238,080
Less allowable deductions		
Donations to approved charities		(6,000)
Taxable emoluments		232,080
Investment income		
Copyright royalties		
(K21,250 x 100/85)		25,000
Income from foreign sources		
Dividends from DeltexCorp		
(K12,000 x 100/60)	20,000	
Debenture interest from DeltexCorp		
(K18,000 x 100/80)	22,500	
		42,500
Total assessable income		299,580
Income Tax		
On first K39,600 x 0%		0
On next K9,600 x 25%		2,400
On next K25,200 x 30%		7,560
On excess K299,580 – K74,400) x 37.5%		84,443
Total Zambian Tax liability		94,403
Less tax already paid		
PAYE		(62,790)
Withholding tax on copyrights		
(K25,000 x 15%)		(3,750)
Less Double taxation Relief on:		
- Dividends from DeltexCorp (W1)	6,302	
- Debenture interest from DeltexCorp (W2)	4,500	
		(10,802)
Final income tax payable		17,061

WORKINGS

1. Double taxation relief on the dividends from foreign sources:

   This will be the lower of:

   (i) The foreign tax paid on the dividends:

K20,000 x 40% = K8,000; and

   (ii) The Zambian Tax Charge attributed to the dividends computed as:

$$\left(\frac{K20{,}000}{K299{,}580}\right) x\ K94{,}403$$

= K6,302

   DTR will therefore be K6,302 being the lower amount.

3. Double taxation relief on the debenture interest from foreign sources:

   This will be the lower of:

   (iii) The foreign tax paid on the debenture interest:

K22,500 x 20% = K4,500; and

   (iv) The Zambian Tax Charge computed as:

$$\left(\frac{K22{,}500}{K299{,}580}\right) x\ K94{,}403$$

= K7,090

   DTR will therefore be K4,500 being the lower amount.

SOLUTION THREE

(a) MULUNDU MINING CORPORATION
COMPUTATION OF TAXABLE MINING PROFIT FOR THE TAX YEAR 2020

	K	K
Profit before tax		8,420,000
Add:		
Mineral royalty tax: K46,000,000 x 6.5%	2,990,000	
Depreciation charges	1,400,000	
Amortistion	300,000	
Entertaining customers and suppliers	400,000	
Construction of link road	1,800,000	
Construction of community hospital	2,600,000	
Personal-to-holder car benefit:		
Toyota Fortuner car	40,000	
Toyota Prado car	30,000	
		9,560,000
		17,980,000
Less:		
Profit on disposal	120,000	
Royalties	340,000	
Dividends	140,000	
Capital allowances (w1)	2,870,000	
		(3,470,000)
		14,510,000
Less:		
Loss relief (w2)		(3,756,522)
Final taxable mining profit		10,753,478

(b) MULUNDU MINING CORPORATION
COMPANY INCOME TAX COMPUTATION FOR THE TAX YEAR 2020

	K
Taxable mining profit	10,753,478
Royalties (K340,000 x 100/85)	400,000
Total taxable income	11,153,478
Company income tax on mining profit	
(K10,753,473 x 30%)	3,226,043
Company income tax on non-mining income	
(K400,000 x 35%)	140,000
Income tax liability	3,366,043
Less:	
Provisional income tax paid	(2,526,000)
WHT- Royalties (K400,000 x 15%)	(60,000)
Income tax payable	780,043

Workings

(1) COMPUTATION OF CAPITAL ALLOWANCES

Old mining equipment (K600,000 – K780,000)		(300,000)
Haulage trucks (K4,720,000 x 25%)	1,180,000	
Toyota Fortuner car: K600,000 x 20%		120,000
Toyota Prado car: K450,000 x 20%	90,000	
Office building: K5,000,000 x 2%		100,000
New mining equipment: K4,000,000 x 20%	800,000	
Link road: K1,800,000 x 20%	360,000	
Community hospital: K2,600,000 x 20%		520,000
Total capital allowances		2,870,000

(2) Indexation of loss

$$\frac{(1 + (K14.40 - K13.80))}{K13.80} \times K3,600,000$$

= K3,756,522

This mining loss is less than 50% of the taxable mining profit; therefore the whole loss will be relieved.

SOLUTION FOUR

(a) COMPUTATION OF THE VDP

Purchase cost	$3,700
Insurance	$400
Transportation	$900
Clearing and forwarding costs	$200
	$5,200
Exchange rate	x K14.50
VDP	75,400

COMPUTATION OF IMPORT TAXES

	K	K
VDP for Customs purposes	75,400	
Specific customs duty	15,348	15,348
	90,748	
Specific excise duty	6,651	6,651
Value for import VAT purposes	97,399	
K97,399 x 16%	15,584	15,584
	112,983	
Surtax charge	2,000	2,000
	114,983	
Total import taxes		39,583

(b) CACTUS LIMITED

COMPUTATION OF VAT PAYABLE

	K	K
Output VAT		
Exempt sales		0
Zero rated sales		
(K630,000 x 0%)		0
Standard rated sales		
(K630,000 x 65/15) x 16%		436,800
		436,800
Input VAT		
Exempt purchases	0	
Standard rated purchases		
(K1,670,400 x 4/29)	230,400	
Office furniture		
(K40,600 x 4/29)	5,600	
Pool car (irrecoverable)	0	
Personal to holder motor car (irrecoverable)	0	
Petrol (irrecoverable)	0	
Diesel		
(K34,800 x 4/29 x 90%) x 80%	3,456	
Entertainment expenses (irrecoverable)	0	
Electricity (irrecoverable)	0	
Other general overheads		
(K81,200x 4/29) x 80%	8,960	
		(248,416)
VAT payable		188,384

SOLUTION FIVE

(a) (i) Qualities of a good taxation system

The following are the qualities of a good tax system:

(1) Taxation should be easy and cheap to collect, and fall directly on the ultimate payer.
(2) Taxation should bear as lightly as possible on production. Taxes should not be so high that they make production very expensive.
(3) Taxes should be certain. if tax rules are complex, they can be subverted and evaded. This means that only taxpayers who can afford to pay the specialists will comply.
(4) Taxes should bear equally so as to give no individual an advantage. This means that taxes should be levied on the ability to pay basis.
(5) Taxes should be flexible. This means that taxes should automatically adjust to changes in the rate of inflation
(6) Taxes should be compatible with foreign tax systems

(ii) The Residence of Taxable persons

Individuals

1. An individual is resident in Zambia if he/she is physically present in Zambia for a period of not less than 183 days in a tax year excluding the day of arrival and departure.
2. Individuals who normally live in Zambia are resident and ordinarily resident in Zambia ignoring temporary absences. Additionally, individuals who come to Zambia with the intention of remaining here for more than 12 months or who come with the intention of establishing permanent residence in Zambia are deemed to be residents and ordinarily residents in Zambia.

Companies

A company is resident in Zambia if:

1. It is incorporated or formed in Zambia

2. The place of effective management of its affairs is in Zambia.

3. A company is effectively managed in Zambia if the board of directors or other central management board of the company meets in Zambia for the purposes of making decisions affecting the company.

(b) Ethical issues

(i) Objectivity

Objectivity means that members shall be impartial and not allow prejudice or bias, conflict of interest or the influence of others to override their objective judgement in relation to matters.

In situations where a member, is required to act as an advocate for a client when representing or assisting them before tribunals or courts of law, the member shall ensure that the client is aware that the member has an obligation not to mislead the court or Tribunal and safeguard their professional objectivity.

In the context of your assignment with Kaoma Ltd, you should not allow the relationship with the managing director to override your professional judgement and the appreciation fee should not be accepted.

You should make the directors of Kaoma Limited aware that, you have an obligation not to mislead the Tribunal, but you safeguard your professional objectivity as you provide the services requested for by Kaoma Ltd.

You should additionally notify your supervisor about the offer of the K70,000 to you and ask for advice on how you should deal with the matter.

(ii) Threats

1. Advocacy threat

This threat occurs when the member is asked to represent the client in some way like in the case of Kaoma Limited. This may lead to the member being biased in favour of the client and therefore, the objectivity may be compromised.

2. Self-interest threat

This threat can occur if the member is offered a personal gain by the client like in the case of Kaoma Limited. This may lead to the principle of objectivity to be compromised.

3. Familiarity threat

This threat can occur due to the relationship between the member and the client. In the case of Kaoma Limited the member is related to the managing director which may lead to objectivity being compromised.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

APPLICATION LEVEL

CA 2.5: FINANCIAL MANAGEMENT

FRIDAY 18 SEPTEMBER 2020

TOTAL MARKS – 100; TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading time. Use it to study the examination paper carefully so that you understand what to do in each question.

2. This paper is divided into TWO (2) sections:
   Section A: One (1) Compulsory scenario question.
   Section B: Four (4) Optional scenario Questions. Attempt any Three (3) questions.

3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name must **NOT** appear anywhere on your answer booklet.

4. Do **NOT** write in pencil (except for graphs and diagrams).

5. **Cell Phones** are **NOT** allowed in the Examination Room.

6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.

7. All workings must be done in the answer booklet.

8. Present legible and tidy work.

9. Graph paper (if required) is provided at the end of the answer booklet.

DO NOT OPEN THIS QUESTION PAPER UNTIL YOU ARE INSTRUCTED BY THE INVIGILATOR.

SECTION A

This question is compulsory and must be attempted.

QUESTION ONE

DWINK Ltd has decided to replace four (4) of its major equipment at the manufacturing plant. The equipment is vital to the operations of the company. The company is, however, considering whether to purchase the equipment outright or to use lease financing. According to the board of directors, the option chosen should meet the primary objective of DWINK Ltd which is to increase the wealth of its shareholders.

Outright Purchasing of the machine

Each of the equipment is expected to cost K0.9 million if it is purchased outright, payable immediately. After a period of four (4) years the company expects new technology to make the equipment redundant and the estimated scrap value is K50,000 for each equipment. In addition, if the company decide to replace the equipment at that time, the cost would be significant. Capital allowances for tax purposes are available on the cost of the equipment at the rate of 25% per annum reducing balance. The first full year allowance is available on the equipment but no writing down allowance is available in the year of disposal. The difference between the proceeds and the tax written down value in the year of disposal is allowable or chargeable for tax as appropriate.

Leasing

A financial institution is willing to offer a lease to finance the equipment acquisition. The financial institution has offered two (2) options with respect to leasing. The first option is a finance lease over a period of four (4) years and the annual rental is K337,500 per equipment payable at the end of each year. The second option is an operating lease over a period of four (4) years and annual rentals is K350,000 per each equipment payable at the beginning of each year.

Other Information

DWINK Ltd pays annual corporate tax at the rate of 30%. Annual maintenance costs for the equipment under both the purchasing and the finance lease option is K37,500 for each equipment payable at the end of each year. All lease rentals (for both finance and operating options) can be assumed to be allowable for tax purposes in full in the year of payment. Assume that tax is payable one year in arrears. For the operating lease only, contracts are renewable annually at the discretion of either party. DWINK Ltd has adequate taxable profits to relieve all its costs. The company has asset beta of 0.70 and the gearing level of 40%. The annual pre-tax cost of debt is 8%. The interest rate on government bonds is 5% and the expected market return is 12.8%.

Required:

(a) Calculate the current weighted average cost of capital for DWINK Ltd. (8 marks)

(b) Evaluate the two (2) options available to DWINK Ltd and advise which of the options should be selected. (23 marks)

(c) Discuss how the net present value method of investment appraisal contributes towards the objective of maximizing the wealth of shareholders. (9 marks)

[Total: 40 Marks]

SECTION B

Attempt any THREE (3) questions in this section.

<u>QUESTION TWO</u>

Hollo Ltd sells its goods solely within Zambia. The recently-appointed finance manager of the company has been investigating the financial management of the company and has gathered the following information:

<u>Inventory</u>

The current policy is to order 100,000 units when the inventory level falls to 35,000 units. Forecast demand to meet production requirements during the next year is 625,000 units. The cost of placing and processing an order is K250, while the cost of holding a unit in stores is K0.50 per unit per year. Both costs are expected to be constant during the next year. Orders are received two weeks after being placed with the supplier. You should assume a 50-week year and that demand is constant throughout the year.

<u>Accounts receivable</u>

Customers are allowed 30 days' credit, but the financial statements of Hollo Ltd show that the average accounts receivable period in the last financial year was 75 days. The finance manager also noted that bad debts as a percentage of sales increased in the last financial year from 5% to 8%. All sales are on credit.

<u>Accounts payable</u>

To improve its cash flows, Hollo Ltd has recently disposed some of its fleet of trucks to a finance company and entered into an operating lease agreement to continue using them.

Required:

(a) Discuss the objectives of working capital management and discuss the conflict that may arise between them. (3 marks)

(b) Calculate the cost of the current ordering policy and determine the saving that could be made by using the economic order quantity model. (8 marks)

(c) Discuss ways in which Hollo Ltd could improve the management of accounts receivable. (7 marks)

(d) Discuss two (2) attractions of an operating lease as a source of finance. (2 marks)

[Total: 20 Marks]

QUESTION THREE

Power Tools is a Zambian based manufacturer of hand-held tools. The company is seeking to replace one (1) of its manufacturing machines. There are two (2) sophisticated machines available for purchase from two (2) different suppliers. The expected revenue and costs related to each machine are provided below:

Description	**Machine A**	**Machine B**
	K'000	K'000
Redundancy costs	8,500	Nil
Cost of license	900	Nil
Annual Sales	9,800	10,500
Cost of Machine	3,400	7,400
Annual variable costs	5,500	4,300
Annual fixed costs	700	2,400
Share of existing head office annual expenses	Nil	2,800

The expected life span of each Machine is ten (10) years. The current cost of capital is 10%. If Machine A is selected, the cost of capital will increase by 2% and if Machine B is selected, the cost of capital will increase by 1%.

Required:

(a) Evaluate the proposed investments and advise which machine should be selected based on financial grounds. (12 marks)

(b) Explain the key stages in the capital investment decision making process.

(8 marks)
[Total: 20 Marks]

QUESTION FOUR

MUKE Ltd is a manufacturing company that intends to raise finance for a major investment project by means of a rights issue, and is proposing to issue shares on the basis of 1 for 5 rights issue at a price of K2.30 each. The current annual earnings are K1.9 million and have 6 million ordinary shares in issue with a market price of K2.60 each. In addition, MUKE Ltd has 1 million 15% preference shares in issue, with a nominal value per share of 100 ngwee, and a market value of K1.46. The company has also a K1.5 million irredeemable 12% debentures in issue, with a market price of K800 per K1,000 nominal value. The following information relates to dividends that MUKE Ltd has paid for the past 5 years.

Year	1	2	3	4	5(current)
Dividend per share (ngwee)	8	10.1	10.6	11.5	12

NAPSA currently owns 10,000 shares in MUKE Ltd and is seeking advice on whether or not to take up the proposed rights. The corporate tax rate is 30%.

Required:

(a) Explain the reasons for companies issuing a rights issue and scrip issue, and the effects of such issues on private investors. Your explanation should highlight the difference between rights issue and scrip issue. (8 marks)

(b) Calculate the theoretical value of NAPSA's shareholding if it takes up the rights and if it chooses to sell them. (4 marks)

(c) Calculate the current weighted average cost of capital of MUKE Ltd. (8 marks)

[Total: 20 Marks]

QUESTION FIVE

Choolwe Ltd a listed company has made the following projected financial information for the next four (4) years:

Year	1	2	3	4
Earnings before tax (Million)	200	215	275	296

Choolwe Ltd expects the earnings after tax to grow by 6% after the fourth year. The company has in issue two hundred million ordinary shares. The company's capital structure is represented by 80% equity and 20% debt. The before tax cost of debt is 14% and pays corporate tax at the rate of 30% per year. Choolwe Ltd has an asset beta of 0.91. The risk free rate of return is 7% and market rate of return of 15%. The management of Choolwe Ltd has been debating on the best way to value the business.

Required:

(a) Calculate the value of the company based on the present value of expected earnings. (10 marks)

(b) Discuss the relative merits of the following methods of business valuation:

(i) Asset based valuations

(ii) Price earnings ratio valuations

(iii) Dividend based valuations

(10 marks)

[Total: 20 Marks]

END OF PAPER

Formula Sheet

Economic order quantity

$$= \sqrt{\frac{2C_0D}{C_H}}$$

Miller – Orr Model

$$\text{Return point} = \text{Lower limit} + (\frac{1}{3} \times \text{spread})$$

$$\text{Spread} = 3\left[\frac{\frac{3}{4} \times \text{transaction cost} \times \text{variance of cash flows}}{\text{interest rate}}\right]^{\frac{1}{3}}$$

The Capital Asset Pricing Model

$$E(r_i)=R_f+\beta_i(E(r_m)\text{-}R_f)$$

The asset beta formula

$$\beta_a=\left[\frac{V_e}{(V_e+V_d(1-T))}\beta_e\right]+\left[\frac{V_d(1-T)}{(V_e+V_d(1-T))}\beta_d\right]$$

The Growth Model

$$P_o=\frac{D_o(1+g)}{(r_e\text{-}g)}$$

Gordon's growth approximation

$$g=br_e$$

The weighted average cost of capital

$$WACC=\left[\frac{V_e}{V_e+V_d}\right]k_e+\left[\frac{V_d}{V_e+V_d}\right]k_d(1\text{-}T)$$

The Fisher formula

$$(1+i)=(1+r)(1+h)$$

Purchasing power parity and interest rate parity

$$s_1=S_0 x \frac{(1+h_c)}{(1+h_b)} \qquad f_0=s_0 x \frac{(1+i_c)}{(1+i_b)}$$

Present Value Table

Present value of 1 i.e. $(1 + r)^{-n}$

Where r = discount rate
n = number of periods until payment

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	0·980	0·961	0·943	0·925	0·907	0·890	0·873	0·857	0·842	0·826	2
3	0·971	0·942	0·915	0·889	0·864	0·840	0·816	0·794	0·772	0·751	3
4	0·961	0·924	0·888	0·855	0·823	0·792	0·763	0·735	0·708	0·683	4
5	0·951	0·906	0·863	0·822	0·784	0·747	0·713	0·681	0·650	0·621	5
6	0·942	0·888	0·837	0·790	0·746	0·705	0·666	0·630	0·596	0·564	6
7	0·933	0·871	0·813	0·760	0·711	0·665	0·623	0·583	0·547	0·513	7
8	0·923	0·853	0·789	0·731	0·677	0·627	0·582	0·540	0·502	0·467	8
9	0·914	0·837	0·766	0·703	0·645	0·592	0·544	0·500	0·460	0·424	9
10	0·905	0·820	0·744	0·676	0·614	0·558	0·508	0·463	0·422	0·386	10
11	0·896	0·804	0·722	0·650	0·585	0·527	0·475	0·429	0·388	0·350	11
12	0·887	0·788	0·701	0·625	0·557	0·497	0·444	0·397	0·356	0·319	12
13	0·879	0·773	0·681	0·601	0·530	0·469	0·415	0·368	0·326	0·290	13
14	0·870	0·758	0·661	0·577	0·505	0·442	0·388	0·340	0·299	0·263	14
15	0·861	0·743	0·642	0·555	0·481	0·417	0·362	0·315	0·275	0·239	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	0·812	0·797	0·783	0·769	0·756	0·743	0·731	0·718	0·706	0·694	2
3	0·731	0·712	0·693	0·675	0·658	0·641	0·624	0·609	0·593	0·579	3
4	0·659	0·636	0·613	0·592	0·572	0·552	0·534	0·516	0·499	0·482	4
5	0·593	0·567	0·543	0·519	0·497	0·476	0·456	0·437	0·419	0·402	5
6	0·535	0·507	0·480	0·456	0·432	0·410	0·390	0·370	0·352	0·335	6
7	0·482	0·452	0·425	0·400	0·376	0·354	0·333	0·314	0·296	0·279	7
8	0·434	0·404	0·376	0·351	0·327	0·305	0·285	0·266	0·249	0·233	8
9	0·391	0·361	0·333	0·308	0·284	0·263	0·243	0·225	0·209	0·194	9
10	0·352	0·322	0·295	0·270	0·247	0·227	0·208	0·191	0·176	0·162	10
11	0·317	0·287	0·261	0·237	0·215	0·195	0·178	0·162	0·148	0·135	11
12	0·286	0·257	0·231	0·208	0·187	0·168	0·152	0·137	0·124	0·112	12
13	0·258	0·229	0·204	0·182	0·163	0·145	0·130	0·116	0·104	0·093	13
14	0·232	0·205	0·181	0·160	0·141	0·125	0·111	0·099	0·088	0·078	14
15	0·209	0·183	0·160	0·140	0·123	0·108	0·095	0·084	0·074	0·065	15

Annuity Table

Present value of an annuity of 1 i.e. $\frac{1-(1+r)^{-n}}{r}$

Where r = discount rate
n = number of periods

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	1·970	1·942	1·913	1·886	1·859	1·833	1·808	1·783	1·759	1·736	2
3	2·941	2·884	2·829	2·775	2·723	2·673	2·624	2·577	2·531	2·487	3
4	3·902	3·808	3·717	3·630	3·546	3·465	3·387	3·312	3·240	3·170	4
5	4·853	4·713	4·580	4·452	4·329	4·212	4·100	3·993	3·890	3·791	5
6	5·795	5·601	5·417	5·242	5·076	4·917	4·767	4·623	4·486	4·355	6
7	6·728	6·472	6·230	6·002	5·786	5·582	5·389	5·206	5·033	4·868	7
8	7·652	7·325	7·020	6·733	6·463	6·210	5·971	5·747	5·535	5·335	8
9	8·566	8·162	7·786	7·435	7·108	6·802	6·515	6·247	5·995	5·759	9
10	9·471	8·983	8·530	8·111	7·722	7·360	7·024	6·710	6·418	6·145	10
11	10·37	9·787	9·253	8·760	8·306	7·887	7·499	7·139	6·805	6·495	11
12	11·26	10·58	9·954	9·385	8·863	8·384	7·943	7·536	7·161	6·814	12
13	12·13	11·35	10·63	9·986	9·394	8·853	8·358	7·904	7·487	7·103	13
14	13·00	12·11	11·30	10·56	9·899	9·295	8·745	8·244	7·786	7·367	14
15	13·87	12·85	11·94	11·12	10·38	9·712	9·108	8·559	8·061	7·606	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	1·713	1·690	1·668	1·647	1·626	1·605	1·585	1·566	1·547	1·528	2
3	2·444	2·402	2·361	2·322	2·283	2·246	2·210	2·174	2·140	2·106	3
4	3·102	3·037	2·974	2·914	2·855	2·798	2·743	2·690	2·639	2·589	4
5	3·696	3·605	3·517	3·433	3·352	3·274	3·199	3·127	3·058	2·991	5
6	4·231	4·111	3·998	3·889	3·784	3·685	3·589	3·498	3·410	3·326	6
7	4·712	4·564	4·423	4·288	4·160	4·039	3·922	3·812	3·706	3·605	7
8	5·146	4·968	4·799	4·639	4·487	4·344	4·207	4·078	3·954	3·837	8
9	5·537	5·328	5·132	4·946	4·772	4·607	4·451	4·303	4·163	4·031	9
10	5·889	5·650	5·426	5·216	5·019	4·833	4·659	4·494	4·339	4·192	10
11	6·207	5·938	5·687	5·453	5·234	5·029	4·836	4·656	4·486	4·327	11
12	6·492	6·194	5·918	5·660	5·421	5·197	4·988	4·793	4·611	4·439	12
13	6·750	6·424	6·122	5·842	5·583	5·342	5·118	4·910	4·715	4·533	13
14	6·982	6·628	6·302	6·002	5·724	5·468	5·229	5·008	4·802	4·611	14
15	7·191	6·811	6·462	6·142	5·847	5·575	5·324	5·092	4·876	4·675	15

SUGGESTED SOLUTIONS

SOLUTION ONE

(a) Cost of Capital:

Ba=Be x Ve/Ve+Vd(1-t)
0.70 = Be x 0.6/0.6 + 0.4(1-0.3)
0.70=Be0.68
Be=1.03

Cost of equity = 5% + 1.03(12.8%-5%)
Cost of equity = 13.03%
Cost of debt = 8% x (1-0.3) = 5.6%

Cost of Capital = 13.03% x 0.6 + 5.6% x 0.4
<u>Cost of capital = 10%</u>

(b) (i) **Purchase**

	0	*1*	*2*	*3*	*4*	*5*
	K'm	K'm	K'm	K'm	K'm	K'm
Purchase price	(3.6)					
Rental		(0.15)	(0.15)	(0.15)	(0.15)	
Tax on rental			0.045	0.045	0.045	0.045
Tax allowable depreciation (W)		0.27	0.20	0.15	0.11	0.28
Disposal proceeds					0.20	
Net cash flow	(3.6)	0.12	0.95	0.045	0.21	0.33
Discount factor	1.000	0.909	0.826	0.751	0.683	0.621
Present value	(3.6)	10,908	8,054	3,521	14,269	20,289

Net present value = **(K302,959)**

Working
Tax allowable dep

Year of claim	*Depreciation*	*Tax saved*	*Year of tax payment/saving*
	K'm	K'm	
0	0.9	0.27	1
1	0.68	0.20	2
2	0.50	0.15	3
3	0.38	0.11	4
4	0.94	0.28	5

Depreciation
Year 0 360,000 × 25% = 90,000
Yr 1-3 75% of previous year
Yr 4 Balancing allowance = Purchase price – Depreciation – Sale proceeds
= 360,000 – 90,000 – 67,500 – 50,625 – 37,969 – 20,000
= 93,906

(ii) **Finance lease**

Year		Cash flow	Discount value factor	Present
		K'm	10%	K'm
1-4	Rental and maintenance (1.35 + 0.15)	(1.5)	3.170	(4.755)
2-5	Tax on payments	45,000	2.882*	129,690
	Present value			(345,810)

Discount factor= Year 1-5 Factor – Year 1 Factor
= 3.791 – 0.909
= 2.882

(iii) **Operating lease**

Year		*Cash flow*	*Discount factor*	*Present value*
		K'm	10%	K'm
0-5	Rental	(140,000)	3.487	(488,180)
1-6	Tax on rental	42,000	3.170	133,140
	Present value			(355,040)

Based on these calculations, **purchase** would appear to be the best option.

C)

The maximisation of shareholder wealth is usually assumed to be the primary objective of private sector companies. Shareholder wealth comes from dividends and capital gain from the increase in the share price. The price of a company's shares will go up when the company makes attractive profits. However, these profits should be achieved without taking business and financial risks which worry shareholders.

If a company undertakes an investment project with a positive NPV, the market value of the company should increase by the amount of the NPV. In theory, therefore, shareholder wealth is maximized if the company invests in all available projects with a positive NPV.
The cost of capital used in NPV calculations to discount cash flows represents the rate of return that investors expect to be paid for putting funds into the company. It is therefore the minimum return that a company should make from its own investments to earn the cash flows out of which investors can be paid their return.
However, the sometimes long-term nature of NPV may conflict with judgements on a business that are concerned with its (short-term) profits. Managers' remuneration may depend upon the level of annual profits, and they may thus be unwilling to risk large initial expenditure on a project that only offers good returns in the significantly uncertain long-term. There may also be factors that help maximise wealth, but cannot be quantified for NPV purposes, for example investment in a loss-making project for strategic reasons such as obtaining an initial share in an important market.

SOLUTION TWO

2 (a) The objectives of working capital management are profitability and liquidity. The objective of profitability supports the primary financial management objective, which is shareholder wealth maximization. The objective of liquidity ensures that companies are able to meet their liabilities as they fall due, and thus remain in business. However, funds held in the form of cash do not earn a return, while near-liquid assets such as short-term investments earn only a small return. Meeting the objective of liquidity will therefore conflict with the objective of profitability, which is met by investing over the longer term in order to achieve higher returns. Good working capital management therefore needs to achieve a balance between the objectives of profitability and liquidity if shareholder wealth is to be maximized.

2 (b) **Cost of current ordering policy of Hollo Ltd**

Ordering cost = K250 x (625,000/100,000) = K1,563 per year
Weekly demand = 625,000/50 = 12,500 units per week
Consumption during 2 weeks lead time = 12,500 x 2 = 25,000 units
Buffer stock = re-order level less usage during lead time = 35,000 – 25,000 = 10,000 units
Average stock held during the year = 10,000 + (100,000/2) = 60,000 units
Holding cost = 60,000 x K0.50 = K30,000 per year
Total cost =$(Q*C_h)/2+(C_O*D)/Q$ =holding cost+ ordering cost = K1,563 + K30,000 = K31,563 per year

EOQ - based ordering policy

Economic order quantity =$((2C_oD)/C_h)^{1/2}$ =$((2 \times 250 \times 625{,}000)/0.5)^{1/2}$ = 25,000 units
Number of orders per year = 625,000/25,000 = 25 per year
Ordering cost = K250 x 25 = K6,250 per year
Holding cost (ignoring buffer stock) =K0.50 x (25,000/2) = K0.50 x 12,500 = K6,250 per year Holding cost (including buffer stock) = K0.50 x (10,000 + 12,500) = K11,250 per year
Total cost of EOQ-based ordering policy = K6,250 + K11,250 =K17,500 per year
Saving for Hollo Ltd by using EOQ-based ordering policy = K31,563 – K17,500 = K14,063 per year

2 (c) The information gathered by the Financial Manager of Hollo Ltd indicates that two areas of concern in the management of domestic accounts receivable are the increasing level of bad debts as a percentage of credit sales and the excessive credit period being taken by credit customers.

Reducing bad debts

The incidence of bad debts, which has increased from 5% to 8% of credit sales in the last year, can be reduced by assessing the creditworthiness of new customers before offering them credit and Hollo Ltd needs to introduce a policy detailing how this should be done, or review its existing policy, if it has one, since it is clearly not working very well. In order to do this, information about the solvency, character and credit history of new clients is needed. This information can come from a variety of sources, such as bank references, trade references and credit reports from the credit reference agencies. Whether credit is offered to the new customer and the terms of the credit offered can then be based on an explicit and informed assessment of default risk.

Reduction of average accounts receivable period

Customers have taken an average of 75 days credit over the last year rather than the 30 days offered by Hollo Ltd, i.e. more than twice the agreed credit period. As a result, the company will be incurring a substantial opportunity cost, either from the additional interest cost on the short-term financing Hollo Ltd of accounts receivable or from the incremental profit lost by not investing the additional finance tied up by the longer average accounts receivable period. Hollo Ltd needs to find ways to encourage accounts receivable to be settled closer to the agreed date.

Assuming that the credit period offered by Hollo Ltd is in line with that of its competitors, the company should determine whether they too are suffering from similar difficulties with late payers. If they are not, the company should determine in what way its own terms differ from those of its competitors and consider whether offering the same trade terms would have an impact on its accounts receivable. For example, its competitors may offer a discount for early settlement while Hollo Ltd does not and introducing a discount may achieve the desired reduction in the average accounts receivable period. If its competitors are experiencing a similar accounts receivable problem, The company could take the initiative by introducing more favorable early settlement terms and perhaps generate increased business as well as reducing the average accounts receivable period.

Hollo Ltd should also investigate the efficiency with which accounts receivable are managed. Are statements sent regularly to customers? Is an aged accounts receivable analysis produced at the end of each month? Are outstanding accounts receivable contacted regularly to encourage payment? Is credit denied to any overdue accounts seeking further business? Is interest charged on overdue accounts? These are all matters that could be included by Hollo Ltd in a revised policy on accounts receivable management.

2 (d)

Operating leasing is a popular source of finance for companies of all sizes. Operating leases are seen as protection against obsolescence, since they can be cancelled at short notice without a financial penalty. The lessor will replace the leased asset with a more up-to-date model in exchange for continuing leasing business. This flexibility is seen as valuable in the current era of rapid technological change, and can also extend to contract terms and servicing cover.

Operating leasing is often compared to borrowing as a source of finance and offers several attractive features in this area. There is no need to arrange a loan in order to acquire an asset and so the commitment to interest payments can be avoided, existing assets need not be tied up as security and negative effects on return on capital employed can be avoided. Since legal title does not pass from lessor to lessee, the leased asset can be recovered by the lessor in the event of default on lease rentals. Operating leasing can therefore be attractive to small companies or to companies who may find it difficult to raise debt. Operating leasing can also be cheaper than borrowing to buy. There are several reasons why the lessor may be able to acquire the leased asset more cheaply than the lessee, for example by taking advantage of bulk buying, or by having access to lower cost finance by virtue of being a much larger company. The lessor may also be able use tax benefits more effectively than the lessee. A portion of these benefits can be made available to the lessee in the form of lower lease rentals, making operating leasing a more attractive proposition than borrowing. Operating leases also have the attraction of being off-balance sheet financing, in that the finance used to acquire use of the leased asset does not appear in the balance sheet.

SOLUTION THREE

a) Cost of Capital = 10% + 2% = 12%

ACQUISITION	K'm	K'm
Redundancy costs		(8.5)
Cost of license		(0.9)
Annual Sales	9.8	
Annual variable costs	(5.5)	
Annual fixed costs	(0.70)	
Cash flows	3.6	(9.4)
Annuity factor @ 12% for 10 years	5.6502	20.34
NPV		**10.94**

Cost of Capital= 10% + 1% = 11%

MACHINE B	K'm	K'm
Cost of machinery		(7.4)
Annual sales	10.5	
Annual variable costs	(4.3)	
Annual Fixed Cost	(2.4)	
Cash Flows	3.8	(7.4)
Annuity factor @ 11% for 10 years	5.8892	22.38
NPV		**14.98**

Machine B has a higher positive NPV and therefore should be selected on that basis.

b) The company should identify proposals or investment opportunities that are in line the organizational objectives

Investment opportunities or proposals could arise from analysis of strategic choices, analysis of the business environment, research and development, or legal requirements. The key requirement is that investment proposals should support the achievement of organizational objectives.

2. Investment proposals must be screened in order to select appropriate ones

In the real world resources are scarce so it is usual for companies to be restricted in the amount of finance available for capital investment. Companies therefore need to choose between competing investment proposals and select those with the best strategic fit and the most appropriate use of economic resources.

3. Investment proposals must be analyzed and evaluated in order to determine the most attractive

Candidate investment proposals need to be analyzed in depth and evaluated to determine which one offers the most attractive opportunity to achieve organisational objectives i.e maximize shareholder wealth. This is the stage where investment appraisal plays a key role, indicating which investment proposals have the highest net present value.

4. Investment proposals must be approved by an appropriate authority in the organisation

The most suitable investment proposals are passed to the relevant level of authority for consideration and approval. Very large proposals may require approval by the board of directors, while smaller proposals may be approved at divisional level, and so on. Once approval has been given, implementation can begin.

5. Investment proposals must be properly implemented, monitored and reviewed to ensure projects success

The time required to implement the investment proposal or project will depend on its size and complexity, and is likely to be several months. Following implementation, the investment project must be monitored to ensure that the expected results are being achieved and the performance is as expected. The whole of the investment decision-making process should also be reviewed in order to facilitate organisational learning and to improve future investment decisions.

SOLUTION FOUR

(a) **Rights issue**

A rights issue is a way of raising **new share capital** by means of an offer to existing shareholders enabling them to buy more shares, usually at a **price lower** than the **current market price**. Under a rights issue existing shareholders are invited to **subscribe cash** for new shares in proportion to their existing holdings.

Reasons for rights issue

A company may choose to make a rights issue for the following reasons:

(i) Rights issues are **cheaper** than offers for sale to the general public. This is because:

(1) **No prospectus** is **required** (provided that the issue is for less than 10% of the class of shares concerned).
(2) **Administration** is **simpler**.
(3) The **costs** of **underwriting** will be **less**.

The company will however need to **explain** clearly to shareholders the purpose for which the additional funds are required, and **demonstrate** that the **return on capital** will at least be **maintained**, and ideally enhanced as a result of the issue.

(ii) Relative **voting rights** are **unaffected** if shareholders all take up their rights.
(iii) Funds can be raised in this way for any type of **long term investment**, or to **reduce** the level of **capital gearing**.

Impact on private investor
The effects from the point of view of the **private investor** include:

(i) He must decide whether to **take up** or **sell** the rights. If the market is efficient, he should be **no worse off** whether he decides to take up the rights or to sell them. However, if he were to do nothing then he would **forego** the **financial benefits** of the issue.

(ii) If he decides to take up the rights he must have **additional funds** available to invest in the company.
He must therefore decide if this is the **best use** of those funds, and also consider the effect of such an investment on the **risk/return profile** of his investment portfolio.

Scrip issue
A scrip issue (or bonus issue) is an issue of new shares to existing shareholders, by **converting equity reserves** into **issued share capital**. For example, a company with issued share capital of 10m K1 nominal value shares with a market price of K10 and reserves of K20m, could make a scrip issue of one for one. This would have the effect of doubling the number of shares in issue, and thus reducing the theoretical market price of the shares to K5.

Impact on company
The advantage to the company of a scrip issue is that it makes the **shares cheaper** and therefore **more marketable** on the Stock Exchange.

Impact on private investor
From the point of view of the investor, there should be **no change** as a result of a scrip issue. He is not required to subscribe additional capital, unlike the rights issue. Once the issue has taken place, he will own a **larger number of shares** in the company, but the overall value of his holding will be the same as it was before. However, in practice the **share price** may **rise slightly** as a result of improved marketability, and therefore, he may experience a small capital gain.

(b) (i) Theoretical ex-rights price = 1/6 ((5 x 2.60) + 2.30 = K2.55 per share

After the rights issue, NAPSA will own 120,000 shares (100,000 + 20,000) at a price of K2.55. **The theoretical value** of **his holding** will therefore be K306,600.
(ii) **Value of rights** per share = Theoretical ex-rights price – Cost of taking up rights
= K2.55 – K2.30 = 25 ngwee per share
NAPSA has the right to subscribe for an additional 20,000 shares. If it sells these rights it can
expect to receive 2,000 x K0.25 = K5,000.

The required return on equity using the dividend growth model:

$$k_e = \frac{d_0(1+g)}{p_0} + g$$

Where d_0 = Current level of dividends = 12c per share
g = Rate of growth in dividends (see below)
Po = Market prices of shares = K2.6

'g' can be estimated over the four year period as $\left(\sqrt[4]{12/8}\right) - 1 = 0.1067$ ie 11%.

Ke =0.12(1+0.11)/2.6 + 0.11 = 16.12%
Kp = 0.15/1.46 = 10.3%

Kd = 120(1-0.3)/800 = 10.5%

Market Prices:			%
Equity	= 6m x K2.60	= K15.6m	0.85
Preference	= 1m x K1.46	= K1.46m	0.08
Debenture	= 800/1000 x K1.5m	= K1.2m	0.07
		K18.26	

WACC= 16.12% x 0.85 + 10.3% x 0.08 + 10.5% x 0.07 =15.26%

SOLUTION FIVE

– Choolwe

Workings

- Cost of capital

$$\beta a = \beta_e \times \frac{V_e}{V_e + V_d(1-t)}$$

$$0.91 = \beta_e \times \frac{0.80}{0.80 + 0.20(1-0.3)}$$

β_e = 1.07

Cost of equity = 7% + 1.07 (15%-6%)

= 16.6%

Cost of debt = 14% x (1-0.3)

= 9.8%

WACC = 16.6% x 0.80 + 9.8% x 0.20

= 15.24% say 15%

- Present values after year 4

$$CF = \frac{119(1+0.06)}{0.15-0.06} = K1,\ 401.55\text{million}$$

Year	1	2	3	4
	K'm	K'm	K'm	K'm
Earnings before tax	200	215	275	296
tax@30%	-60	-65	-83	-89
Earnings after tax	140	151	193	207
Discount@ 15%	0.870	0.756	0.658	0.572
Present values	122	114	127	119
		K'm		
Total present value (1-4 yr)		480.76		
Total present value (after yr 4)		1,401.55		
Total value of the company		**1,882.31**		
Value per share (K1,882.31m/200m)		9.41		

- **(i) Asset based valuation**

Valuing a company on the **basis of its asset values** alone is rarely appropriate if it is to be sold on a going concern basis. Exceptions would include property investment companies and investment trusts, the market values of the assets of which will bear a close relationship to their earning capacities. PFE is typical of a service companies, a large part of whose value lies in the **skill, knowledge and reputation of its personal.** This is not reflected in the net asset values, and renders this methods quite inappropriate. A potential purchaser of PFE will generally value its intangible assets such as knowledge, expertise, customer/supplier relationships, brands etc more highly than those that can be measured in accounting terms.

Knowledge of the net asset value (NAV) of a company will, however, be important as a **floor value** for a company in financial difficulties or subject to a takeover bid.

Shareholders will be reluctant to sell for less than the net asset value even if future prospect are poor.

- **(ii) P/E ratio valuation**

The P/E ratio measures the **multiple of the current years earning** that is reflected in the **market price** of a share. It is thus a methods that reflects the earnings potential of a company from a market point of view. Provided the marketing is efficient, it is likely to give the most meaningful basis for valuation.

One of the first things to say is that the market price of a share at any point in time is determined by supply and demand forces prevalent during small transactions, and will be dependent upon a lot of factors in addition to a realistic appraisal of future prospects. A downturn in the market, economies and political changes can all affect the day-today price of a share, and thus its prevailing P/E ratio. It is not known whether the share price given for CTT was taken on one particular day, or was some sort of average over a period. the latter would perhaps give a sounder basis from which to compute an applicable P/E ratio.

Even if the P/E ratio of CTT can be taken to be **indicative of its true worth**, using it as a basis to value a smaller, unquoted company in the same industry can be problematic.

The status and marketability of shares in a quoted company have tangible effects value but these are difficult to measure.

The P/E ratio will also be affected by **growth prospects** – the higher the growth expected, the higher the ratio. The growth rate incorporated by the shareholders of CTT is probably based on a more rational approach than that used by the PEE.

If the growth prospects of PEE, as would be perceived by the market, did not coincide with those of **PFE management** it is difficult to see how the P/E ratio should be adjusted for relative levels of growth. The earnings yield method of valuation could however be useful here.

In the valuation in (a) a crude ad

Adjustment has been made to CTT`s P/E ratio to arrive at a ratio to use value PEE`s earnings. This can result in a very inaccurate result if account has not been taken of all the differences involved.

(b)(iii) Dividend based valuation

The dividend valuation model (DVM) is a **cash flow based approach**, which valued the dividends that the shareholders expect to receive from the company by discounting them at their required rate of return. It is perhaps more appropriate for valuing a non-controlling shareholding where the holder has no influence over the level of dividends to be paid than valuing a whole company, where the total cash flows will be of greater relevance.

The practical problems with the dividend valuation model lie mainly in its **assumptions**. Even accepting that the required "perfect capital market" assumptions may be satisfied to some extent, in reality, the formula used in (a) assumes constant growth rates and constants required rates of return in perpetuity.

Determination of an **appropriate cost of equity** is particularly difficult for a unquoted company, and the use of an "equivalent" quoted company`s data carries the same drawbacks as discussed above. Similar problems arise in estimating future growth rates, and the results from the model are highly sensitive to changes in both these inputs.

It is also highly dependent upon the **current year`s dividend** being a representative base from which to start.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

ADVISORY LEVEL

CA 3.1: ADVANCED FINANCIAL REPORTING

MONDAY 14 SEPTEMBER 2020

TOTAL MARKS: 100; TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading time. Use it to study the examination paper carefully so that you understand what to do in each question.

2. This paper is divided into TWO (2) sections:

   Section A: One (1) compulsory scenario question.

   Section B: Four (4) Optional scenario Questions. Attempt any three (3) questions.

3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name must **NOT** appear anywhere on your answer booklet.

4. Do **NOT** write in pencil (except for graphs and diagrams).

5. **Cell Phones** are **NOT** allowed in the Examination Room.

6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.

7. All workings must be done in the answer booklet.

8. Present legible and tidy work.

9. Graph paper (if required) is provided at the end of the answer booklet.

10. Present Value and Annuity tables are attached at the end of this paper.

DO NOT OPEN THIS QUESTION PAPER UNTIL YOU ARE INSTRUCTED BY THE INVIGILATOR.

SECTION A

This Question is Compulsory and must be Attempted

QUESTION ONE

Mulana Plc has control and significant influences in various entities. The following are the consolidated financial statements of Mulana Plc group.

Consolidated statement of profit or loss and other comprehensive income for the year ended 31 December 2019:

	K'000
Revenue	2,242.00
Cost of sales	(838.00)
Gross profit	1,404.00
Distribution cost	(665.00)
Administrative cost	(477.00)
Finance cost	(81.00)
share of associate profit after tax	48.00
Profit before tax	229.00
Taxation	(91.00)
Profit for the period	138.00
Other comprehensive income:	
Revaluation gain	42.00
Net actuarial loss	(12.00)
Total comprehensive Income	168.00
Profit for the period attributable to:	
Equity holders of parent	110.40
Non-controlling interest	27.60
	138.00
Total comprehensive income attributable to:	
Equity holders of parent	140.40
Non-controlling interest	27.60
	168.00

Consolidated statement of financial position as at 31 December:

	2019	2018
	K'000	K'000
Assets		
Non-current		
Property, plant and equipment	1,526.00	1,177.00
Goodwill	158.00	179.00
Investment in associate	507.00	385.00
	2,191.00	1,741.00
Current		
Inventory	184.00	180.00
Trade Receivable	292.00	252.00
Cash & cash equivalents	328.00	342.00
	804.00	774.00
Total Assets	**2,995.00**	**2,515.00**
Equity and liabilities		
Equity		
Equity shares of K5 each	773.00	326.00
Share premium	118.00	28.00
Retained earnings	72.00	(10.00)
	963.00	344.00
Non- controlling interests	178.00	208.00
Total Equity	**1,141.00**	**552.00**
Liabilities		
Non-current		
Employee benefits	403.00	536.00
Deferred tax	48.00	59.00
Obligations under lease	240.00	180.00
Financial liability - Unsecured bank loan	500.00	612.00
	1,191.00	1,387.00
Current		
Trade payables	340.00	234.00
Obligations under lease	90.00	70.00
Taxation	111.00	103.00
Finance cost payable	122.00	169.00
	663.00	576.00
Total Liabilities	**1,854.00**	**1,963.00**
Total equity and liabilities	**2,995.00**	**2,515.00**

The following information is relevant:

(1) On 31 December 2019, Mulana Plc sold 60% out of its 90% shareholding in equity interests of Pama Plc for a cash consideration of K96,000. Mulana Plc acquired equity interest of 90% in Pama Plc for a cash consideration of K180,000 on 1 January 2015. The fair values of Pama Plc's net assets were K190,000 and K170,000 as at 1 January 2015 and 31 December 2019 respectively. The fair value of 30% shareholding in Pama Plc as at 31 December 2019 was K56,000.

The fair value of net assets of Pama Plc of K170,000 as at 31 December 2019 is summarised below:

	K'000
Property, plant and equipment	130
Trade receivables	90
Bank overdraft	(30)
Interest payable	(20)
	170

Mulana Plc retained significant influence in Pama Plc.

There was no acquisition of subsidiary during the year to 31 December 2019.

(2) Mulana Plc acquired 40% of the equity shares in Sapa Plc on 1 October 2019 for a cash consideration of K 41,000. The fair values of the net assets of Sapa Plc were K93,000 and K97,000 as at 1 October 2019 and 31 December 2019 respectively. Mulana Plc had significant influence in Sapa Plc.

Investments in associated companies were impaired by K14,000 as at 31 December 2019.

No investments in associated companies were disposed of during the year.

(3) On 31 December 2019, Mulana Plc acquired another piece of machinery under a 5-year lease arrangement. The machinery had a fair value of K90,000 and an economic useful life of 5 years.,The present value of the lease payments amounted to K90,000. In the same year, Mulana Plc disposed of equipment with a carrying value of K69,000 for cash consideration of K79,000. There were no other disposals of non–current assets.

Revaluation gain relates to buildings which were revalued for the first time in 2018. They had a revaluation loss of K18,000 in that year.

Depreciation charge and interest on lease obligations for the year amounted to K122,000 and K29,000 respectively.

(4) During the year to 31 December 2019, net pension expense charged in profit or loss (as part of operating profit) on the defined benefit scheme amounted to K123,000. The scheme paid out pension benefits of K61,000 during the year.

(5) Consolidated goodwill was impaired during the year to 31 December 2019. This included impairment loss of K4,000 relating to goodwill in Pama Plc.

(6) During the year to 31 December 2019, Mulana Plc issued equity shares for cash. It also paid out dividends of K28,400.

(7) It is Mulana Plc's group policy to value non – controlling interests using proportion of net assets method.

(8) Both other comprehensive income items (Revaluation gain and Net actuarial loss) for the year were taken to share premium.

Required:

Prepare a consolidated statement of cash flow of Mulana Plc Group using the indirect method, for the year ending 31 December 2019 in accordance with the requirements of IAS 7'*Statement of cash flows*'. (40 marks)

[Total: 40 Marks]

SECTION B

Attempt any THREE (3) questions in this section.

<u>QUESTION TWO</u>

(a) Yava Plc is both a wholesaler and retailer of hardware products. It was formed 10 years ago. The management of the company has started implementing growth strategy of the company by investing in other companies, both direct and indirect competitors.

The company made the following investments:

Investment in Wana Limited
Yava Plc acquired 18% of the equity shares in Wana Limited for a cash consideration of K120,000 on 1 January 2019. Yava Plc incurred legal costs of K7,000 to complete the purchase of the shares. Yava Plc intends to sell the shares when their value is atleast K150,000.

During the year to 31 December 2019, Wana Plc made profit after tax of K10,000 and dividends of K8,000 were paid.

The 18% investment in Wana Plc had a fair value of K132,000 as at 31 December 2019. (5 marks)

Investment in Loko Plc
On 1 January 2019, Yava Plc acquired 15% of the equity shares in Loko Plc for a cash consideration of K90,000 when the fair value of net assets of Loko stood at K600,000. The shareholding entitled Yava Plc to two (2) seats on the board of directors and to participating in the financial and operating decisions and policies of Loko Plc.

During the year to 31 December 2019, Loko Plc made profit after tax of K30,000 and paid out dividends of K10,000. (5 marks)

The management of Yava Plc need your advise on the accounting treatment of investments above in their consolidated financial statements.

Required:

Advise the management of Yava Plc how the above investments should be treated in their consolidated financial statements for the year 31 December 2019. **(Your answer should include relevant workings).** (10 marks)

(b) **Sona Plc**

Sona Plc introduced a pension scheme on 28 February 2019 as one of its strategies to promote retention of its employees. However, the scheme became operational on 1 April 2019 immediately after Sona Plc had made a contribution of K900,000. Sona Plc has guaranteed pension benefits which employees will get at retirement age. Further, all the employees were eligible including those who were due for retirement in 2019.

The following information relates to the pension plan for the year to 31 December 2019:

(i) Pension benefits of K100,000 were paid on 30 September 2019.

(ii) Fair value of pension assets were K900,000 and K920,000 on 1 April 2019 and 31 December 2019 respectively.
(iii) Present value of pension obligations amounted to K1,200,000 on 1 April 2019 and K1,400,000 on 31 December 2019.
(iv) Current service costs were equal to K120,000.
(v) The yield on high quality corporate bonds at 1 April 2019 was 10%.

The Directors of Sona Plc need your advice on the accounting treatment of the scheme in their financial statement for the year to 31 December 2019.

Required:

Advise the Directors of Sona Plc on how the pension scheme should be treated in the financial statements of the company for the year to 31 December 2019. **(Your answer should include relevant workings).** (10 marks)

[Total: 20 Marks]

QUESTION THREE

Michelo Plastics Plc was incorporated several years ago with a mission to manufacture high quality household and industrial plastic products for the Zambian market. The company has grown to profitability levels whereby its shares have become highly marketable. Its board of directors have come up with a number of remuneration schemes aimed at improving goal congruency between the company's corporate goals and the personal goals of its directors.

In preparing financial statements for the year ended 31 December 2019, directors are seeking advice on how the following transactions must be treated:

Award of Share Appreciation Rights (SARs) to the senior managers

Michelo Plc entered an agreement with its senior managers under which it agreed to reward them with a cash bonus based on an increase in the price of its equity shares (SARs). Under the arrangement, entered into on 1 October 2018, Michelo has promised to pay each of its five senior managers a cash bonus equal to the increase in the market price of 200,000 Michelo Plc equity shares over a period of at least three (3) years beginning 1 January 2019.

The Senior Managers must remain in service with Michelo Plc throughout the three (3) year period up to 31 December 2021 for them to qualify for the bonus. However, managers can exercise the rights at any time after the three (3) years' performance period but not later than 31 December 2022. The bonus for each manager will be computed as 'increase in the fair value of each share between 1 January 2019 and the exercise date multiplied by 200,000 shares'.

At the time the arrangement was being entered, Michelo Plc had expected that all the five (5) managers would qualify for the bonus. However, although none of the managers left employment with Michelo during the year to 31 December 2019, the company expects that one manager will leave the company over the next two (2) years.

The fair value of each Michelo Plc's equity share has been as follows:

Date	Fair value per share (K)
1 October 2018	4.5
1 January 2019	4.6
31 December 2019	5.1

Costs relating to employee remuneration are generally tax deductible in the period when they fall due for payment to employees.

Michelo plc is seeking advice on how to account for the SARs arrangement including the deferred tax implications of the arrangement in its financial statements for the year to 31 December 2019. (10 marks)

Award of Share options to Executive Directors

On 1 October 2018, Michelo granted each of its four Directors options on 600,000 Michelo Plc equity shares exerciseable at a price of K4.5 per share on 30 June 2022. The rights under the options will only vest with the directors after they remain in service with Michelo over a three year performance period commencing 1 January 2019.

Michelo Plc had initially expected two Directors to leave before end of the performance period. However, as at 31 December 2019, though one director left during the year to 31 December 2019, the company does not expect any further departures over the next two (2) years.

The fair value of each option on Michelo's equity shares has been as follows:

Date	Fair value per option (K)
1 October 2018	0.5
1 January 2019	0.7
31 December 2019	0.8

Michelo plc is seeking advice on how to account for the share options arrangement including the deferred tax implications of the arrangement in its financial statements for the year to 31 December 2019. (10 marks)

Michelo Plc is liable to income tax on its profits at a tax rate of 30%.

Required:

Explain to Michelo Plc's directors how the above arrangements must be accounted for in accordance with the IFRS framework addressing their concerns.

[Total: 20 Marks]

QUESTION FOUR

(a) You work for Fana Chartered Accountants as one of the firm's financial consultants. Your clients have approached you for advice on the accounting treatment of the following transactions in their respective financial statements for the year to 31 December 2019 in accordance with applicable accounting standards.

Client One– Sama Limited

Sama Limited purchased a sugar packaging machine for business use for US$ 10,000 on 30 September 2019 but became operational on 1 October 2019. The company paid US$7,000 of the total cost on the same date and the balance on 20 January 2020.

The company depreciates machinery at an annual rate of 25% on cost with no scrap value.

Date	**Kwacha to US$1**
30 September 2019	11.0000
31 December 2019	13.0000
20 January 2020	14.0000

The Directors of Sama Limited need your advice on how they should treat the transaction above in their financial statement for the year to 31 December 2019.

(5 marks)

Client Two – Solo Plc

Solo Plc introduced a Share Option Scheme to its employees on 1 January 2018. On the same date, it granted 40,000 share options to each of its 120 employees on condition that each remained with the company for five (5) years.

On 1 January 2018 the company expected 10 employees to leave the company by the end of a 5-year period. In 2018, 2 employees left the company and 9 additional employees were expected to leave in the remaining four (4) years. Further, 3 employees left in 2019. Solo Plc expects additional 7 employees to leave in the remaining three (3) years.

The fair values of each option are given below:

Date	Fair value (K)
1 January 2018	50.00
31 December 2018	54.00
31 December 2019	60.00

The Directors of Solo Plc need your advice on the treatment of the transaction in the financial statements for the year to 31 December 2019. (5 marks)

Required:

Advise your clients on the accounting treatment of their respective transactions in their financial statements for the year to 31 December 2019. **(Your answer should include relevant calculations)**. (10 marks)

(b) **Dasa Plc**

Dasa Plc has been operational for 6 years as an agro – dealer based in Nakonde. In 2019, the company decided to open two outlets, one in Mpika and another in Livingstone. The following information has been provided by respective branch managers for the year to 31 December 2019.

	Total	**Nakonde**	**Mpika**	**Livingstone**
	K'000	**K'000**	**K'000**	**K'000**
Revenue: External	2,250.00	1,680.00	270.00	300.00
Inter - branch	450.00	336.00	54.00	60.00
Costs	1,870.00	1,266.00	364.00	240.00
Profit/(loss)	830.00	750.00	(40.00)	120.00
Assets	9,000.00	6,720.00	1,080.00	1,200.00
Liabilities	5,400.00	4,032.00	648.00	720.00

The Directors of Dasa Plc have only included one total figure for revenue, costs, assets and liabilities in the accounts of Dasa Plc for the year to 31 December 2019 without any other additional information in the notes to the accounts.

Required:

Explain the nature of segment information that Dasa must include in the notes to the accounts, identifying the reportable segments as part of its financial statements for the year to 31 December 2019 in accordance with applicable IFRS. (10 marks)

[Total: 20 Marks]

QUESTION FIVE

(a) Laka Plc's motor vehicle which was bought three (3) years ago at a total cost of K150,000 got stolen on 1 October 2019. It had total accumulated depreciation of K63,000 at that date. The vehicle was insured and Laka Plc reported the theft to the insurance company. On 1 February 2020 the insurance company agreed to pay K45,000 to Laka Plc as compensation for the lost vehicle.

The Directors of Laka Plc need your advice on the accounting treatment of compensation from the insurance company in the financial statements for the year to 31 December 2019.

Note: Laka Plc authorises its financial statements for issue on 1 April of every year following end of the accounting year to which they relate.

Required:
Advise the Directors of Laka Plc on the accounting treatment of compensation from the insurance company in the financial statements for the year 31 December 2019. (4 marks)

(b) Baca Limited bought a food processing machine on 1 January 2019. The total cost of the machine amounted to K300,000. On 31 December 2019, Baca Limited decided to revalue the machine to K250,000 in accordance with the company's revaluation policy.

The machine is depreciated at an annual rate of 20% on cost. The machine enjoys capital allowances at an annual rate of 25% on cost.

Baca Limited applicable income tax rate is 30%.

The Directors of Baca Limited have not yet accounted for deferred tax liability relating to the processing machine in the draft financial statements for the year to 31 December 2019. There is currently a deferred tax asset amounting to K5,000, income tax expense was K72,500 and other components of equity were K12,000 as at 31 December 2019 in the draft financial statements.

Required:
Prepare extracts of financial statements of Baca Plc for the year to 31 December 2019, showing accounting treatment of deferred tax. (6 marks)

(c) Zala Insurance Plc is an insurance company that provides general and life insurance. The company was formed five (5) years ago. The company wants to start providing general insurance cover to mining companies. This will require huge cash payouts in compensation in case of claims from the policy holder (s). It is therefore considering re –insurance arrangements.

The Directors of Zala Insurance Plc have heard that there is a new International Financial Reporting Standard covering recognition, measurement, presentation and disclosures of insurance contracts. They have therefore asked you as their external financial accountant for more information on the new standard.)

Required:

Explain the recognition and measurement of insurance contracts under IFRS 17 *'Insurance Contracts'* and scope of the standard. (10 marks)

[Total: 20 Marks]

END OF PAPER

Annuity Table

Present value of an annuity of 1 i.e. $\frac{1 - (1 + r)^{-n}}{r}$

Where r = discount rate
n = number of periods

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	1·970	1·942	1·913	1·886	1·859	1·833	1·808	1·783	1·759	1·736	2
3	2·941	2·884	2·829	2·775	2·723	2·673	2·624	2·577	2·531	2·487	3
4	3·902	3·808	3·717	3·630	3·546	3·465	3·387	3·312	3·240	3·170	4
5	4·853	4·713	4·580	4·452	4·329	4·212	4·100	3·993	3·890	3·791	5
6	5·795	5·601	5·417	5·242	5·076	4·917	4·767	4·623	4·486	4·355	6
7	6·728	6·472	6·230	6·002	5·786	5·582	5·389	5·206	5·033	4·868	7
8	7·652	7·325	7·020	6·733	6·463	6·210	5·971	5·747	5·535	5·335	8
9	8·566	8·162	7·786	7·435	7·108	6·802	6·515	6·247	5·995	5·759	9
10	9·471	8·983	8·530	8·111	7·722	7·360	7·024	6·710	6·418	6·145	10
11	10·37	9·787	9·253	8·760	8·306	7·887	7·499	7·139	6·805	6·495	11
12	11·26	10·58	9·954	9·385	8·863	8·384	7·943	7·536	7·161	6·814	12
13	12·13	11·35	10·63	9·986	9·394	8·853	8·358	7·904	7·487	7·103	13
14	13·00	12·11	11·30	10·56	9·899	9·295	8·745	8·244	7·786	7·367	14
15	13·87	12·85	11·94	11·12	10·38	9·712	9·108	8·559	8·061	7·606	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	1·713	1·690	1·668	1·647	1·626	1·605	1·585	1·566	1·547	1·528	2
3	2·444	2·402	2·361	2·322	2·283	2·246	2·210	2·174	2·140	2·106	3
4	3·102	3·037	2·974	2·914	2·855	2·798	2·743	2·690	2·639	2·589	4
5	3·696	3·605	3·517	3·433	3·352	3·274	3·199	3·127	3·058	2·991	5
6	4·231	4·111	3·998	3·889	3·784	3·685	3·589	3·498	3·410	3·326	6
7	4·712	4·564	4·423	4·288	4·160	4·039	3·922	3·812	3·706	3·605	7
8	5·146	4·968	4·799	4·639	4·487	4·344	4·207	4·078	3·954	3·837	8
9	5·537	5·328	5·132	4·946	4·772	4·607	4·451	4·303	4·163	4·031	9
10	5·889	5·650	5·426	5·216	5·019	4·833	4·659	4·494	4·339	4·192	10
11	6·207	5·938	5·687	5·453	5·234	5·029	4·836	4·656	4·486	4·327	11
12	6·492	6·194	5·918	5·660	5·421	5·197	4·988	4·793	4·611	4·439	12
13	6·750	6·424	6·122	5·842	5·583	5·342	5·118	4·910	4·715	4·533	13
14	6·982	6·628	6·302	6·002	5·724	5·468	5·229	5·008	4·802	4·611	14
15	7·191	6·811	6·462	6·142	5·847	5·575	5·324	5·092	4·876	4·675	15

Present Value Table

Present value of 1 i.e. $(1 + r)^{-n}$

Where r = discount rate
n = number of periods until payment

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	0·980	0·961	0·943	0·925	0·907	0·890	0·873	0·857	0·842	0·826	2
3	0·971	0·942	0·915	0·889	0·864	0·840	0·816	0·794	0·772	0·751	3
4	0·961	0·924	0·888	0·855	0·823	0·792	0·763	0·735	0·708	0·683	4
5	0·951	0·906	0·863	0·822	0·784	0·747	0·713	0·681	0·650	0·621	5
6	0·942	0·888	0·837	0·790	0·746	0·705	0·666	0·630	0·596	0·564	6
7	0·933	0·871	0·813	0·760	0·711	0·665	0·623	0·583	0·547	0·513	7
8	0·923	0·853	0·789	0·731	0·677	0·627	0·582	0·540	0·502	0·467	8
9	0·941	0·837	0·766	0·703	0·645	0·592	0·544	0·500	0·460	0·424	9
10	0·905	0·820	0·744	0·676	0·614	0·558	0·508	0·463	0·422	0·386	10
11	0·896	0·804	0·722	0·650	0·585	0·527	0·475	0·429	0·388	0·305	11
12	0·887	0·788	0·701	0·625	0·557	0·497	0·444	0·397	0·356	0·319	12
13	0·879	0·773	0·681	0·601	0·530	0·469	0·415	0·368	0·326	0·290	13
14	0·870	0·758	0·661	0·577	0·505	0·442	0·388	0·340	0·299	0·263	14
15	0·861	0·743	0·642	0·555	0·481	0·417	0·362	0·315	0·275	0·239	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	0·812	0·797	0·783	0·769	0·756	0·743	0·731	0·718	0·706	0·694	2
3	0·731	0·712	0·693	0·675	0·658	0·641	0·624	0·609	0·593	0·579	3
4	0·659	0·636	0·613	0·592	0·572	0·552	0·534	0·516	0·499	0·482	4
5	0·593	0·567	0·543	0·519	0·497	0·476	0·456	0·437	0·419	0·402	5
6	0·535	0·507	0·480	0·456	0·432	0·410	0·390	0·370	0·352	0·335	6
7	0·482	0·452	0·425	0·400	0·376	0·354	0·333	0·314	0·296	0·279	7
8	0·434	0·404	0·376	0·351	0·327	0·305	0·285	0·266	0·249	0·233	8
9	0·391	0·361	0·333	0·308	0·284	0·263	0·243	0·225	0·209	0·194	9
10	0·352	0·322	0·295	0·270	0·247	0·227	0·208	0·191	0·176	0·162	10
11	0·317	0·287	0·261	0·237	0·215	0·195	0·178	0·162	0·148	0·135	11
12	0·286	0·257	0·231	0·208	0·187	0·168	0·152	0·137	0·124	0·112	12
13	0·258	0·229	0·204	0·182	0·163	0·145	0·130	0·116	0·104	0·093	13
14	0·232	0·205	0·181	0·160	0·141	0·125	0·111	0·099	0·088	0·078	14
15	0·209	0·183	0·160	0·140	0·123	0·108	0·095	0·084	0·074	0·065	15

SUGGESTED SOLUTIONS

SOLUTION ONE

Mulana Plc Group
Consolidated Statement of Cashflow for the year ended 31 December 2019

	K'000	K'000
Cash flow from operating activities		
Profit before tax		229.00
Adjustments:		
Share of associate profit after tax		(48.00)
Finance cost expense		81.00
Reversal of revaluation deficit		(18.00)
Depreciation charge		122.00
Net pension expense		123.00
Profit on disposal of equipment (79 - 69)		(10.00)
Loss on disposal of Pama Plc **W9**		6.00
Goodwill impairment **W2**		16.00
Increase in inventory (180 - 184)		(4.00)
Increase in trade receivables (252-90 -292]		(130.00)
Increase in trade payables (340 - 234)]		106.00
Cash generated from operations		473.00
Pension contribution paid **W6**		(268.00)
Taxation paid **W4**		(94.00)
Interest paid **W7**		(79.00)
Net cash inflow from operating activities		**32.00**
Cash flow from investing activities		
Disposal of shares in Pama Plc (96+30)	126.00	
Purchase of shares in Sapa Plc	(41.00)	
Purchase of PPE **W1**	(520.00)	
Proceeds from disposal of PPE	79.00	
Dividends received from associates **W3**	23.00	
Net cash outflow from investing activities		**(333.00)**
Cashflow from financing activities		
Proceeds from issue of shares **W10**	507.00	
Dividends paid to NCI **W5**	(40.60)	
lease rentals paid **W8**	(39.00)	
Other dividends paid	(28.40)	
Loan repayment (500 - 612)	(112.00)	
Net cash inflow from financing activities		**287.00**
Decrease in cash & cash equivalents		**(14.00)**
Opening cash & cash equivalents		342.00
Closing cash & cash equivalents		328.00

Available
Maximum

WORKINGS

W1 Property, plant & equipment

	K'000
Opening balance	1,177.00
Depreciation charge	(122.00)
Disposal of Pama Plc	(130.00)
Disposal of equipment	(69.00)
Revaluation gain (42+18)	60.00
Right of Use Asset for non-cash consideration	90.00
Cash Acquisitions (bal. fig.)	**520.00**
Closing balance	1,526.00

W2 Goodwill

	K'000
Opening balance	179.00
Disposal of Pama Plc [180 - (190 x 90%)]-4	(5.00)
Impairment (bal fig.)	**(16.00)**
Closing balance	158.00

W3 Investment in associate

	K'000
Opening balance	385.00
Investment in Pama Plc	56.00
Investment in Sapa Plc	41.00
Share of profit after tax	48.00
Dividends received (bal. fig)	**(23.00)**
Closing balance	507.00

W4 Taxation

	K'000
Opening balance (103 + 59)	162.00
Profit or loss	91.00
Cash paid (bal. fig)	**(94.00)**
Closing balance (48+111)	159.00

W5 Non - Controlling Interest

	K'000
Opening balance	208.00
Disposal of Pama Plc (10% x 170)	(17.00)
Profit or loss	27.60
Dividends paid (Bal. fig)	**(40.60)**

Closing balance	178.00

W6 Employee Benefits

	K'000
Opening balance	536.00
Net actuarial loss	12.00
Net pension expense	123.00
Pension benefits paid (61 - 61)	-
Contribution paid	**(268.00)**
Closing balance	403.00

W7 Interest Payable

	K'000
Opening balance	169.00
Profit or loss	81.00
Interest on lease obligations	(29.00)
Disposal of Pama Plc	(20.00)
Cash paid (Bal.fig)	**(79.00)**
Closing balance	122.00

W8 Obligations under leases

	K'000
Opening balance (180+70)	250.00
New machinery under finance lease	90.00
Finance cost	29.00
Cash paid (Bal.fig)	**(39.00)**
Closing balance (240 + 90)	330.00

W9 Disposal of 60% Shareholding - Pama Plc

	K'000
Fair value of net assets at disposal	170.00
Goodwill (9W2 - 4 impairment)	5.00
	175.00
Less:	
NCI W5	(17.00)
FV of retained interest (30%)	(56.00)
Consideration received	(96.00)
Loss on disposal	**6.00**

W10 Issue of Equity shares

	K'000
Opening balances (326 + 28)	354.00
Revaluation gain in other comprehensive income	42.00
Net actuarial loss	(12.00)
Cash received (Bal. fig)	**507.00**
Closing balance (773 + 118)	891.00

SOLUTION TWO

a) **Investment in Wana Limited**

The treatment of investment in consolidated financial statements will depend on whether acquisition of 18% in Wana Limited gives Yava Plc no significant influence; significant influence; joint control or control in the company. Acquiring equity shareholding of less than 20% in another entity is presumed not to result in significant influence unless there is information to the contrary. The investment in Wana Limited will be treated as trade investment classified as a fair value through profit or loss asset in consolidated financial statements as they are held for the sole purpose of selling and there no information to suggest Yava Plc has significant influence in Wana Limited. The investment will initially be recognised at fair value of K120,000, excluding legal costs of K7,000. The investment will be re-measured to K132,000, its fair value at 31 December 2019, and shown under non-current assets. The difference between fair value at 31 December 2019 and 1 January 2019 of K12,000 (132,000 – 120,000) and dividends received of K1,440 (18% x 8,000) will be taken to statement of profit or loss for the year ended 31 December 2019 as other income. While legal costs of K7,000 will be charged as an expense to statement of profit or loss for the year ended 31 December 2019. The treatment is in accordance with IFRS 9 *'Financial Instruments: Recognition and Measurement'.*

Investment in Loko Plc

Yava Plc's acquisition of 15% equity interests in the shares of Loko Plc is presumed not to give rise to significant influence as it is less than 20%. IAS 28 '*Investments in Associates and Joint Ventures'* states that where an entity holds 20% or more of the voting power (directly or through subsidiaries) on an investee, it will be presumed the investor has significant influence unless it can be clearly demonstrated that this is not the case. If the holding is less than 20%, the entity will be presumed not to have significant influence unless such influence can be clearly demonstrated. There is therefore need to look at the rights which come acquiring 15% in Loko Plc. Yava Plc has two seats on the board of directors and is able to participate in the financial and operating decisions of Loko Plc. These provide evidence of existence of significant influence in accordance with IAS 28. Loko Plc should therefore be treated as an associate in the consolidated financial statements of Yava Plc and accounted for using the Equity Method. Loko Plc will be shown in the consolidated statement of financial position as at 31 December 2019 under current assets with an amount of K93,000**W5**. Group share of profit after tax of K4,500**W5** will be credited to consolidated statement of profit or loss for the year ended 31 December 2019. Further, share of retained profit for the year of K3,000 (K4,500 – K1,500) will be credited to consolidated retained earnings in consolidated statement of financial position as at 31 December 2019.

b) The pension plan introduced by Sona Plc will be accounted for in accordance with IAS 19 'Employee Benefits'. The scheme will be treated as a defined benefit plan. This is because Sona Plc has guaranteed pension benefits employees will receive at retirement. Its obligation is therefore not limited to pension to contributions to the plan.

Sona Plc will recognise a net liability of K480,000 **W4** under non-current liabilities in its statement of financial position as at 31 December 2019. It will also recognise a net pension expense of K142,500 **W3** and net actuarial loss of K37,500 **W1&W2** (55 -92.5) in its statement of profit or loss and other comprehensive income for the year ended 31 December 2019.

Workings

W1 Pension Plan Assets

	K'000
Fair value at 1 April 2019	900.00
Benefits paid	(100.00)
Interest (10% x 900 x6/12) +(10%x800x3/12)	65.00
Actuarial gain (bal.fig)	55.00
Fair value at 31 December 2019	920.00

W2 Plan Obligations

	K'000
Present value at 1 April 2019	1,200.00
Interest (10% x 1,200 x 6/12) +(10% x K1,100 x 3/12)	87.50
Current service cost	120.00
Benefits paid	(100.00)
Actuarial loss (bal.fig)	92.50
Present value at 31 December 2019	1,400.00

W3 Net pension expense

	K'000
Current service cost	120.00
Net Interest expense (87.5 – 65)	22.50
Net expense	**142.50**

W4 Net pension obligation

	K'000
Present value at 31 December 2019	1,400.00
Fair value at 31 December 2019	(920.00)
Net Liability	480.00

Investment in Associate - Loko Plc

W5

	K'000
Cost of investment	90.00
Share of profit after tax 15% x 30	4.50
Share of dividends 15% x 10	(1.50)
	93.00

SOLUTION THREE

Award of Share Appreciation Rights (SARs) to the senior managers

The award of SARs must be accounted for in accordance IFRS 2 Share Based Payments as they appear to fall within the definition of Cash Settled Share Based Payments. Michelo Plc will acquire employee services over the three year performance period for which it will settle by paying amounts of cash bonuses based on the change in the fair value of its equity shares.

IFRS 2 requires that the cost of a Share Based Payment (SBP) must be recognized as an expense over the performance where rights vest over a future period. In this case, the estimated total cost of the SBP will primarily be spread over the three year performance period commencing 1.1.2019. The amount of expense to recognize each year will be based on the estimated total cost incorporates the current fair value of the equity instrument as by definition, the amount of cash payable will depend on a future share price. The accrual of the SBP expense in P/L will result in recognition of a SBP liability in the SFP.

The SBP liability to report in Michelo's SFP at 31.12.2019 will be computed as follows:

	K'000
Estimated total cost of SBP based on estimates at 31.12.2019	
(5-1) Managers X2 00,000 Shares per Manger X K(5.1-4.6) per share	400
SBP liability at 31.12.2019 based on years of performance to date:	
400x1/3	133.3

Therefore, Michelo must report a SBP liability of K133,333 in its financial statements for the year to 31.12.2019. This amount will be presented within non current liabilities (at least two years prior to settlement).

In the P/L for the year to 31.12.2019, Michelo will report a SBP equal to the increase for the year in the SPB liability. This being the first year, the opening liability was nil and hence the increase in the liability equals the liability at 31.12.2019. Therefore, Michelo will report a SBP expense amounting to K133,333 in its P/L for the year to 31.12.2019.

In accordance with IAS 12 Income Taxes, deferred tax amounts will arise due to temporary differences between the carrying amounts of the SPB liabilities reported in the SFP and amounts recognized for tax purposes (Tax Base amounts) at each reporting date. Costs relating to employee remuneration are generally tax deductible in the period when they fall due for payment to employees according to Michelo's tax jurisdiction. This implies that tax base amounts are nil at points in time before the SBP vest and fall due.

Arising from the above, the following are computations relating to deferred tax on the SARs for the year to 31.12.2019:

	Date (31.12)	
	2018	2019
	K'000	k'000
Carrying amount of SBP liabity in SFP	0	133.3
Tax Base Amount	(0)	(0)
Temporary	0	133.3

The temporary difference of K133,3333 at 31.12.2019 is a tax deductible difference (will reduce taxable profits in future) and therefore gives a deferred tax asset of K40,000(ie 30%X133333) to be reported in Michelo's SFP at 31.12.2019. This gives a decrease in deferred tax liabilities (increase in assets) equal to K40,000 as there was no opening deferred tax asset/liability at 1.1.2019. The increase in the deferred tax asset will be credited to P/L for the year as part of the income tax expense.

Award of Share options to Executive Directors

The grant of share options must be accounted for in accordance IFRS 2 Share Based Payments as they appear to fall within the definition of Equity Settled Share Based Payments. Michelo Plc will acquire employee services over the three year performance period for which it will settle by awarding options on its shares.

IFRS 2 requires that the cost of a Share Based Payment (SBP) must be recognized as an expense over the performance where rights vest over a future period. In this case, the estimated total cost of the SBP will be spread over the three year performance period commencing 1.1.2019. The amount of expense to recognize each year will be based on the estimated total cost based on the options fair value on the grant date that is on 1.10.2019. The accrual of the SBP expense in P/L will result in recognition of a SBP Reserve within Equity in the SFP.

The SBP reserve to report in Michelo's SFP at 31.12.2019 will be computed as follows:

	K'000
Estimated total cost of SBP based on estimates at 31.12.2019 (4-1) Directors X 600,000 options per Director X K0.5 per option	900
SBP Reserve at 31.12.2019 based on years of performance to date: 900x1/3	300

Therefore, Michelo must report a SBP reserve of K300,000 in its financial statements for the year to 31.12.2019. This amount will be presented within equity

In the P/L for the year to 31.12.2019, Michelo will report a SBP expense equal to the increase for the year in the SPB Reserve. This being the first year, the opening SBP Reserve was nil and hence the increase in the SBP Reserve equals its balance at 31.12.2019. Therefore, Michelo will report a SBP expense amounting to K300,0000 in its P/L for the year to 31.12.2019.

With regard to equity settled SBP, deferred tax assets will arise on tax deductible temporary differences as the entity will normally benefit from future tax relief when a cost equal to the intrinsic value of the options (market value less exercise price) becomes deductible for tax purposes in the period when the options are exercised. In accounting for deferred tax in earlier periods, the temporary difference (tax deductible) is computed as the currents intrinsic value of the options attributable to the performance period to date.

Arising from the above, the following are computations relating to deferred tax on the SARs for the year to 31.12.2019:

	Date(31.12) 2018 K'000	2019 k'000
Tax deductible Temporary Difference		
(Intrinsic value of the shares under optionsX1/3)	0	
(5.1-4.5)X(4-1)X600000X1/3		360
Deffered Tax Asset at 30%	0	108

A deffered tax asset of K108,000 will therefore be reported in Michelo's SFP at 31.12.2019 in respect of the share options. The increase in the deferred tax asset of K108,000 will be credited to P/L for the y/e 31.12.2019 and presented within the income tax expense.

SOLUTION FOUR

a) Client One – Sama Limited

The packaging machine will be translated at the exchange rate prevailing at acquisition date of K11/US$. This gives machine cost of K110,000 (US$10,000 x K11/US$). This will be subject to depreciation and impairment review. Depreciation charge of K6,875 (K110,000 x 25% x 3/12) will be taken to statement of profit or loss for the year ended 31 December 2019 under expenses. The same amount will be credited to packaging machine to arrive at its carrying value at 31 December 2019. The amount of K103,125(K110,000 – K6,875) will shown as carrying value for packaging machine under non-current assets in the statement of financial position as at 31 December 2019.

Sama Limited will have to translate outstanding amount of US$3,000 at transaction date using exchange rate of K11/US$ and then retranslated using exchange rate at reporting date of K13/US$. This gives liability amounts of K33,000 (US$3,000 x K11/US$) and K39,000 (US$3,000 x K13/US$) at 30 September 2019 and 31 December 2019. Therefore, Sama Limited will recognise a liability of K39,000 under current liabilities in its statement of financial position as at 31 December 2019 and exchange loss of K6,000 (K39,000 – K33,000) in its statement of profit or loss for the year ended 31 December 2019.

Client Two – Solo Plc

IFRS 2 '*Share based Payment*' requires equity settled transactions involving employees and others providing similar services to be recognised in the financial statements of the company based on the options that are expected to vest multiplied by the option's fair value at grant date 1 January 2018 of K50.00 throughout the vesting period. The fair value of the equity instruments granted is used because it is virtually impossible to estimate reliably the fair value of employee services received. The cost is then spread over the vesting period. This is 5 years in Solo Plc's case.

Solo Plc will therefore recognise in equity in its statement of financial position as at 31 December 2019 an amount of K86,400, 000 **W**. In the statement of profit or loss for the year ended 31 December 2019, it will recognise share option costs of K42,800, 000 (K86,400, 000 – 43,600, 000)**W**.

b) Dasa Plc

Suitability of including only total figures for revenue, costs, assets and liabilities depends on whether there are various operating segments which have met criteria provided for in IFRS 8 '*Operating Segments*' or there are none. IFRS 8 defines an operating segment as a component of an entity:

- That engages in business activities from which it may earn revenues and incur expenses
- Whose operating results are regularly reviewed by the entity's chief operating decision maker to make decisions about resources to be allocated to the segment and assess its performance, and

- For which discrete financial information is available

The three branches of Dasa Plc meet the definition of an operating segment. They do generate revenue and incur costs. Their performance is regularly assessed and financial information easily made available by the respective branch managers. Merely meeting the definition of an operating segment is not enough to justify reporting, through disclosures to the financial statements, separate information about each reporting segment. The respective operating segments have to meet the criteria provided for in IFRS 8. These include the following:

i) Segment total is 10% or more of total:
   - Revenue (internal and external), or
   - All segments not reporting a loss (or all segments in loss if greater), or
   - Assets

ii) Further, at least 75% of total external revenue must be reported by operating segments.

Applying the criteria above to Dasa Plc gives the following:

1) 10% of total revenue K270,000**W1**
2) 10% of total profit K87,000**W1**
3) 10% of total loss K4,000**W1**
4) 10% of total assets K900,000**W1**

Nakonde and Livingstone branches have met all the criteria. Their respective revenue, profit and assets are more than the figures above. Mpika branch on the other hand, has met the revenue and assets criteria but its loss of K40,000 is less than K87,000 which is the greater of 10% of total profit and 10% of total loss. Further, 100% of total external revenue is reported by the operating segments.

Based on analysis above, Dasa Plc should provide additional information on each branch in form of disclosures to the financial statements in order to comply with IFRS 8. It should disclose the following information:

- Operating segment profit or loss
- Segment assets
- Segment liabilities

a) Workings

Client Two – Solo Plc

Year		**Equity**	**Expense**
		K'000	**K'000**
2018	[40,000shrs x (120 - 2 - 9) x K50] x 1/5	43,600.00	43,600.00
2019	[40,000shrs x (118 - 3 - 7) x K50] x 2/5	86400.00	42,800.00

b) Dasa Plc

W1 Calculation of thresholds

	Total K'000	10% K'000
Combined revenue	2,700.00	270.00
Combined profit	870.00	87.00
Combined loss	(40.00)	(4.00)
Total assets	9,000.00	900.00

SOLUTION FIVE

a) Compensation from the insurance will initially be disclosed in the notes in the financial statements for the year to 31 December 2019. This is because the amount receivable from the insurance company is not known. Therefore, Laka Plc will treat compensation from the insurance company as a contingent asset. IAS 37'*Provisions, contingent liabilities and a contingent assets*' defines a contingent asset as a possible asset that arises from past events, and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the entity. However, the agreement by the insurance company to Laka Plc K45,000 as compensation for the loss represents an adjusting event in accordance with IAS 10 'Events after the reporting date'. This is because it provides additional information to what already existed at reporting date, an insurance claim with unknown amount, and that the insurance company agreed before financial statements were authorised for issue. Consequently, the compensation of K45,000 will be recognised as a receivable under current assets in the statement of financial position as at 31 December 2019 and as other income in the statement of profit or loss for the year ended 31 December 2019.

b) **Baca Limited**

	K'000
Non - current liabilities	
Deferred tax liability (7.5**W3** - 5)	2.50
Equity	
Other components of equity 12 + (10**W1** - 3**W3**)	19.00

Baca Limited

(extract) for the year ended 31 December 2019

	K'000
Income tax (72.5 + 4.5**W3**)	77.00
Other comprehensive income	
Revaluation gain 10**W1** - 3**W3**	7.0

c) IFRS 17'*Insurance Contracts*' establishes the principles for the recognition, measurement, presentation and disclosure of insurance contracts within the scope of the standard.

Scope

An entity shall apply IFRS 17 to:

- Insurance contracts, including reinsurance contracts, it issues;

- Reinsurance contracts it holds; and
- Investment contracts with discretionary participation features it issues, provided the entity also issues insurance contracts

Recognition

An entity shall recognise a group of insurance contracts it issues from the earliest of the following:

- The beginning of the coverage period of the group of contracts;
- The date when the first payment from a policyholder in the group becomes due; and
- For a group of onerous contracts, when the group becomes onerous.

Measurement

On initial recognition, an entity shall measure a group of insurance contracts at the total of:

- The fulfilment cash flows, which consist of:
    - Estimates of future cashflows;
    - An adjustment to reflect the time value of money and the financial risks associated with the future cashflows; and
    - A risk adjustment for a non-financial risk
- The contractual service margin

An entity shall include the future cash flows within the boundary of each contract in the group. The entity may estimate future cash flows at the higher level of aggregation and then allocate the resulting fulfilment cash flows to individual groups of contracts.

Subsequent measurement

The carrying value of a group of insurance contracts at the end of each reporting period shall be the sum of:

- The liability for remaining coverage consisting of:
    - Future cash flows related to future services and;
    - Contractual service margin of the group at that date;
- The liability for incurred claims, comprising the future cash flows related to past service allocated to the group at that date.

Onerous contracts

An insurance contract is onerous at initial recognition if the total of the future cash flows, any previously recognised acquisition cash flows and any cash flows arising from the contract at that date is the net outflow. An entity shall recognise a loss in profit or loss for the net outflow, resulting in the carrying amount of the liability for the group being equal to the future cash flows and the contractual service margin for the group being zero.

On subsequent measurement, If a group of insurance contracts becomes onerous (or more onerous), that excess shall be recognised in profit or loss. Additionally contractual service margin cannot increase and no revenue can be recognised, until the onerous amount previously recognised has been reversed in profit or loss as part of service expense

Reinsurance contracts held

The requirements of the standard are modified for reinsurance contracts held.
In estimating the present value of future expected cash flows for reinsurance contracts, entities use assumptions consistent with those used for related direct insurance contracts. Additionally estimates include the risk of reinsurer's non-performance.

The risk adjustment for non-financial risk is estimated to represent the transfer of risk from the holder of the reinsurance contract to the reinsurer.

On initial recognition, the contractual service margin is determined similarly to that of direct insurance contracts issued, except that the contractual service margin represents net gain or loss on purchasing reinsurance. On initial recognition this net gain or loss is deferred, unless the net loss relates to events that occurred before purchasing a reinsurance contract (in which case it is expensed immediately).

Subsequently, reinsurance contracts held are accounted similarly to insurance contracts under the general model. Changes in reinsurer's risk of non-performance are reflected in profit or loss, and do not adjust contractual service margin.

Part (b) Workings

W1 Calculation of carrying value

	K'000
Cost	300.00
Depreciation @ 20%	60.00
Carrying value	240.00
Revaluation surplus	10.00
Revalued amount	250.00

W2 Calculation of tax base

	K'000
Cost	300.00
Capital allowance @ 25%	75.00
Tax base	225.00

W3 Deferred Tax

	K'000
Carrying value	250.00
Tax base	225.00
Taxable temporary difference	25.00

Deferred tax liability @30%	7.50

Allocation:

To other components of equity (30% x 10W1)	3.00
To profit or loss (7.5 -3)	4.50

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

ADVISORY LEVEL

CA 3.2: ADVANCED AUDIT AND ASSURANCE

THURSDAY 17 SEPTEMBER 2020

TOTAL MARKS – 100; TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading time. Use it to study the examination paper carefully so that you understand what to do in each question. You will be told when to start writing.
2. This paper is divided into TWO (2) sections:
   Section A: One (1) Compulsory scenario question.
   Section B: Four (4) Optional Questions. Attempt any Three (3) questions.
3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name must **NOT** appear anywhere on your answer booklet.
4. Do **NOT** write in pencil (except for graphs and diagrams).
5. **Cell Phones** are **NOT** allowed in the Examination Room.
6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.
7. All workings must be done in the answer booklet.
8. Present legible and tidy work.
9. Graph paper (if required) is provided at the end of the answer booklet.

DO NOT OPEN THIS QUESTION PAPER UNTIL YOU ARE INSTRUCTED BY THE INVIGILATOR.

SECTION A

This question is compulsory and must be attempted

<u>QUESTION ONE</u>

Nile Road Contractors Ltd is a company involved in road construction in Zambia. It won a five year tender to construct a four hundred kilometre road.

This is a $300 million contract. Under the terms of the contract, the contractor is paid 20% of the contract amount upfront as a mobilization fee. The mobilization fee is repayable on failure by the company to perform its part of the contract per agreement. Failure to repay and perform the works, the government has the right to terminate and sue for non-completion of work and refund of the mobilization fee.

According to the terms of the contract Nile Road Contractors Ltd who are the main contractors are required to subcontract 20% of the works to small local contractors in category 'C' of contractors under the National Council for Construction. The contract is in its third year and revenue is recognized annually based on the work certified and supported by certificates issued by approved architects. Failure to adhere to the condition for subcontracting results in the inability to tender for future government contracts. Nile Road Contractors Ltd has only subcontracted 5% of the contract to a small road construction company that was set up by a friend to the CEO of Nile Road Contractors Ltd.

The company owns most of its earth moving equipment. In the current year, the company leased all the compacting equipment that it requires for this contract. The company hires technical staff on permanent basis and uses unskilled labour for casual work. The minimum wages for casual workers is set by the government. Nile Road Contractors Ltd has been trying to save on cost by paying the casual workers below the minimum wage.

Nile Road Contractors Ltd maintains a large range of spares for equipment and fuel. The company employs an administrator whose job involves procurement of all spares and fuel and issuing to users on demand. There is no segregation of duties in the procurement and handling of materials and fuels. The company employs an accountant whose main job is to manage petty cash and issue cheques as authorized verbally by the Chief Engineer.

The company received payment from government as per agreement in the first two (2) years of the contract. There have been delays in getting payment in the current year resulting in delays in the work being carried out. The government has put pressure on Nile Road Contractors Ltd to speed up the works because the road is of strategic importance to the country. The company arranged a three (3) year loan with a commercial bank based on the guarantee given by the government that it will pay the contractor. The loan is based on fixed interest rates and is secured by the earth moving equipment of Nile Road Contractors Ltd.

The company wants to improve its internal control systems and has requested your firm to recruit a Finance Manager for it. The only partner in your firm of chartered accountants has been proposed to be a member of the board of directors of Nile Contractors Road Ltd.

In an effort to speed up the road works, management of Nile Road Contractors Ltd decided that all senior staff should be paid a performance bonus based on the distance of road works done above agreed levels.

Revenue recognized annually is based on the value of work certified in the year.

In the current year, the Civil Engineer who was in charge of the works was fired for fraudulent activities in collusion with the administrator. They were accused of inflating purchases of spares and fuel resulting in the company paying for goods not received. The administrator is still working because there was no evidence linking him to the fraud. The Chief Executive Officer (CEO) of Nile Road Contractors Ltd has requested that your firm should second one of your workers to the company who will be responsible for checking on procurement and inventory controls in order to reduce the chance of a fraud recurring.

Nile Road Contractors Ltd has been an audit client of your firm for the past two years. The audit fee for the previous year audit is overdue and still outstanding due to the liquidity challenges that the company is facing. During the previous year's audit, your firm established that the figure of revenue declared by Nile Road Contractors Ltd in the tax returns is much lower than the actual revenue figure in the audited financial statements. This matter was brought to the attention of management through the management letter. Management's response was that they will correct this in the next tax returns and do not wish this matter to be brought to the attention of the revenue authorities.

Towards the end of the audit you listened to a news item on the national television that cabinet has decided that no more new road contracts will be entered into due to increased government debt. The running contracts will go on until completion but payments will be irregular depending on availability of funds.

Required:

(a) Identify and explain eight (8) business and audit risks in the audit of the financial statements of Nile Road Contractors Ltd. (16 marks)

(b) Suggest three (3) audit procedures that should be performed in the audit of the revenue of Nile Road Contractors Ltd. (3 marks)

(c) Discuss four (4) ethical issues in the audit of Nile Road Contractors Ltd (6 marks)

(d) (i) Distinguish between a management expert and an auditor expert. (2 marks)

(ii) Evaluate the need of your firm engaging an expert in the audit of Nile Road Contractors Ltd. (6 marks)

(e) Using suitable examples in Nile Road Contractors Ltd., explain written representations which will be required. (7 marks)

[Total: 40 Marks]

SECTION B

There are four (4) questions in this section. Attempt any three (3).

QUESTION TWO

(a) In carrying out audits of financial statements, auditors test samples of transactions and balances. Based on the sample results, auditors extrapolate and make conclusions for the whole population.

During the course of the audit, auditors come across errors and misstatements in the figures contained in the financial statements. Such errors may be corrected by management during the course of the audit. There could also be errors that may not have been corrected during the audit. Auditors accumulate and keep a record of all misstatements that they come across during the course of the audit.

You are in the final stages of the audit of the financial statements for Quick Brew Industries.

You are reviewing the working papers for the current audit and there is a schedule of uncorrected misstatements amounting to K1.2 million. The performance materiality figure computed at the planning stage of the audit is K1.5 million.

Required:

(i) Explain the meaning of projected misstatements in the audit of the financial statements of Quick Brew Industries. (3 marks)

(ii) Discuss the work that you will perform with regards to the uncorrected misstatements of K2 million in the financial statements of Quick Brew Industries stating the impact uncorrected misstatements will have on the opinion. (3 marks)

(b) Lima Farms Ltd is one of your firm's audit clients. The company is involved in mixed farming including the rearing of livestock and the growing of citrus fruits. The company has a processing plant for products such as cheese from dairy products and mixed fruit jam from the fruits harvested.

You are the Audit Manager for the audit of the financial statements for the year ended 31 December 2019.

Lima Farms Ltd has the following agricultural and processed products:

1. Livestock
2. Cheese processed from dairy products
3. Orange trees in a plantation
4. Mixed fruit jam processed from the fruits harvested.

Required:

(i) Discuss the audit risk in the audit of agricultural and processed products at the period end of Lima Farms Ltd for the year ended 31 December 2019. (4 marks)

(ii) Suggest the action your firm should take in response to the risk of material misstatement in the valuation of biological assets in the financial statement of Lima Farms Ltd. (4 marks)

(iii) Discuss the audit procedures that you will undertake in the audit of the biological assets, orange trees and processed products. (6 marks)

[Total: 20 Marks]

QUESTION THREE

(a) Audit firms risk being sued for professional negligence if this can be proved in court. This is a matter of concern for audit firms because it could result in large amounts of money being paid as compensation to the claimants.

Currently there is a debate for proportionate liability and capping liability in order to reduce the burden on the audit firms of being convicted for professional negligence.

Required:

(i) Explain the meaning of proportional liability and discuss the arguments for it. (3 marks)

(ii) Explain the meaning of capping liability and discuss the arguments against capping liability to the profession. (2 marks)

(b) Below is information relating to two (2) of your firm's audit clients.

Giraffe Ltd:

Giraffe Ltd is a family owned company which was established ten (10) years ago. The company has not had its financial statements audited by external auditors.

Two (2) years ago, Giraffe Ltd was acquired by an overseas company. The parent company intends to list the shares of Giraffe Ltd on the local securities exchange. The parent company has directed that the financial statements of Giraffe Ltd should be audited by external auditors.

Your firm of Chartered Accountants has been appointed first auditors of the financial statements of Giraffe Ltd.

Buffalo Plc:

Buffalo Plc. has been an audit client of a different audit firm until this year when your firm has been appointed auditor.

All the appointment professional requirements were followed when your firm took appointment. The previous auditors gave your firm the previous year's working papers of the audit of Buffalo Plc. The audit opinion for the audit of the previous year was modified by way of a qualified opinion. A review of the working papers shows that the cause of the modification of the opinion was a disagreement between management and the auditors over the valuation of work in progress at the previous year end.

The audit procedures for the current year do not show evidence that the amount of work in progress was corrected. At the end of the current audit, the disagreement still stands.

Buffalo Plc has a risk management system and there is a Risk Manager who is responsible for the risk management.

Buffalo Plc. requested your firm to carry out and issue a report on its risk management systems.

Required:

(i) Recommend four (4) audit procedures that your firm should carry out with regards to the opening balances in the financial statements of Giraffe Ltd. (4 marks)

(ii) Recommend four (4) audit procedures that your firm should carry out with regards to the opening balances in the financial statements of Buffalo Plc. (4 marks)

(iii) Discuss the impact on the audit report of the current year of the modification of the previous year opinion of Buffalo Plc. (3 marks)

(iv) Distinguish between the engagement to carry out an audit of the risk assessment processes of Buffalo Ltd and the risk assessment procedures that are performed as part of the planning of the audit of historical financial statements. (4 marks)

[Total: 20 Marks]

<u>QUESTION FOUR</u>

Kayula Ltd is a large brewery which sells its beer to wholesalers. The quality of its beer is generally good but expensive because of the production methods employed. All sales are on credit. It was incorporated on 12 December 2017 and started its operations on 1 January 2018.

You are the Audit Manager responsible for the audit of the financial statements for Kayula Ltd for the year ended 31 December 2018. You have received the following email from Michael Ngwenya, the Engagement Partner.

To: Audit Manager

From: Michael Ngwenya

Date: 10 January 2019

Hi

I need you to draft briefing notes for me to use at our audit planning meeting, which clearly evaluates the use of analytical procedures in the audit of the financial statements for Kayula Ltd for the year ended 31 December 2018. I have already met the Chairperson of the Audit Committee and the Finance Director. The budget and the monthly management accounts for the year ended 31 December 2018 have been made available. A significant sum of money has been spent on research and development to support the unique production methods employed. Kindly make these notes available by end of business tomorrow.
Regards,

Michael Ngwenya

Your immediate assistant has been requested by the Staff & Training Partner to provide a training session to the new Audit Juniors on:

1. The relationship between International Standards on Auditing (ISAs) and national regulation, given that national standards on auditing and related services published in many countries differ in form and content; and
2. The reliability of written representations since they are a common feature in all audits.

He has asked for your assistance.

Required:

(a) Explain the relationship between International Standards on Auditing (ISAs) and national regulation. (4 marks)

(b) Explain the reliability of written representations. (4 marks)

(c) Write a report discussing the use of analytical procedures at all the three (3) stages of the audit of the financial statements of Kayula Ltd. (12 marks)

[Total: 20 Marks]

QUESTION FIVE

You are an Audit Manager in Linyanti & Co Chartered Accountants. The firm has three offices in Kitwe, Lusaka and Ndola. You are employed on a permanent pensionable basis and you are based in Lusaka. Linyanti & Co Chartered Accountants has been losing customers mainly due to non-existence of quality control systems. The Managing Partner is currently reviewing quality issues, with an aim of developing and implementing formal quality control policies and procedures for the first time. This will ensure quality control receives the needed attention and resources.

The Managing Partner is happy with quality control leadership at individual audit level but is concerned with leadership at the firm level. He is considering the suggestion by the Staff Partner that the longest serving Audit Manager, who recently wrote his final paper in the CA Zambia Professional Qualification, should oversee quality in the firm.

The Managing Partner has also announced the following interim quality control measures:

1. Annual leave for qualified staff that represents a mere 4% has been suspended until further notice.
2. If a client has an internal audit department, Linyanti & Co Chartered Accountants will use the internal auditors to perform audit work in respect of accounting estimates.
3. Eight CA Zambia graduates must be recruited immediately in order to address the current staff shortages.
4. Members of staff will not be allowed to sit for examinations in December since most clients' accounting periods end on 31 December.

You are currently reviewing the audit files for two (2) clients for which the audit fieldwork is complete. The Audit Seniors have presented to you the following about the clients in respect of which you should prepare appropriate responses to guide them on the possible impact on the auditor's report if the issues remain unresolved.

Client one
The client has included an insurance claim of K200,000 regarding inventory destroyed by fire during the year. The insurance company is in liquidation but the Liquidator has confirmed that the claim may be settled. The financial statements for the year ended 31 December 2019 show profit before tax of K8 million and total assets of K25 million.

Client two
This client deals in maize exports to neighboring countries. The directors are finding it difficult to obtain export permits from the authorities and therefore believe the going concern basis is inappropriate and have prepared the financial statements using the 'break-up' basis. Adequate disclosure has been made in the financial statements. The Audit Senior is satisfied with the disclosures in the financial statements.

Required:

(a) Evaluate the appropriateness of the interim quality control measures announced by the Managing Partner. (10 marks)

(b) Evaluate the suggestion that the longest serving Audit Manager should oversee quality in the Linyanti & Co. Chartered Accountants. (4 marks)

(c) Explain the impact on the audit's report if the issues for the two clients remain unresolved. (6 marks)

[Total: 20 Marks]

END OF PAPER

SUGGESTED SOLUTIONS

SOLUTION ONE

a) **Business and audit risks of Nile Road Contractors Ltd.**

1. **Government discontinuance of road construction:**
   The cut by government to continue spending on road construction is a significant risk to Nile Road Contractors Ltd because this has an implication on the ability of the company to continue as a going concern.

   If no more government contracts are available, the company will have to wind up unless it is able to relocate to another country where road construction works are still in progress.

2. **Bank enforcing security on the loan:**
   The delays by government to pay contractors may cause Nile Road Contractors Ltd to fail to meet its loan obligations. There is a risk that if this goes on the bank may enforce the security. The loan is secured by fixed charge over the earth moving equipment. Any such enforcement may result in Road Contractors Ltd not going on with the current works.

3. **Failure to meet contractual obligations:**
   There is a risk that Nile Road Contractors Ltd may fail to meet contractual obligations. This may result in the 20% mobilization fee being repayable to the government and also possible legal action against the company. Repayment of the mobilization amount and any legal action could have adverse effect on the liquidity of Nile Road Contractors Ltd.

4. **Failure to sub contract 20% of contract amount:**
   The contract requires that the main contractors should sub-contract 20% of the works failure to which contractors will not be eligible to tender for future government contracts.

   Clearly Road Contractors Ltd is in breach of this condition where it has only sub contracted 5% of the contract amount. Noncompliance with this condition could have going concern consequences for Nile Road Contractors Ltd.

5. **Leasing of compacting equipment:**
   Nile Road Contractors Ltd has obtained compacting equipment on lease in the current year. There is a risk that the accounting for leased assets may not be in accordance with the provisions of IFRS 16 *Leases* which could result in the material misstatement of the financial statements.

6. **Payments of casual workers below the statutory minimum wages:**
   Nile Road Contractors Ltd employs casual workers whose minimum wage is set by the government.

The company pays its casual workers below the minimum statutory amount. The company risks being sued and suffer the consequences of noncompliance. There is also the risk of casual workers suing the company and the provisions may be misstated in the financial statements.

7. **Lack of segregation of duties:**
   The administrator employed by Nile Road Contractors Ltd does all the work with regards to procurement and issue of material and fuel. Clearly there is no segregation of duties and this can result in errors and fraud not being detected or prevented. This could result in misstatements of the financial statements through falsification of purchases and inventory of materials and fuel.

8. **Verbal authorization of payments by the Chief Engineer:**
   Verbal authorization of payments by the Chief Engineer poses a risk that unauthorized payment may be made by the accountant. The risk of fraud is enhanced due to lack of written authorization of payments and this could result in loss of money by Nile Road Contractors Ltd.

9. **Revenue recognition:**
   Revenue of Nile Road Contractors is based on work certified in the current year. Certification is carried out by independent architects. There is a risk that revenue in the financial statements of Nile Road Contractors Ltd may be misstated and not accounted for in accordance with IFRS 15 *Revenue from Contracts with Customers.*

10. **Performance based pay for senior staff:**
    In an effort to improve on productivity, management has put in place a performance based scheme for its senior staff.

    The senior staff may be motivated to cover longer distances in order to get a higher pay and this may be at the expense of quality. Poor quality works may result in Nile Road Contractors failing to meet the required standard which could result in the company failing to meet the contractual obligations and result in possible non-payment or litigation.

b) Audit procedures of revenue in financial statements of Nile Road Contractors Ltd.:

1. Inspect the Engineer's certificate of work certified in the current year.
2. Evaluate the objectivity of the Engineer and ensure there are no threats to their independence.
3. Re-compute the workings for revenue recognized in accordance with the provisions of IFRS 15 *Revenue from Contracts with Customers*

4. Review the contract for the road works and confirm that revenue recognition is in accordance with the contractual terms.

c) Ethical issues in Nile Road Contractors Ltd:

1. **Secondment of audit staff to Nile Road Contractors:**
   The request by the management of Nile Road Contractors Ltd that the firm should second its staff to the company to take charge of procurement and inventory control is an ethical matter which poses a self-review threat.

   This will arise if the seconded staff take part in the audit. The firm can apply the safeguard of assigning different people to the audit other than any staff who may be seconded to Nile Road Contractors Ltd.

2. **Overdue audit fee:**
   The overdue fee of the previous audit which remains unpaid is tantamount to the firm giving Nile Road Contractors Ltd a loan. This gives rise to a self-interest threat to the firm and may lead to loss of objectivity.

   The firm should make efforts to get the overdue fee paid without further delay.

3. **Fraud with regards tax returns:**
   Clearly Nile Road Contractors Ltd was involved in fraud by falsifying the revenue figures in the tax returns.

   The response by management when queried that the matter should not be reported to the tax authorities is an ethical matter. Auditors should act with integrity during the performance of their work. The impact of the fraud on the financial statements should not be ignored. Further, the ethical guidance with regards confidentiality allows exceptions when crime is committed.

4. **Recruitment of Finance Manager for Nile Road Contractors:**
   The request by the management of Nile Road Contractors Ltd that the firm should recruit the Finance Manager on its behalf poses an ethical threat.

   It is normal for audit firm to recruit senior staff if requested. If this is being done for an audit client, there is need to apply safeguards in order to remove any self-interest threat that may exist. Guidance provides that the auditors in this case should end at shortlisting possible candidates and let the client make the final selection of whom they are going to employ.

   The firm should inform the management of Nile Road Contractors Ltd that they will end up at shortlisting and the company should do the final selection of whom to employ.

5. **Proposal for partner to be on Board of Nile Road Contractors Ltd:**
   A partner to be on the board of directors of Nile Road Contractors Ltd poses a self-interest threat. This is because the partner will be involved in management of the company and he would not be objective in giving an opinion on the company if he sits on the board.

   In this case this is the only partner in the firm and so the offer should be declined and management of Nile Road Contractors Ltd should be informed about the fact that the partner may not be in the board of the company.

d) (i) Distinction between management and auditor experts:

From an auditing point of view, an expert is anyone with expertise in a field other than auditing and accounting.

A management expert is one who is engaged by management in an area where there are no internal resources to carry out the work. The work of the expert may be used to determine figures that are contained in the financial statements.

An auditor expert on the other hand is one engaged by the auditor to perform procedures on behalf of the auditors.

(ii) Need for engaging an expert in audit of Nile Road Contractors Ltd.:

The need for the use of the work of an expert in the audit of Nile Road Contractors Ltd arises in that the work carried out is of a nature that auditors and accountants have no expertise.

The following are the areas where the work of an expert may be required:

- In carrying out the audit of contract revenue, the determination of the work certified requires expertise which the auditors do not poses.
- Determining the quality of the work carried out by Nile road contractor Ltd to establish whether it meets the contractual obligations requires expertise.

e) Written representations

Written representations are given by management of a client company and they form part of the evidence that the auditor gathers which forms the basis of the audit opinion.

In the audit of Nile Road Contractors written representations may be obtained for:

- Any oral evidence that may have been made to the auditor.
- Written representations regarding fraud that has taken place and the fact that management has disclosed to the auditor’s fraud that has come to its attention and any suspected fraud that management may have.
- Written representations from management that it accepts its responsibilities regarding the preparation of financial statements.

- Written representations that management accepts its responsibilities with regards to putting in place necessary internal control in Nile Road Contractors.

SOLUTION TWO

a) i. Meaning of analytical procedures:

Analytical procedures consist of the evaluations of financial and non-financial data made by a study of plausible or expected relationships.

Analytical procedures encompass the investigation of the identified fluctuations and relationships that are consistent with other information or deviate significantly from predicted amounts.

The use of analytical procedures involves the calculation of ratios and an analysis of the meaning in the changes in the ratios computed.

ii. Use of analytical procedures in an audit:

At the planning stage of the audit:
ISA 315 (Revised) *Assessing the risk of material misstatement through understanding the entity and its environment* gives analytical procedures as one of the methods by which the auditors perform the risk assessment procedures. They are used by the auditor in gaining an understanding of the entity and its environment.

During the substantive stage of the audit:
This is the stage when the auditor gathers evidence which is the basis of the opinion.

Analytical procedures are an efficient and economic tool used in gathering evidence by the auditor where the objective is to detect material misstatement in the financial statements. This is done by the auditor comparing figures in the financial statements with expected figures or trends. Any misstatements that are likely to exist will be highlighted.

At the review stage of the audit:
This is the stage when the final review of the financial statements takes place. It is usually carried out by senior members of the audit team. The objective of the use of analytical procedures is to determine whether the financial statements make sense. Any unusual fluctuations or ratios are investigated further.

(b) i. Audit risk in the audit of agricultural and processed products in Lima Farms Ltd:

The audit risk regarding the figure of inventory in Lima Farms can be explained by considering the three elements of audit risk and relating this to inventory of Lima Farms.

Inherent risk – The nature of agricultural produce is that it has risks peculiar to this industry. For example, livestock can be reared for sale or for the produce such as milk or wool. Plants are grown over a long period of time and produce fruits and at the period end some fruits will still be on the plant.

Valuation of agricultural produce is not so straight forward and there are a number of standards giving guidance. There is a risk that valuation of biological assets may not be in line with guidance in the relevant standards.

Control risk – In relation to biological assets, the controls may fail to prevent or detect material misstatements regarding valuation of biological assets.
This can arise if the controls that are put in place fail to detect or prevent misstatements from occurring

Detection risk with regards the audit of inventory contained in the financial statements of Lima Farms is that the auditors may not detect material misstatements that may exist. This can arise for example because the auditors may not have the necessary skills to audit agricultural products.

Inventory for a company such as Lima Farms is likely to be a material figure. The risk that detection risk may be high arises from the fact that in agriculture, a number of accounting standards apply with regards valuation of biological assets and bearer plants.

ii. Response to risk of inventory in financial statements of Lima Farms Ltd:

In response to the risk of material misstatement of the valuation of biological assets, the following responses may be applied by the firm:

Assignment of staff with knowledge and skill:
In response to the high risk that valuation of agricultural products may be misstated the assignment of audit team members on the audit of Lima Farms will take into account the skills and knowledge in this field. The firm should assign more experienced staff to the audit.

The staff assigned to this audit should be those with knowledge of the standards relating to agricultural products.

Set materiality level this assertion low:
In view of the fact that the risk of misstatement for the agricultural product has been set at high, the firm will consider setting a materiality figure for inventory. This will be set at a low level in view of the high risk of material misstatement.

Closer supervision of the work done:
The work carried out by the audit team should be closely supervised so that any problems likely to be encountered are detected and dealt with early in the audit. The involvement of senior audit team members is necessary in view of the high risk of misstatements.

Possible use of an auditor expert:
The valuation of biological assets and agricultural produce may require skills that are not possessed by accountants.

The firm will consider the use of experts in the audit of inventory of Lima Farms. The firm will still remain responsible for its opinion despite the use of an expert.

iii. Audit procedures:
Biological assets: (Livestock)
- Attend the physical count of living animals.
- Confirm that the biological assets have been valued in accordance with IAS 41 Agriculture at fair value less costs to sell.
- Review the determination of fair values and follow adjustment made in the accounts arising from the fair value adjustment.
- Confirm disclosure in the financial statements of the valuations for biological assets.

Bearer Plants: (The orange trees)
- Inspect the orchard to confirm existence of bearer plants.
- Confirm the bearer plants are accounted for in accordance with the provisions of IAS 16 *Property, plant and equipment.*

Processed cheese and fruit jam:
- Confirm that the inventory of processed cheese and fruit jam is valued in accordance with IAS 2 *Inventory.*
- Attend the inventory count that will be undertaken by the client to determine inventory qualities.
- For a sample of processed products confirm that inventory has been valued at the lower of cost and net realizable value.

SOLUTION THREE

a) i. The meaning of proportional liability:

This is a push by the large international firms that when professional negligence has been established, the blame should be shared with management.

Management is responsible for the preparation of the financial statements and auditors gather evidence and conclude on whether the financial statements are materially misstated.

The propagators of proportional liability argue that the damages suffered should be shared and management should bear some of the cost.

Arguments for proportional liability:

- Management are responsible for the day to day running of the company.
- If there is something that is wrong in the financial statements they should take some responsibility because it is their primary responsibility to prepare the financial statements.
- Currently it is possible for the auditors to suffer the whole liability when they are only partly to blame.
- Therefore, any liability for professional liability should be shared between management and the auditors.

ii. The meaning of capping liability:

This is where a maximum limit is set with regards the amount that the auditor would have to pay out under any claim against them.

Arguments against capping liability:

- That the limit may be set at a level where small and medium size firms would be disadvantaged in that they will still find the limit too high for them.
- It is argued that capping will reduce the value of audits to investors in the sense that auditors may be less careful in the performance of their work knowing that they can only be liable up to the cap set.
- Capping may bring pressure to the profession to reduce fees.

b) i. Audit procedures for opening balances – Giraffe Ltd.

The financial statements of Giraffe Ltd are being audited for the first time. ISA 510 *Initial Audit Engagements* gives guidance in this area as follows:

- The auditors will perform audit procedures to confirm whether the previous year closing balances have been correctly brought forward as opening balances for the current year.

- Auditors will evaluate the accounting policies for the previous year and establish whether they reflect the application of appropriate accounting policies.
- Evaluate whether current year audit procedures give evidence that is relevant to opening balances.
- Carry out specific audit procedures relating to opening balances if appropriate evidence cannot be obtained using the other means.

ii. Audit procedures for opening balances – Buffalo Plc.

In the case of Buffalo Plc., the financial statements were audited by predecessor auditors.

The new auditors will perform the following audit procedures concerning the opening balances:

- A review of the previous year working papers will be carried out to obtain evidence regarding the opening balances.
- Evaluate the extent to which the current year audit procedures provide evidence relevant to opening balances.
- Confirm that previous year opening balances have been correctly carried forward to the current year as opening balances.
- Consider the reasons for any modification of the previous year financial statements and evaluate whether the reasons for doing so are still relevant in the current year.

iii. Impact on audit report modification of opinion of Buffalo Ltd:

Current year auditors form an opinion on the financial statements for the current year.

It should be observed that the previous year closing balances have an impact on the current year figures. This means that if the closing balances are misstated it goes without saying that the current year figures will also be misstated.

In the case at hand, the predecessor auditors modified the opinion by way of a qualified opinion on the grounds of a disagreement that the work in progress was materially misstated.

In the current year, it has been established that there has been no correction to the work in progress figure and therefore the reason for issuing a qualified opinion still exists.

Guidance provides that in this case, the current year opinion should also be modified on account of the continuing relevance of the matter that caused the opinion to be modified in the previous year.

iv. Distinction between planning risk assessment and evaluation of client risk assessment:

Risk assessment is carried out by the auditors as part of planning the audit in accordance with ISA 315 (Revised) *Assessing the risk of material misstatement through understanding the entity and its environment*.

The objective of the auditor carrying out a risk assessment at this stage of the audit is to enable the auditor to respond to the assessed risk and reduce the risk of material misstatement remaining un-detected.

The risk assessment carried out at the planning stage of the audit are part of the engagement to carry out an audit of financial statements.

The request by Buffalo Plc. that the auditors should carry out an audit of its risk Management Systems is a separate engagement requiring a separate letter of engagement clearly defining the work that should be carried out.
Management of Buffalo Plc. is responsible for risk identification in the company and also establishing controls aimed at responding to the risks identified. The company has a risk department responsible for all aspects of risk management. The objective of the engagement being requested for is that the company wishes to obtain assurance on how its risk management systems are being carried out.

SOLUTION FOUR

(a) **Relationship between ISAs and national regulation:**

International Standards on Auditing are produced by the International Auditing and Assurance Standards Board (IAASB), a technical standing committee of the International Federation of Accountants (IFAC). An explanation of the workings of the IAASB, the authority of the ISAs and so on are laid out in the *Preface to the international quality control, auditing, review, other assurance, and Related Services.* The preface states that the IAASB's objective is the development of a set of international standards that are accepted worldwide. ISAs do not, however, override the local regulations.

Within each country, local regulations govern, to a greater or lesser degree, the practices followed in the auditing of financial or other information. Such regulations may be either of a statutory nature, or in the form of statements issued by regulatory or professional bodies in the countries concerned. In Zambia, for example, the Companies Act 1994 provides legislation connected with the audit of companies. ZiCA has also adopted the auditing standards and other pronouncements issued by the IAASB.

However, although ISAs are now in operation in many countries, not all countries have adopted the standards. National standards on auditing and related services published in may differ in form and content. The IAASB takes account of such documents and differences and, in the light of such knowledge, issues ISAs which are intended for international acceptance.

(b) **Reliability of written representations:**

ISA 580 *Written Representation* gives guidance in this area. The ISA stresses that written representations do not provide sufficient appropriate audit evidence on their own. This means that when auditors receive such representations, they should:

- Seek corroborative audit evidence from sources inside or outside the entity
- Evaluate whether the representations made by management appear reasonable and are consistent with other audit evidence obtained, including other representations
- Consider whether the individuals making the representations can be expected to be well-informed on the particular matters.

(c) Use of analytical procedures in the audit of Kayula Ltd

Briefing notes

To: Audit Partner (Michael Ngwenya)

From: Audit Manager

Subject: Kayula Ltd audit plan

Introduction

The following notes evaluates the use of analytical procedures in the audit of the financial statements for Kayula Ltd for the year ended 31 December 2018.

Guidance on analytical procedures is given in ISA 520 *Analytical Procedures.* Analytical procedures are used at three stages of the audit:

1. Planning
2. Substantive procedures
3. Overall review

The standard requires the use of analytical procedures at the planning and review stages. Their use as substantive procedures is optional. Analytical procedures consist of the evaluations of financial information through analysis of plausible relationships among both financial and non-financial data. They also encompass such investigation as is necessary of identified fluctuations and relationships that are inconsistent with other relevant information or that differ from expected values by a significant amount.

The use of analytical procedures at the planning stage in the audit of Kayula Ltd

The audit team must use draft management accounts including minutes of meetings of management and the board to develop an understanding of the entity and its environment, and identify areas of potential audit risk. This will help direct the approach that the audit will take. Ratio analysis will be useful. The audit team should get a lot of information about Kayula Ltd, including the most basic facts and corroborate this with intelligent discussions with management.

The use of analytical procedures as substantive procedures in the audit of Kayula Ltd

At this stage the draft financial statements will be available. In the case of Kayula Ltd, it will only be possible to compare actual financial information with the budgeted information since this is the first year of operation. Comparisons with the industry or competitors' financial information will be meaningless because of the different business strategies followed, the significant one-off expenditures normally required in the first year of operation or basically costs associated with the start-up e.g. in the case of Kayula Ltd, the differentiation strategy and the significant sum of money spent on research and development to support the unique production methods employed.

It may also be possible to analyze predictable relationships, for example, the relationship between receivables and credit sales, tangible non-current assets and depreciation etc. However, since this is the first year of audit, the audit team may not have the required knowledge about the business to apply to the financial information in order to come up with meaningful conclusions. Hence, analytical procedures at this stage would be less effective and should not be used.

The use of analytical procedures at the review stage in the audit of Kayula Ltd

At this stage, the audit team will have gathered appropriate sufficient audit evidence to enable a Senior Member of the audit team to undertake an overall review of the financial statements. The evidence obtained from the review in conjunction with the conclusions drawn from other audit evidence obtained will provide a reasonable basis for the audit opinion on the financial statements.

Conclusion

The audit team should only use analytical procedures at the planning and review stage for them to be effective. The use of analytical procedures at the substantive stage could useful next year.

SOLUTION FIVE

(a) **Evaluation of the appropriateness of the interim quality control measures announced by the Managing Partner**

(i) Suspension of Annual leave for qualified staff:

Annual leave is both a legal requirement and an important part of an employee's conditions of service. An employee needs to rest on an annual basis to continue being productive and provide quality output. It will be difficult to ensure excellence in the qualified staff if this measure is implemented. A more accepted interim quality control measure could be established through consultations with the qualified staff.

(ii) Use of internal auditors:

ISA 610 (Revised) *Using the work of Internal Auditors* provides guidance for the external auditor when the eternal auditor expects to use internal auditors to perform audit procedures under the direction, supervision and review of the external auditor (direct assistance). However, the standard states that the internal audit function must not provide direct assistance to perform procedures which involve significant judgments. Accounting estimates may involve a great deal of estimation. The standard also requires the external auditors to evaluate the internal audit function's objectivity, competence and whether the internal audit function applies a systematic and disciplined approach (including quality control). The Managing Partner should reconsider this interim quality control measures and ensure the ISA 610 guidelines are strictly followed.

(iii) Recruitment of eight (8) CA Zambia graduates:

CA Zambia graduates have the theoretical knowledge but may lack the required experience. It is crucial to any professional to have not only sound theoretical knowledge but also to be able to apply that knowledge competently while working. CA Zambia graduates must undergo a three (3) year compulsory practical training. The Managing Partner must know that this is a long-term rather than a short-term solution.

(iv) Members of staff will not be allowed to sit for examinations in December

Linyanti & Co. Chartered Accountants must support education and training since these are extremely important as they are designed to maintain standards in the auditing profession. ISQC 1 *Quality Control for Firms that perform Audits and Reviews of Financial Statements and Other Assurance and Related Services Engagements* requires that the engagement partner should ensure that he assigns staff of sufficient capabilities, competence and time to individual assignments so that he will be able to issue an appropriate report. The interim quality control measure is more focused on time at the expense of developing the required capabilities and competences. This interim quality control measure is unprofessional and Linyanti & Co. Chartered must as a matter of urgency recruit more qualified staff or simply giving up some clients so that it remains with only those it can manage to handle with existing human capital.

(b) **Evaluation of the suggestion that the longest serving Audit Manager should oversee quality in the firm**

ISQC 1 *Quality Control for Firms that perform Audits and Reviews of Financial Statements and Other Assurance and Related Services Engagements* gives guidance in this area. The standard states that personnel within the firm responsible for establishing and maintaining the firm's system of quality control shall have an understanding of the entire text of this ISQC, including its application and other explanatory material, to understand its objective and to apply its requirements properly.

The longest serving manager may have the experience in the performance of audit procedures and other related issues but it is questionable whether he has sufficient and appropriate experience since he is a part qualified accountant. He may not even have the ability nor the necessary authority to carry out the job. The job must be at partner-level to command the necessary authority.

It may be advisable to consider using a group of individuals as an interim measure while the firm continue to look for an individual with the right credentials.

(c) **Impact on the audit report in each Client if matters remain unresolved:**

Client one

The insurance claim represents 2.5% (0.2/8 X 100%) of profit before tax and 0.8% (0.2/25 X 100%) of total assets. Therefore, the amount is immaterial to the financial statements.

IAS 37 *Provisions, Contingent Liabilities and Contingent Assets* requires that a contingent asset, in this case the insurance claim, must only be recognized if it is certain to be received. In the case of client one, the receipt of the insurance claim is only probable and therefore no asset should be recognized.

The accounting treatment is wrong but the audit report will be unmodified since the issue is immaterial.

Client two

The issue regarding going concern is naturally material. In this case the preparation of the financial statements on the alternative break up basis is appropriate.

In this case because the disclosures are to the audit senior's satisfaction, the auditor's opinion will be unmodified and a separate paragraph will be included in the auditor's report which will explain the material uncertainty in detail.

END OF THE SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

ADVISORY LEVEL

CA 3.3: STRATEGIC BUSINESS ANALYSIS

WEDNESDAY 16 SEPTEMBER 2020

TOTAL MARKS: 100; TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading time. Use it to study the examination paper carefully so that you understand what to do in each question.

2. This paper is divided into TWO (2) sections:

   Section A: One (1) compulsory scenario question.
   Section B: Four (4) Optional scenario Questions. Attempt any three (3) questions.

3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name must **NOT** appear anywhere on your answer booklet.

4. Do **NOT** write in pencil (except for graphs and diagrams).

5. **Cell Phones** are **NOT** allowed in the Examination Room.

6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.

7. All workings must be done in the answer booklet.

8. Present legible and tidy work.

9. Graph paper (if required) is provided at the end of the answer booklet.

10. Present Value and Annuity tables are attached at the end of this paper.

DO NOT OPEN THIS QUESTION PAPER UNTIL YOU ARE INSTRUCTED BY THE INVIGILATOR.

SECTION A

This question is compulsory and must be attempt.

<u>QUESTION ONE</u> – (Compulsory)

Federal Express (FedEx)

Federal Express (FedEx) provides an excellent example of an organization (and an entrepreneur) that opened up an unrealized market opportunity and began a new industry. 'The greatest business opportunities arise when you spot things your customer didn't have a clue they needed until you offered it to them'.

The idea behind FedEx is simple: to provide a speedy and reliable national and international 'overnight' courier service for letters and parcels based upon air cargo. FedEx rightly claim to have invented the concept of overnight delivery, creating a whole new market where previously there was none.

FedEx is, however, unusual in a number of ways. Before it could even begin, FedEx needed a nationwide (North American) distribution system with a fleet of planes and trucks – a huge investment in planning and resources.

The business was the idea of Fred Smith who as a student wrote a paper outlining a freight-only airline which delivered and collected parcels to and from a series of hubs. His father was also an entrepreneur who had founded and built a successful bus company. After graduating and determined to implement his idea for a courier service, he invested a $10 million family inheritance and raised a further $72 million from various sources based on a number of independent but positive feasibility studies.

FedEx took to the skies in 1973, offering a service in and out of 25 East coast cities with 14 jet aircraft. The demand was there, as he had forecast. Unfortunately the rise in the OPEC oil price made FedEx uneconomical almost as soon as it started. Two (2) years of losses and family squabbles – Smith was accused of 'squandering the family fortune' – were followed by profits and Smith's belief, courage and persistence were rewarded.

FedEx opened a hub in Paris in 1999 and opted for a standard price across the eurozone; and in 2006 it acquired UK-based competitor ANC – which it rebranded FedEx UK. In 2004 FedEx acquired Kinko's, an American high street franchise that provides a range of office services. This allows customers to more readily access FedEx services.

FedEx is successful because it delivers on time and speedily, and because it has a sophisticated tracking system – SuperTracker which it introduced in 1986 – for when something does go astray. It uses a slogan 'The World On Time'.

There are now nearly 700 FedEx aircraft flying over 1 million miles every two (2) days. The central hub remains in Memphis, Tennessee, in the USA but the flights are international over the whole world including Zambia. Six million packages from 220 countries are handled every night. FedEx's courier vans cover another 2 million miles every day collecting and delivering these parcels. To ensure FedEx can maintain its service it flies empty aircraft every night, which track close to the pick-up airports and which are brought into service if they are needed. Its success has, of course, spawned competition. But with learning and emergence FedEx has stayed at the forefront of the industry it invented.

Source: Adapted from Thompson, J. & Martin, F. Strategic Management – Awareness and Change. Sixth Edition. South-Western CENGAGE Learning,UK, pp. 384 – 386.)

Required:

(a) Describe the elements of the strategy which FedEx could have used to turn from loss making to profitability. (8 marks)

(b) What role did planning play in the success of FedEx over the years? Contrast a strategic plan and business plan. (6 marks)

(c) Draw a force field analysis diagram and use it to analyse what FedEx had been doing to ensure success in its operations. (8 marks)

(d) Given the following fictional data concerning FedEx:

(i) Equity = K 5,000,000

(ii) Sales = K3,000,000

(iii) Capital employed = K5,000,000

(iv) Total costs = K2,000,000

(v) Total assets = K6,000,000

(vi) Return on capital employed = 25%

Compute the following:

(i) PBIT
(ii) Net income
(iii) Asset turnover
(iv) Return on sales
(v) ROI
(vi) ROE

(18 marks)
[Total: 40 Marks]

SECTION B

Attempt any three (3) from the following questions

QUESTION TWO

Polopela Cement Company, a once high performing enterprise, has been having challenges in its operations. Unfortunately, management has not been giving its board of directors' correct information on the business operations until bailiffs took action at the company. When board carried out its investigations through you as an external auditor, several issues came up.

(a) Describe any four (4) causes of business decline of such a company. (16 marks)

(b) Analyse any two (2) reasons for the importance of Corporate Governance in Polopela Cement Company. (4 marks)

[Total: 20 Marks]

QUESTION THREE

Milenge Sugar Company incorporated over three (3) years ago with their offices and fields near Bangweulu Swamps have through the board of directors decided to request for a 10 years strategic plan. Prior to that the company needed to come up with the Mission statement and objectives of the new company to compete in the sugar market in Zambia in which Kalungwishi and Mansa Sugar companies were well ahead. You have been requested by management to spearhead this exercise.

(a) Discuss any four (4) separate elements that will help in the Ashridge College model expanded definition of a mission of a company like Milenge Sugar Company that link business strategy to culture. (12 marks)

(b) The mission statement that you will develop with the company management of this company will need to be operationalized by Objectives. Classify in writing any four (4) of what would be the functions of these objectives. (8 marks)

[Total: 20 Marks]

QUESTION FOUR

Mukuba Development Corporation has been experiencing a business stress and its strategy review has revealed that the long-term performance prospects for the corporation as a whole have become unattractive (as the portfolio has too many slow growths, declining or competitively weak units). As its Chief Strategist:

(a) Describe any four (4) conditions that may necessitate introduction of portfolio restructuring strategies by the corporation. (12 marks)

(b) Explain any four (4) reasons that would have led to poor business performance of any of it subsidiary companies. (8 marks)

[Total 20 Marks]

QUESTION FIVE

Mindolo Beverages Company is seeking to diversify into the opaque beer industry on the Copperbelt which is not only highly competitive but also profitable. The company has carried out a market research and recognises that it would get a good return on its investment in this industry but it also realised that there is likely to be some barriers to entry into this market,

(a) Demonstrate to this company any four (4) entry barriers it is likely to face as it embarks on this choice of strategy. (12 marks)

(b) Briefly explain any other four (4) factors that are at play in an industry that will influence competition. (8 marks)

[Total: 20 Marks]

END OF PAPER

SUGGESTED SOLUTIONS

SOLUTION ONE

1. Describe the strategy and its elements which FedEx could have used to turn from loss making to profitability.

When a business is in terminal decline and faces closure or takeover like FedEx faced in the early years, there is need for rapid and extensive change in order to achieve cost reduction (efficiency) and revenue generation (growth). This is a turnaround strategy which consists of 7 elements:

a. Crisis stabilization

This emphasizes reducing costs and increasing revenues. An emphasis on reducing direct costs and improving productivity is more likely to be effective in this regard than efforts that focus on reducing overhead costs.

i. Measures to reduce costs
   - Cut labor costs and senior management costs.
   - Improve productivity.
   - Ensure clear marketing focus on target market segments.
   - Utilize financial controls.
   - Utilize strict cash management controls.
   - Reduce inventory.
   - Remove unprofitable products and services.

ii. Measures to increase revenue
   - Tailor marketing mix to key market segments.
   - Review pricing policies to maximize revenue.
   - Focus activities on target market segments.
   - Exploit revenue opportunities if related to target segments.
   - Invest in growth areas.

b. Management changes

New managers may be required especially at the senior management levels.

c. Communication with stakeholders

The support of key stakeholder groups – groups with both a high level of power and a high degree of interest in the organization like the employees and providers of financial resources is likely to be very important in a turnaround. It could also be likely that the stakeholders did not receive full information during the period of deterioration.

A stakeholder analysis should be carried out so that the various stakeholder groups can be informed and managed appropriately.

d. Attention to target markets

A clear focus on appropriate target market segments is essential since a lack of such focus is a common cause of decline. The organization must become customer-oriented and ensure that it has good flows of marketing information.

e. Concentration of Effort

Resources should be concentrated on the best opportunities to create value. It is appropriate to review products and the market segments currently served, and to eliminate and distractions and poor performers. A similar review of internal activities would also likely show up several candidates for outsourcing.

f. Financial restructuring

Some kind of financial restructuring is likely to be required. Even where the business is more or less solvent, capital restructuring may be required, both to provide cash for investment and to reduce cash outflows in the shorter term.

g. Prioritization

The eventual success of a turnaround strategy depends in part on management's ability to prioritize necessary activities like those mentioned above.

2. What role did planning play in the success of FedEx over the years? Contrast a strategic plan and business plan.

Planning is the primary managerial function which is essential for organizational success and FedEx must have planned its activities from the outset as the following indicate.

Before it could even begin, FedEx needed a nationwide (North American) distribution system with a fleet of planes and trucks – a huge investment in planning and resources.

After graduating and determined to implement his idea for a courier service, the founder invested a $10 million family inheritance and raised a further $72 million from various sources based on a number of independent but positive feasibility studies. Planning indicated the need for these.

FedEx is successful because it delivers on time and speedily, and because it has a sophisticated tracking system. Its success has, of course, spawned competition. But with learning and emergence FedEx has stayed at the forefront of the industry it invented. This are the results of planning.

Hence FedEx must have utilized both strategic plans and business plans but the purposes and uses of these documents are not necessarily the same, as shown below:

Strategic Plan	Business Plan
Purpose: A high-level plan that sets the overall strategic direction of the whole organization.	Purpose: Aims to demonstrate the feasibility of a business, especially a new business.
Uses	Uses
1. Used as an internal planning tool which may be shared externally but its main purpose is to have an internal focus.	1. Has a narrower focus than the strategic plan.
2. May be used to inspire employees and to communicate the future direction of the organization.	2. Likely to be shared with external potential investors.

3. Format is flexible so that an organization can use the format that best suits its needs.	3. Includes detailed information on the financial position of the organization, competitor and market analyses and financial forecasts including capital requirements.
4. Provides a basis for more detailed planning including business plans.	4. Usually more formal and detailed in its structure and contents than a strategic plan.

3. Draw a forcefield analysis diagram and use it to analyse what FedEx had been doing to ensure success in its operations.

Forcefield analysis consists of the identification of the factors that promote and hinder change.

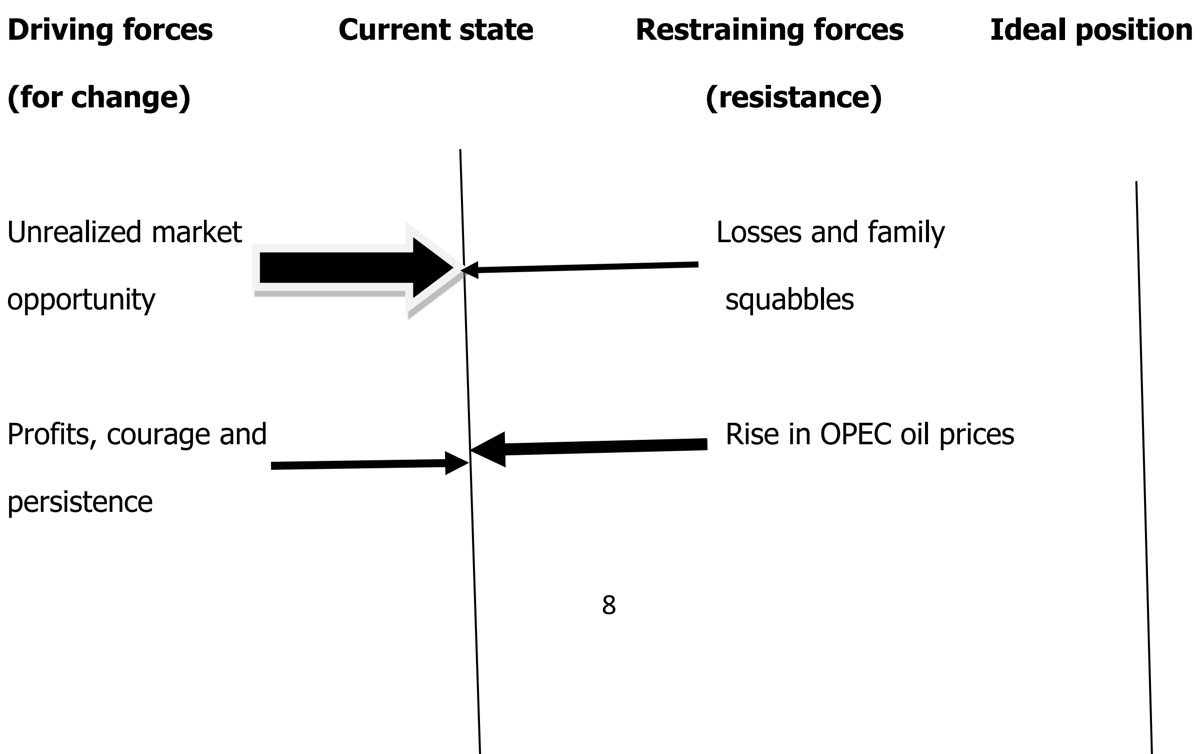
The promoting forces should be exploited while the effect of the hindering forces reduced as much as possible.

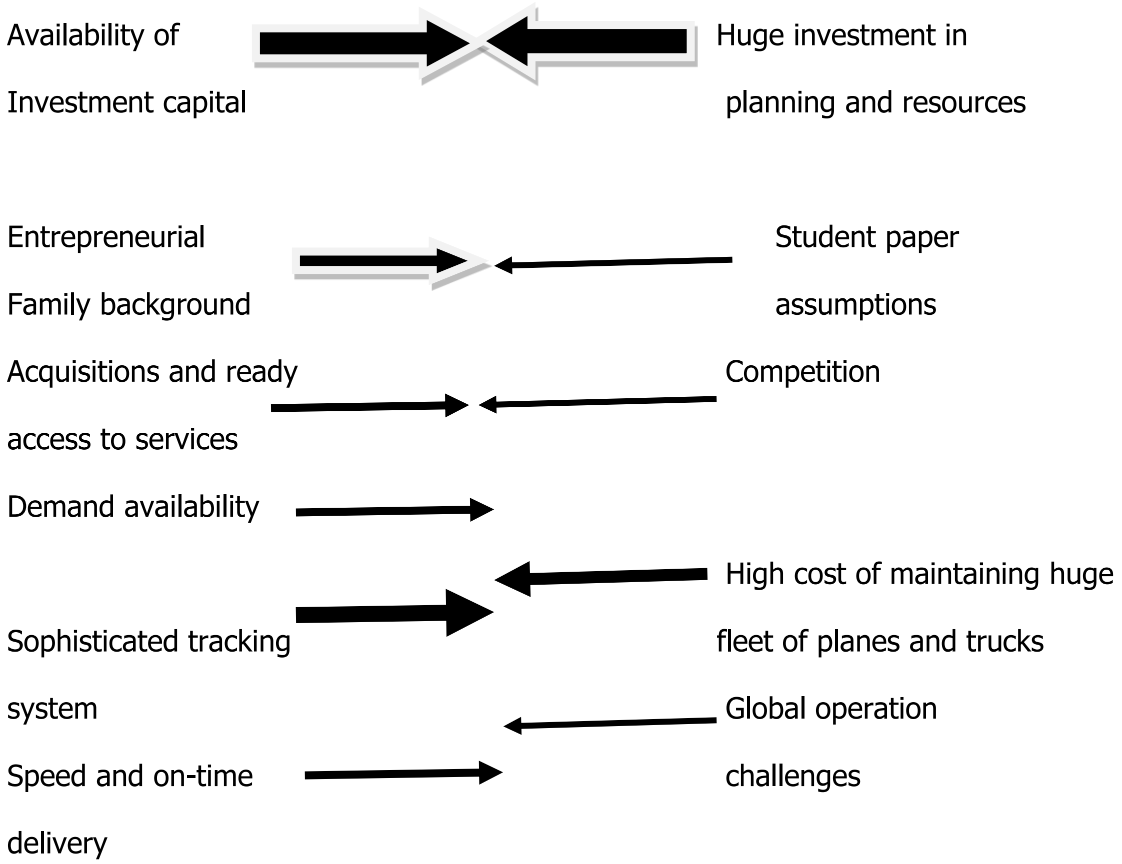
The forces are represented by arrows whose individual dimensions (sizes) correspond to their perceived strengths in the given situation.

For FedEx, the major promoting forces are an unrealized market opportunity, readily available investment funds, ready demand and sophisticated tracking system.

The major hindering forces are huge investment in planning and resources, sudden rise in OPEC oil prices, high cost of maintaining huge fleet of planes and trucks and the challenges of running a large global business.

Forcefield Analysis for FedEx





4. Given the following fictional data concerning the operations of FedEx:

   a. Equity = K 5,000,000

   b. Sales = K3,000,000

   c. Capital employed = K5,000,000

   d. Total costs = K2,000,000

   e. Total assets = K6,000,000

   f. Return on capital employed = 25%

   Calculate the following values:

   i. PBIT

   PBIT = Capital Employed x Return on Capital Employed

   = K5,000,000 x 0.25

   = **<u>K1,250,000</u>**

   iii. Net income

Net income = Sales – Total costs

= K3,000,000 – K2,000,000

= **<u>K1,000,000</u>**

iii. Asset turnover

Asset turnover = Sales / Capital employed

= K3,000,000 / K5,000,000

= **<u>0.60 or 60%</u>**

iv. Return on sales

Return on sales = Net income / Sales

= K1,000,000 / K3,000,000

= **<u>0.33 or 33%</u>**

v. ROI

Return on investment = Return on sales x Asset turnover

= 0.33 x 0.60

= **<u>0.20 or 20%</u>**

vi. ROE

Return on equity = ROI x (Total assets/Equity)

= 0.20 x (K6,000,000 /K5,000,000)

= 0.20 x 1.20

= **<u>0.24 or 24%</u>**

SOLUTION TWO

(a)There are seven main causes of business decline that stand out amongst main. These include the following:

i) Poor management: This covers a multitude of sins, ranging from sheer incompetence to neglect of core businesses and an insufficient number of good managers.
ii) Overexpansion: The empire-building strategies of autocratic CEOs often involve rapid expansion and extensive diversification. Most of this diversification is poorly conceived and adds little value to the business.
iii) Inadequate Financial Controls: The most common aspect of inadequate financial controls is the failure to assign profit responsibility to key decision makers within the organization. The lack of accountability for the financial consequences of their actions can encourage middle-level managers to employ excess staff and spend resources beyond what is necessary for maximum efficiency.
iv) High Costs Inadequate financial controls can lead to high costs. Beyond this, the most common cause of a high costs structure is low labour productivity.
v) New Competition: Competition in capitalist economies is a process characterized by the continual emergence of new companies championing new ways of doing business. Other competitors may be affected by such pressure or costs involved.
vi) Unforeseen Demand shifts: Unforeseen and often an foreseeable, shifts in demand can be brought about by major changes in technology, economic or political conditions, and social and cultural norms. These may lead customers' to change in the use and finally in demand of a product.
vii) Organizational inertia The emergence of powerful new competition and unforeseen shifts in demand might not be enough to cause corporate decline. What will also aggravate the decline is an organization that is slow to respond to such environmental changes.

(b) Analyse any two (2) reasons for the importance of Corporate Governance in Polopela Cement Company.

Good governance provides a framework for an organization to pursue its strategy in an ethical and effective way and offers safeguards against misuse of resources, human, financial, physical or intellectual. Since corporate governance is the system by which organizations are directed and controlled, it is important to companies like Polopela's continued survival and sustainability. Since the directors/managers are often acting as agents for the owners of the company, agency theory is extremely important in corporate governance.

Good corporate governance can attract new investment into companies, particularly in developing countries. It should mean that shareholders can trust those responsible for running and monitoring the company. Accountability is generally a major theme in all governance frameworks, including accountability not just to shareholders but also to other stakeholders, and accountability not just by directors but by auditors as well. Corporate governance underpins capital market confidence in companies and in the government/regulators/tax authorities that administer them. It helps protect the value of shareholders' investment and their willingness to keep it in the company concerned like Polopela.

SOLUTION THREE

a) The four separate elements that will help in the Ashridge College model expanded definition of a mission of a company like Milenge Sugar Company that link business strategy to culture are:

i) **Purpose** which include:

To create wealth for shareholders who take priority over all stakeholders;
To satisfy the interests of all stakeholders, including employees;
To reach some higher goals such as advancement of the society

ii) **Values** – are beliefs and moral principles that underlie the organisation's culture.

iii) **Strategy** –provides the commercial logic for the company (the nature of the organisation's business), and so addresses the nature of company business, what it should be, and what is its competitive business.

iv) **Policies and standards of Behaviour** –which provides guidance on how the organisation's business should be conducted. For example, a service industry that wishes to be the best in its market must aim for standards of service in all its operations.

b) The following are functions of objectives that any management of a business organisation have:

i) **Planning** – Objectives define what the plan is all about ;

ii) **Responsibility** – objectives define the responsibilities of managers and departments;

iii) **Integrations** – objectives should support one another and be consistent, this integrates the efforts of different departments;

iv) **Motivation –** the first step in motivation is knowing what is to be done. Objectives must be created for all areas of performance.

v) **Evaluation –** performance is assessed against objectives and control is exercised.

SOLUTION FOUR

(a) The conditions that would prompt introduction of portfolio restructuring strategies will include the following.

i) When one or more of the firms key business units fall prey to hard times.

ii) When a new Chief Executive Officer (CEO) takes over the reins and decides that its time to redirect where the company is headed (Mission alignment).

iii) When new efficient technologies emerge and make a series of foothold acquisitions an attractive way to get a position in a potentially big new industry.

iv) When a unique opportunity presents itself to make an acquisition so big that several existing business units have to be sold off to raise money to finance the new acquisition (e.g. oil, gemstone, precious metals, - gold, silver, diamonds.).

(b) Reasons leading to poor business performance of any one of Mukuba Development Corporation may be due:

i) Losses in one or more business units which pull overall performance above.

ii) Having a disproportionate number of businesses in unattractive industries.

iii) A bad economy which has adversely impacted many of the business units, or

iv) Having weak management at either the corporate or business levels.

SOLUTION FIVE

a) The Company as it tries to enter the market is likely to face any of the following:

i) Economies of scale to as barriers to small entrants and the inability to gain access to technology and specialised know how

ii) Threat to market share to existing firms by large entrants

iii) Learning and experience Curve Effects

iv)Brand preference and customer loyalty

v) Capital requirement - The larger the total dollar investment needed to enter the market successfully the more limited the pool of potential entrants

vi) Cost disadvantages independent size. Existing firms may have cost advantages not available to potential entrants regardless of entrants size eg access to cheapest raw materials patents.

vii) Access to distribution channels.

viii) Regulatory policies - Government agencies can limit or even bar entry requiring licences and permits e.g. banks, lottery, radio, and TV station, insurance.

ix) Tariffs and International trade restrictions

b) The four other factors that at play in an industry that will influence competition are:

i) The rivalry among competing sellers in the industry
ii) The market attempts of companies in other industries to win customers to their own substitute products.
iii) The bargaining power and leverage exercisable by supplier of key raw materials and components.
iv) The bargaining power and leverage exercisable by buyers of the product.

END OF SOLUTIONS

CHARTERED ACCOUNTANT ZAMBIA

ADVISORY LEVEL – PUBLIC PRACTICE ROUTE

CA 3.4: ADVANCED TAXATION

THURSDAY 17 SEPTEMBER 2020

TOTAL MARKS – 100 TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading and planning time. Use it to study the examination paper carefully so that you understand what to do in each question. DO NOT write in your answer booklet during this TIME.
2. This paper is divided into TWO (2) sections: Section A: ONE Compulsory Question. Section B: FOUR (4) Optional Questions. Attempt any THREE (3) questions from Section B.
3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name **MUST** not appear anywhere on your answer booklet.
4. Do NOT write in pencil (except for graphs and diagrams).
5. **Cell phone**s are **NOT** allowed in the examination room.
6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.
7. All workings must be done in the answer booklet.
8. Present legible and tidy work.
9. Graph paper (if required) is provided at the end of the answer booklet.
10. A Taxation table is provided from page 2 to page 6 of the question paper.

DO NOT OPEN THIS QUESTION PAPER UNTIL YOU ARE INSTRUCTED BY THE INVIGILATOR.

Taxation table

Income Tax

Standard personal income tax rates

Income band	Taxable amount	Rate
K1 to K39,600	first K39,600	0%
K39,601 to 49,200	next K9,600	25%
K49,201 to K74,400	next K25,200	30%
Over K74,400		37.5%

Income from farming for individuals

K1 to K39,600	first K39,600	0%
Over K39,600		10%

Company Income Tax rates

On income from manufacturing and other	35%
On income from farming	10%
On income of Banks and other Financial Institutions	35%
On income from mineral processing	30%
On income from mining operations	30%
On income from manufacture of products made out of copper cathodes	15%

Mineral Royalty

Mineral Royalty on Copper

Range of Norm Price	Mineral Royalty Rate
Less than US$4,500	5.5% of norm value
From US$4,500 to less than US$6,000	6.5% of norm value
From US$6,000 to less than US$7,500	7.5% of norm value
From US$7,500 to less than US$9,000	8.5% of norm value
From US$9,000 and above	10% of norm value

Mineral Royalty on other minerals

Type of mineral	Mineral Royalty Rate
Base Metals (Other than Copper, Cobalt and Vanadium)	5% of norm value
Cobalt and Vanadium	8% of norm value
Energy and Industrial Minerals	5% of gross value
Gemstones	6% of gross value
Precious Metals	6% of norm value

Capital Allowances

Implements, plant and machinery and commercial vehicles:

Wear and Tear Allowance –	Plant used normally	25%
	Used in Manufacturing and Leasing	50%
	Used in farming and agro-processing	100%
	Used in mining operations	20%

Non- commercial vehicles

Wear and Tear Allowance	20%

Industrial Buildings:

Wear and Tear Allowance	5%
Initial Allowance	10%
Investment Allowance	10%

Low Cost Housing **(Cost up to K20,000)**

Wear and Tear Allowance	10%
Initial Allowance	10%

Commercial Buildings

Wear and Tear Allowance	2%

Farming Allowances

Development Allowance	10%
Farm Works Allowance	100%
Farm Improvement Allowance	100%

Presumptive Taxes

Turnover Tax 4%

Presumptive Tax for Transporters

Seating capacity	Tax per annum	Tax per day
	K	K
From 64 passengers and over	10,800	29.60
From 50 to 63 passengers	9,000	24.70
From 36 to 49 passengers	7,200	19.70
From 22 to 35 passengers	5,400	14.80
From 18 to 21 passengers	3,600	9.90
From 12 to 17 passengers	1,800	4.90
Less than 12 passengers and taxis	900	2.40

Property Transfer Tax

Rate of Tax on Realised Value of Land, Land and Buildings and shares	5%
Rate of Tax on Realised Value on a transfer or sale of a mining right	10%
Rate of Tax on Realised Value on a transfer of Intellectual Property	5%

Value Added Tax

Registration threshold	K800,000
Standard Value Added Tax Rate (on VAT exclusive turnover)	16%

Customs and Excise duties on used motor vehicles

	Aged below 5 years		Aged 5 years and over	
Motor vehicles for the transport of ten or more persons, including the driver	**Customs duty K**	**Excise duty K**	**Customs duty K**	**Excise duty K**
Sitting capacity of 10 but not exceeding 14 persons including the driver	17,778	22,223	8,889	11,112
Sitting capacity exceeding 14 but not exceeding 32 persons	38,924	0	13,840	0
Sitting capacity of 33 but not exceeding 44 persons	86,497	0	19,462	0
Sitting capacity exceeding 44 persons	108,121	0	43,248	0

	Aged below 5 years		Aged 5 years and over	
Motor cars and other motor vehicles principally designed for the transport of persons including station wagons and racing cars	**Customs duty**	**Excise duty**	**Customs duty**	**Excise duty**
	K	**K**	**K**	**K**
Sedans				
cylinder capacity not exceeding 1000 cc	12,490	10,824	7,136	6,185
Cylinder capacity exceeding 1000 cc but not exceeding 1500 cc	16,058	13,917	8,564	7,422
Cylinder capacity exceeding 1500 cc but not exceeding 2500 cc	16,545	21,508	8,423	10,950
Cylinder capacity exceeding 2500 cc but not exceeding 3000 cc	18,049	23,463	10,528	13,687
Cylinder capacity exceeding 3000 cc	22,561	29,329	12,032	15,642
Hatchbacks				
cylinder capacity not exceeding 1000 cc	10,705	9,278	7,136	6,185
Cylinder capacity exceeding 1000 cc but not exceeding 1500 cc	14,274	12,371	8,564	7,422
Cylinder capacity exceeding 1500 cc but not exceeding 2500 cc	15,041	19,553	8,423	10,950
Cylinder capacity exceeding 2500 cc but not exceeding 3000 cc	16,545	21,508	10,523	13,687
Cylinder capacity exceeding 3000 cc	19,553	25,419	12,032	15,642
Station wagons				
cylinder capacity not exceeding 2500 cc	16,545	21,508	9,024	11,731
Cylinder capacity exceeding 2500 cc but not exceeding 3000 cc	18,049	23,463	13,357	17,598

Cylinder capacity exceeding 3000 cc but not exceeding 2500 cc	22,561	29,329	18,049	23,463
SUVs				
Cylinder capacity not exceeding 2500 cc	21,057	27,374	9,024	11,732
Cylinder capacity exceeding 2500 cc but not exceeding 3000 cc	24,065	31,284	13,357	17,598
Cylinder capacity exceeding 3000 cc	28,577	37,150	18,049	23,463
	Aged below 5 years		**Aged 5 years and over**	
Motor vehicles for the transport of goods -with compression-ignition internal combustion piston engine (diesel or semi-diesel):	**Customs duty**	**Excise duty**	**Customs duty**	**Excise duty**
	K	**K**	**K**	**K**
Single cab				
GVW exceeding 1.0 tonne but not exceeding 1.5 tonnes	21,926	9,501	8,770	3,801
GVW exceeding 1.5 tonnes but not exceeding 3.0 tonnes	26,311	11,402	15,348	6,651
GVW exceeding 3.0 tonnes but not exceeding 5.0 tonnes	30,697	13,302	17,541	7,601
Double cabs GVW exceeding 3 tonnes but not exceeding 5 tonnes	30,274	0	24,119	10,452
Double cabs GVW exceeding 3.0 tonnes but not exceeding 5.0 tonnes, **with spark ignition internal combustion piston engine**	30,697	13,302	24,119	10,452
Panel Vans				
GVW exceeding 1.0 tonne but not exceeding 1.5 tonnes	15,348	6,651	8,770	3,801
GVW exceeding 1.5 tonnes but not exceeding 3.0 tonnes	17,541	7,601	15,348	6,651
GVW exceeding 3.0 tonnes but not exceeding 5.0 tonnes	21,926	9,501	17,541	7,601
Trucks				
GVW up to 2 tonnes	21,926	9,501	10,963	4,751
GVW exceeding 2.0 tonnes but not exceeding 5.0 tonnes	28,504	12,352	13,156	5,701
GVW exceeding 5.0 tonnes but not exceeding 10.0 tonnes	24,724	18,955	10,817	8,293
GVW exceeding 10.0 tonnes but not exceeding 20.0 tonnes	30,905	23,694	11,744	9,004
GVW exceeding 20 tonnes	51,898	0	19,461	0
GVW exceeding 20 tonnes, **with spark ignition internal combustion piston engine**	37,086	28,432	13,907	10,662

Surtax

On all motor vehicles aged more than five (5) years from year of manufacture	K2,000

Customs and Excise on New Motor vehicles

Duty rates on:

1.	**Motor cars and other motor vehicles (including station wagons) principally designed for the transport of less than ten persons, including the driver:**	
	Customs Duty:	
	Percentage of Value for Duty Purposes	30%
	Minimum Specific Customs Duty	K6,000
	Excise Duty:	
	Percentage of Value for Duty Purposes for Excise Duty Purposes	
	Cylinder capacity of 1500 cc and less	20%
	Cylinder Capacity of more than 1500 cc	30%
2.	**Pick-ups and trucks/lorries with gross weight not exceeding 20 tones:**	
	Customs Duty	
	Percentage of Value for Duty Purposes	15%
	Minimum specific Customs Duty	K6,000
	Excise Duty:	
	Percentage of Value for Duty Purposes for Excise Duty Purposes	10%
3.	**Buses/coaches for the transport of more than ten persons**	
	Customs Duty:	
	Percentage of Value for Duty Purposes	15%
	Minimum Specific Customs Duty	K6,000
	Excise Duty:	
	Percentage of Value for Duty Purposes for Excise Duty Purposes	
	Seating Capacity of 16 persons and less	25%
	Seating Capacity of 16 persons and more	0%
4.	**Trucks/lorries with gross weight exceeding 20 tonnes**	
	Customs Duty:	
	Percentage of Value for Duty Purposes	15%
	Excise Duty:	
	Percentage of Value for Duty Purposes for Excise Duty Purposes	0%

SECTION A

This question is compulsory and must be attempted

<u>QUESTION ONE</u>

Assume that today's date is 18 December 2019 and that the earnings ceiling for the purposes of NAPSA contributions is K275,904 per annum.

Mweene and Lubasi are twin brothers who recently completed their degree programmes at a local university. Using the money they inherited from their father, they wish to commence in a retail business on 1 January 2020. Mweene and Lubasi are not sure whether it will be beneficial to run their business as a partnership or as a limited company. They will prepare their financial statements annually to 31 December.

Regardless of how the business is run, the business will acquire a Toyota Mark-X car (2400cc) and a Mitsubishi canter truck at a cost of K260,600 and K334,700 respectively. The business will also acquire a Toyota Allion car (2000cc) at a cost of K140,000, computers at a cost of K35,000 and Office furniture at a cost of K30,000. These assets will be acquired from within Zambia on 5 March 2020. The Toyota mark-X car and the Toyota Allion car will be used by Mweene and Lubasi respectively for both business and private purposes. It is estimated that the business use in the two motor cars will be 70% by each individual. All other assets will be used wholly and exclusively for the purpose of the business.

Partnership

If Mweene and Lubasi run their business as a partnership, they will draw annual partners' salaries of K420,000 and K310,000 for Mweene and Lubasi respectively. Under this alternative NAPSA contributions will not be payable by either Mweene or Lubasi. The tax adjusted business profit for the year ended 31 December 2020 is expected to be K1,500,000. This profit figure is before capital allowances and any expenses relating to Mweene and Lubasi, but after all the relevant tax adjustments have been made. Any balance of profits and losses will be shared between Mweene and Lubasi in the ratio of 2 : 1 respectively.

Limited company

If Mweene and Lubasi run their business as a limited company, they will form a private limited company known as ML Limited. Mweene and Lubasi will personally run and manage the business as full time working directors. Mweene will hold 55% of the issued share capital while Lubasi will hold 45% of the issued share capital of ML Limited. They will draw annual directors emoluments of K420,000 and K310,000 for Mweene and Lubasi respectively. Mweene and Lubasi will be required to contribute 5% of their basic salaries as NAPSA contributions. ML Limited will also be required to contribute 5% of each director's salary as employers' NAPSA contributions.

The tax adjusted business profit for the year ended 31 December 2020 is estimated to be K1,500,000. This profit figure is before capital allowances and any expenses relating to Mweene and Lubasi, but after all the relevant tax adjustments have been made

Future plans

Mweene and Lubasi are considering either taking up a permanent health insurance cover or a whole of life assurance policy to protect their wealth from the adverse effect of illness or death. They further wish to invest some of their share of profits from the business in the following types of investments:

(i) Equity shares of Zambian companies which are listed on the Lusaka Securities Exchange.

(ii) Government of the Republic of Zambia (GRZ) bonds.

(iii) Certificates of Deposits

They are keen to know the taxation implications associated with the insurance policies they are considering taking up as well as the taxation implications associated with the above investment opportunities.

Required:

(a) Advise Mweene and Lubasi of the income tax payable by each individual for the tax year 2020 if they run their business as a partnership. (11 marks)

(b) Assuming the business is run as a company:

(i) Compute the amount of income tax payable by Mweene and Lubasi for the tax year 2020. (3 marks)

(ii) Compute the amount of income tax payable by ML Limited for the tax year 2020. (9 marks)

(c) Advise Mweene and Lubasi as to whether it will be beneficial to run the business as a partnership or as a Limited company. Your answer should be supported by a computation of income net of tax and NAPSA contributions. (5 marks)

(d) In relation to Mweene and Lubasi's future plans, advise them the nature of the following protection products and the taxation implications that will arise for them as individuals if they take up each policy:

(i) Whole of life assurance policy (3 marks)

(ii) Permanent Health insurance policy (3 marks)

(e) Advise Mweene and Lubasi of the taxation implications of investing in:

(i) Equity shares of Zambian companies which are listed on the Lusaka Securities Exchange (2 marks)

(ii) Government of the Republic of Zambia (GRZ) bonds. (2 marks)

(iii) Certificates of Deposits (2 marks)

[Total: 40 Marks]

SECTION B

There are FOUR (4) questions in this section. Attempt Any THREE (3) questions.

<u>QUESTION TWO</u>

The following summarised statement of profit or loss for the year ended 31 December 2020 has been extracted from the financial statements of Kapopo Mining Corporation (KMC), a Zambian resident subsidiary of a foreign based Multinational Mining company. KMC is engaged in mining operations of copper. The group maintains its accounts in US dollars.

KAPOPO MINING CORPORATION
STATEMENT OF PROFIT OR LOSS FOR THE YEAR ENDED 30 SEPTEMBER 2020

	Note	K'000
Revenue	(1)	815,000
Cost of sales		(375,200)
Gross profit		439,800
Operating expenses	(2)	(320,805)
Finance cost		(190,000)
Investment income	(3)	605
Loss for the year		(70,400)

The following additional information is available:

(1) The sales revenue represents the norm value of copper sold during the year based on the London Metal Exchange cash price which ranged from $4,500 to $,5,900 per metric tonne throughout tax year 2020.

(2) Included in operating expenses is mineral royalty tax paid by the company during the year which was computed correctly and paid on the relevant due dates. Also included in operating expenses are depreciation charges of K280,000, amortisation of intangible assets of K120,000, drilling expenses of K5,500,000, expenditure on drafting and surveying of K1,380,000, insurance and freight expenses of K3,678,000, staff costs of K133,400,000. The balance represents miscellaneous allowable operating expenses.

(3) Investment income includes copyright royalties of K170,000 (net) and dividends from LuSE listed companies of K435,000 (gross) and foreign exchange gains of K78,000.

(4) The income tax values of implements, plant and machinery qualifying for wear and tear allowances at 1 January 2020, which were acquired locally from Zambian resident suppliers are as follows:

	Cost	*Income Tax value*
	K	K
Mining equipment	2,400,000	1,200,000
Smelting plant	1,600,000	800,000

(5) In June 2020, the company acquired two (2) motor vehicles for two (2) of its Directors. These comprised a Toyota Land Cruiser (GXL) which was acquired at a cost of K650,000 (with a cylinder capacity of 4,700cc) which was provided to the managing director on personal to holder basis and a Toyota Fortuner car which was acquire at a cost of K500,000 and has a cylinder capacity of 2,700cc and was provided to the Finance Director on a personal to holder basis. Each director has private use of each vehicle of 50%.

(6) The company constructed and successfully commissioned an on-site primary school two years ago, in January 2018, to provide primary school education to the local community in the mining township, at a cost of K1,500,000. In the same year, the company also constructed a health post at a cost of K900,000 in the mine township to provide health services to the local community.

(7) The company incurred a tax adjusted mining loss of US$580,000 in the year ended 31 December 2019.

(8) Mining losses can be indexed using the following formula:

$$1+\frac{(R_2-R_1)}{R_1}$$

(9) The following Zambian Kwacha per US Dollar (ZMW/US$) average mid exchange rates have been provided and approved by the Commissioner General:

Accounting Period	*Average BOZ Mid Exchange rate*
	ZMW/ US$
Y/e 31 December 2019	13.00
Y/e 31 December 2020	14.50

Required:

(a) Compute the taxable mining profits for the tax year ended 31 December 2020. (16 marks)

(b) Calculate the total income tax payable by the company for the tax year 2020. (4 marks)

[Total: 20 Marks]

QUESTION THREE

You are employed in a tax practice and you are dealing with the tax affairs of Unique Limited a Zambian resident company which manufactures a wide range of products both for the Zambian market and for export to other countries. Unique Ltd owns 25% of the ordinary shares of NSK plc a company resident in a country known as Bestovia. Unique Ltd also owns 45% of the ordinary shares of Hazel plc a company resident in a country known as Pestovia.

The Chief executive officer of Unique Ltd is Niza Nanyangwe, who is resident and ordinary resident in Zambia. Niza has shareholdings of 5% in each of the three companies Unique Ltd, NSK plc and Hazel plc. In the year ended 31 December 2020, Niza earned gross emoluments of K390,000. She paid income tax of K142,500 under the Pay As You Earn system. She also paid NAPSA contributions of K13,795. In addition to the director's emoluments, Niza also received net dividends of K25,500 from Unique plc, K90,000 from NSK plc and K126,000 from Hazel plc.

Unique Ltd's profit before tax from its Zambian operations for the year ended 31 December 2020 was K14,500,000. This profit figure is after making the relevant adjustments for tax purposes but before making any adjustments for tax purposes in relation to the following transactions which took place between Unique Ltd and its two related companies NSK plc and Hazel plc:

(1) On 1 January 2020, Unique Ltd made a loan of K25 million to NSK plc at an interest rate of 10% per annum. The loan is repayable in 5 years. The commercial rate of interest on loans of this type in Zambia is 32% per annum. In Bestovia, the rate of withholding tax on interest income is 0%.

(2) During the year, Unique Ltd imported raw materials from Hazel plc at a value of K3,500,000, to be used by the Unique Ltd in one (1) of its production processes to manufacture goods which are sold by Unique on the local Zambian market. Hazel plc would have sold the raw materials to an unconnected party at a fair open market value of K1,300,000.

(3) On 20 December 2020, NSK plc paid total dividends equivalent to K1,800,000 to all of its investors net of withholding tax at the rate of 40% deducted in Bestovia. Unique Ltd has not accounted for its share of the dividends received from NSK plc in arriving at the profit figure from Zambian operations of K14,500,000.

(4) On 31 December 2020, Hazel plc paid total dividends equivalent to K2,520,000 to all of its shareholders net of withholding tax at the rate of 30% deducted in Pestovia. Unique Ltd has not accounted for its share of the dividends received from Hazel plc in arriving at the profit figure from Zambian operations of K14,500,000.

There is no double taxation treaty between Zambia and both Bestovia and Pestovia. Any double taxation relief available on income received from either country is given by way of unilateral credit relief.

Required:

(a) Calculate the income tax payable by Niza Nanyangwe for the tax year 2020. (10 marks)

(b) Calculate the income tax payable by Unique Ltd for the tax year 2020. (10 marks)

[Total: 20 Marks]

QUESTION FOUR

You are employed as a Tax Manager in a tax practice and you are dealing with the tax affairs of MerryGold General Insurance Ltd, a Zambian resident company providing general insurance services. The directors have informed you that the company has just received notification that the Zambia Revenue Authority will be conducting a tax audit of the affairs of the company soon. The directors are confused as they do not know what a tax audit is and are not sure as to whether it amounts to a tax investigation. They are also keen to know the main types of tax defaults which may be discovered during a tax audit.

You have further been provided with the following information relating to the company's operations for the year ended 31 December 2020:

	K'000
Reserve for unexpired risks at 1 January 2020	115,850
Reserve for unexpired risks at 31 December 2020	114,500
Interest income (note 1)	400
Gross premiums received during the year	925,000
Income (amounts) received under reinsurance	110,000
Premiums refunded (paid) on reinsurance	2,000
Actual losses incurred from claims by customers	3,500
Other operating expenses (note 2)	734,750

Notes:

(1) Interest income

This comprises treasury bill discount of K300,000 (gross) and fixed deposit interest of K100,000 (gross).

(2) Other operating expenses

These comprises depreciation of non-current assets of K120,000,000, staff salaries and wages of K86,500,000, fines for non-compliance with regulations under the Pension and Insurance Act amounting to K35,000,000, fair value losses on investment property of K25,000,000 and administration expenses of K225,250,000. The balance comprises miscellaneous allowable operating expenses.

(3) Provisional income tax

The provisional income tax paid by the company during the year was K99,675,000.

Required:

(a) Advise the directors of the differences between a tax audit and a tax investigation. (4 marks)

(b) Explain the meaning of the following types of defaults which may be uncovered during a tax audit, giving examples in each case:

(i) Deliberate behaviour (2 marks)

(ii) Careless behaviour without significant consequences (2 marks)

(iii) Careless behaviour with significant consequences (2 marks)

(c) Advise the directors of the amount of taxable income for MerryGold General Insurance Ltd and the company income tax payable for the tax year 2020.

(10 marks)

[Total: 20 Marks]

QUESTION FIVE

For the purpose of this question, you should assume that today's date is 31 December 2020.

You are employed in a firm of Chartered Accountants. Your supervisor has just assigned you to deal with the tax affairs of Rebok Plc. You own 10% of the issued share capital of Rebok plc, which is one your firms oldest clients. The company is a manufacturer of various soft drinks. It has been in existence since June 1995. The company is registered for Income Tax, Pay As You Earn (PAYE), Value Added tax (VAT) and Withholding Tax (WHT).

Whilst performing your work you discovered that the company has un-receipted income of K5.5 million for the year under review. You have approached the directors of the company to adjust the accounts to reflect the above income but they have advised you to just overlook this matter as they are unlikely to have any queries from the ZRA as long as you kept this information confidential in line with your duty of confidentiality as required by the code of ethics for professional accountants.

You have further been provided with the following information relating to the transactions that took place during the charge year 2020:

(1) Rebok Plc acquired food processing equipment which had a cash price of K232,000 (VAT inclusive) under a hire purchase agreement on 1 January 2020. The company was required to pay an initial deposit of K46,400 to be followed by five monthly installments of K50,720.

(2) Rebok Plc paid electricity expenses amounting to K3,712 (VAT inclusive) on 31 October 2020, for a new director's residential accommodation relating the period from 1 November 2020 to 31 December 2020.

(3) 0n 1 February 2020, Rebok Plc issued K5 million 10% redeemable bonds of at a price of K100 per K100 nominal, which are redeemable at this nominal value in five years' time. The company incurred issue costs of K100,000. The bonds were issued to finance the construction of a new manufacturing plant. Construction works were completed in October 2020 and cost K5 million (VAT exclusive). The plant was immediately brought into use during the month of October 2020.

(4) Rebok Plc engaged a South African company Woma Plc to install manufacturing equipment at the company's new plant. Installation works took five (5) days. Woma Plc issued a tax invoice on its own behalf as it did not have enough time to appoint a tax agent in Zambia. The tax invoice issued by Woma Plc to Rebok Plc was denominated in South African Rand (ZAR) and had a value of ZAR250,000. This amount is exclusive of South African VAT since it represents an export from South Africa. The exchange rate on the date of issue of the invoice was K0.90 per ZAR1.

Required:

(a) Evaluate the ethical and professional issues you face in relation to your assignment recommending any appropriate course(s) of action that should be taken in response to each issue. (6 marks)

(b) Advise Rebok Plc using appropriate supporting computations, on the tax implications of each of the transactions (1) up to (4) above for the year ended 31 December 2020. (14 marks)

[Total: 20 Marks]

END OF PAPER

SUGGESTED SOLUTIONS

SOLUTION ONE

(a) Partnership

Mweene and Lubasi

Income tax payable for the tax year 2020

	K	K
Marks		
Business profits		1,500,000
Less:		
Capital allowances		
Toyota Mark-X car: K260,600 x 20% x 70%	36,484	
Toyota Allion car: K140,000 x 20% x 70%	19,600	
Mitsubishi canter truck: K334,700 x 25%	83,675	
Computers: K35,000 x 25%	8,750	
Office furniture: K30,000 x 25%	7,500	
		(156,009)
Taxable business profit		1,343,991

	Total	Mweene	Lubasi
Marks			
	K	K	K
Salaries	730,000	420,000	310,000
Balance (2: 1)	613,991	409,327	204,664
Total	1,343,991	829,327	514,667
Income Tax			
First K74,400		9,960	9,960
Balance: K754,927/ K440,267 @37.5%		283,098	165,100
Income tax payable		293,058	175,060

(b) (i) Mweene and Lubasi

Income tax payable for the tax year 2020

	Mweene	Lubasi
Marks		
	K	K
Directors' emoluments	420,000	310,000

Computation

	K	K
First K74,400	9,960	9,960
Balance: K345,600/ K235,600 @37.5%	129,600	88,350
Income tax payable	139,560	98,310

(ii) ML Limited

Income tax payable for the tax year 2020

	K	K
Marks		
Business profits		1,500,000
Less:		
Directors' emoluments (420,000 + 310,000)	730,000	
Employers' NAPSA (K275,904 x 5% x 2)	27,590	
Capital allowances		
Toyota Mark-X car: K260,600 x 20%	52,120	
Toyota Allion car: K140,000 x 20%	28,000	
Mitsubishi canter truck: K334,700 x 25%	83,675	
Computers: K35,000 x 25%	8,750	
Office Furniture: K30,000 x 25%	7,500	
		(937,635)
Taxable business profits		562,365
Income tax @35%		196,828

(c) Tax advice

Net income

	Partnership	Limited Company
Marks		
	K	K
Business profits	1,500,000	1,500,000
Less:		
Income tax payable:		
Mweene	(293,079)	(139,560)
Lubasi	(175,070)	(98,310)
ML Limited	-	(196,828)
Employees' NAPSA (K275,904 x 2) x 5%	-	(27,590)
Employers' NAPSA (K275,904 x 2) x 5%	-	(27,590)
Net income after tax and NAPSA	1,031,851	1,010,122

It will be beneficial for Mweene and Lubasi to run their business as a partnership rather than as a limited company because the net income under partnership will be K21,729 (K1,031,851 – K1,-010,000) higher than that of a limited company.

(d) (i) Whole of life assurance

This policy pays out the sum assured as a lump sum on the death of the life/lives assured to the grantee, who need not necessarily be the life assured or their beneficiaries.

The taxation implications will be as follows:

(1) Each individual will not receive any tax relief on the premiums they will be paying, i.e. the premium will not be allowable for tax purposes.

(2) The policy proceeds which the insurance company will pay on the occurrence of the assured event will be exempt from income tax.

(ii) Permanent health insurance
This policy provides income replacement payable in the event of disability. The taxation implications are as follows:

(1) Each individual will not receive any tax relief on the premiums paid they will be paying, i.e. the premium will not be allowable for tax purposes.

(2) The policy proceeds which the insurance company will pay on the occurrence of the assured event will be exempt from income tax.

(e) The following are the tax implications

(i) Investing in equity shares of Zambian listed companies

(1) The dividends receivable are exempt from income tax. This means that the dividends are received gross.
(2) On transfer (sale) of shares there is no property transfer tax to charge because transfer of share listed on the Lusaka Securities Exchange is exempt from PTT.

(ii) Investing in GRZ bonds

(1) The interest receivable is subjected to withholding tax at a rate of 15% which is the final tax for individuals. This means that interest will be received net of tax at 15%.

(2) On transfer of the bonds there is no property transfer tax to be charged because bonds fall outside the scope of PTT.

(iii) **Certificates of deposits**

(1) The interest receivable is subjected to withholding tax at a rate of 15% which is the final tax for individuals. This means that interest will be received net of tax at 15%.

(2) On transfer of the certificates of deposit, there is no property transfer tax to be charged because certificates of deposit fall outside the scope of PTT.

SOLUTION TWO

(a) COMPUTATION OF TAXABLE MINING PROFITS

	K'000	K'000	
Net loss as per accounts		(70,400)	
Less expenses			
Mineral royalty tax			
(K815,000 x 6.5%)	52,975		
Depreciation	280		
Amortisation	120		
Personal to holder motor car benefit			
- Toyota land cruiser	40		
- Toyota Fortuner	30		
Interest	190,000		(W1)
		243,445	
		173,045	
Less:			
Copyright royalties	170		
Dividends	435		
		(605)	
Tax EBITDA		172,440	
Less:			
Interest (30% x K172,440)	51,732		(W1)
Capital allowances	1,710		(W2)
		(53,442)	
Taxable mining profits before loss relief		118,998	
Less Tax loss (W3)		(8,410)	(W3)
Final taxable mining profit		110,588	

WORKING

(1) COMPUTATION OF DISALLOWED INTEREST

	K'000
Interest paid during the year	190,000
Less tax allowable interest	
(30% x Tax EBITDA)	
(30% x K172,440)	(51,732)
Unrelieved interest carried forward	138,268

(2) KMC
COMPUTATION OF OTHER CAPITAL ALLOWANCES ON QUALIFYING EXPENDITURE

	K' 000
Mining equipment	
Wear & tear allowance	
(K2,400,000 x 25%) NOTE	600
Smelting plant	
Wear & tear allowance	
(K1,600,000 x 25%) NOTE	400
Toyota land cruiser	
Wear & tear allowance	
K650,000 x 20%	130
Toyota Fortuner	
Wear & tear allowance	
(K500,000 x 20%)	100
Hospital	
Wear & tear allowance	
(K900,000 x 20%)	180
School	
Wear & tear allowance	
(K1,500,000 x20%)	300
Total	1,710

NOTE: The wear and tear on the mining capital expenditure incurred before 1 January 2020 continues to be at the rate of 25% which was applicable when this expenditure was incurred. The wear and tear allowance of 20% applies only to mining capital expenditure incurred on or after 1 January 2020.

(3) Loss Relief

Translated Loss b/f(US$580,000 x K13.00)	K7,540,000
Loss b/f Indexed	
[(1 + (14.50 – 13.00/13.00)] x K7,540,000	8,410,000
Profits available for loss relief	
(K134,930,000 x 50%)	67,465,000

The profits are enough to offset the whole loss and the whole amount of the loss will be relieved.

(b) KAPOPO MINING

COMPANY INCOME TAX COMPUTATION FOR THE TAX YEAR 2020

	K'000
Taxable Mining profit	110,588
Copy right royalties	
(K170,000 x100/85)	200
Total taxable business profit	110,788
Company income tax on mining profits	
(K110,588,000 x 30%)	33,176
Company income tax on copy right royalties	
(K200,000 x 35%)	70

	33,246
Less Tax already paid	
WHT on Fixed deposit interest	
(K200,000 x 15%)	(30)
Company Income Tax payable	33,216

SOLUTION THREE

(a) NIZA NANYANGWE

PERSONAL INCOME TAX COMPUTATION FOR THE TAX YEAR 2020

	K	K	
Annual salary		390,000	
Foreign dividends from			
NsK (K90,000 x100/60)	150,000		
Hazel plc (K126,000 x 100/70)	180,000		
		330,000	
		720,000	
Income tax			
On the first K74,400		9,960	
On the balance			
37.5% x (K720,000 – K74,400)		242,100	
		252,060	
Double taxation relief			
Dividend from NsK plc	51,312		(W3)
Dividend from Hazel plc	54,000		(W4)
		(105,312)	
Less tax paid under the Pay As You Earn system		(142,500)	
Income tax payable		4,248	

Workings

(1) Total assessable income

	K
Income chargeable to income tax	720,000
Gross Zambian dividend (K25,500 x 100/85)	30,000
Total assessable income	750,000

(2) Total amount of Zambian tax charge

	K
Income Tax	252,060
Withholding tax on Zambian dividend (15% x K30,000)	4,500
Total Zambian tax charge	256,560

(3) Double taxation relief on dividend from NsK plc is the lower of:

(i) Zambian income tax attributed to the foreign dividend

= K150,000/ K750,000(W1) x K256,560(W2)

= K51,312

(ii) Foreign withholding tax paid

= K160,000 x 40%

= K64,000

(4) (i) Zambian income tax attributed to the foreign dividend

= K180,000/ K750,000(W1) x K256,560(W2)

= K61,574

(ii) Foreign withholding tax paid

= K180,000 x 30%

= K54,000

(b) UNIQUE

COMPANY INCOME TAX COMPUTATION FOR THE TAX YEAR 2019

	K'000	
Business profits	14,500	
Interest charged below market rate		
(32% - 10%) x K25 m	5,500	
Raw materials acquired at higher than market value		
(K3,500,000 – K1,300,000)	2,200	
Foreign dividends from:		
NSK plc (K1,800,000 x 100/60) x 25%	750	
Hazel plc (K2,520,000 100/70) x 45 %	1,620	
Total taxable profit	24,570	
Company income tax		
(K24,570,000 x 35%)	8,599.5	
Less Double Taxation Relief on:		
Dividend from NsK plc (W1)	(262.5)	W
Dividend from Hazel Ltd (W2)	(486.0)	W
Company income tax payable	7,851.0	

Workings

(1) Double taxation relief on dividend from NsK plc is the lower of:

(i) Zambian company income tax on the dividend

= 35% x K750,000

= K262,500

(ii) Foreign withholding tax paid

= 40% x K750,000

= K300,000

(2) Double Taxation Relief on dividend from Hazel plc is the lower of:

(i) Zambian company income tax on the foreign dividend

= 35% x K1,620,000

= K567,000

(ii) Foreign withholding tax paid

= K1,620,000 x 30%

= K486,000

SOLUTION FOUR

(a) **Tax Audit**

A tax audit is the examination of a tax return, a declaration of liability or a repayment claim, a statement of liability to stamp duty, or the compliance of a business with tax and duty legislation. The main purpose of a tax audit is to establish the correct level of tax liability. Any tax payer can be a subject of a tax audit.

A tax audit may be comprehensive and examine compliance under a wide range of taxes which persons may be liable to, or it may be restricted so that it examines compliance under a specific tax, such as PAYE or VAT. The tax audit will examine the books and records of the taxpayer to establish if there is any tax default and if so, to reach a settlement with the taxpayer and ensure future compliance to the tax code.

Tax Investigation

A tax investigation on the other hand is carried out purely because some tax evasion or tax fraud has been reported or being suspected in connection with a tax payer.

A tax investigation will also be carried out where a taxpayer carrying on business consistently reports losses, as on financial grounds, a business that is in a position of perpetual loss would not be a going a concern.

(b) (i) Deliberate behaviour

Deliberate behaviour involves a breach of a tax obligation where there is intent on the part of the taxpayer and so does not qualify as careless behaviour. Examples of deliberate behaviour include failure to maintain books and records, omission of transactions from the books and records, providing false or misleading information.

(ii) Careless behaviour without significant consequences

Carelessness in this context refers to a failure to take reasonable care. Significant consequences refer to the amount of tax underpaid as the result of the tax payer failing to take reasonable care when discharging tax obligations.

With Careless behaviour without significant consequences, the amount of tax underpaid by the tax payer as a result of not taking reasonable care when discharging tax obligations is insignificant with reference to the correct tax payable for the relevant period.

This category relates to defaults of a minor nature that are discovered during a tax audit, for example, computational errors and inadequate adjustments for personal expenditure in the statement of profit or loss and other comprehensive income.

Careless behaviour with significant consequences

Significant consequences applies where the tax underpaid as a result of the tax payer failing to take reasonable care when discharging tax liabilities, is significant with reference to the correct tax payable for the relevant period.

Examples of careless behaviour include failure to take advice, neglecting to categorise expenditure into allowable and disallowable categories for tax purposes, insufficient standard of record keeping in the business and so on.

(c) MERRYGOLD GENERAL INSURANCE

COMPUTATION OF TAXABLE INCOME AND COMPANY INCOME TAX PAYABLE

	K'000	K'000
Gross premiums received during the year		925,000
Interest income		400
		925,400
Add:		
Reserves of unexpired risk at 1 January 2020	115,850	
Less Reserves of unexpired risk at 31 December 2020	(114,500)	
		1,350
		926,750
Less		
Actual losses incurred	3,500	
Less amounts received under reinsurance	(2,000)	
		(1,500)
		925,250
Less other allowable expenses		
- Staff salaries & wages	86,500	
- Administration expenses	225,250	
- Other Allowable operating expenses		
(K734.75m – K120m -K86.5m – K35m -K25m K225.25m)	243,000	
		(554750)
Taxable income		370,500
Company income tax		
(K370,500 x 35%)		129,675
Less		
WHT on Treasury bill discount (K100,000 x 15%)		(15)
WHT on Fixed deposit interest (K300,000 x 15%)		(45)
Provisional income tax		(99,675)
Company Income Tax payable		29,940

SOLUTION FIVE

a) Ethical and professional issues

1) Self-interest threat
   This arises as a result of having financial interest in the firm of the tax client. As one of the shareholders of Rebok plc your professional judgement of the state of affairs of the company may be impaired.

   Safeguard
   Your firm should declare this financial interest in the client and ask another Tax Manager to finalise the report.

2) Familiarity threat
   This arises when the tax adviser has been providing services to the client for a long period of time. There is familiarity threat because Rebok plc is one of your oldest clients and hence a close relationship has been created. The tax expert will become too sympathetic to the interest of the client or too accepting of their work.

   Safeguard
   Your firm should rotate clients or discontinue the professional tax advice involved.

3) Discovery of un-receipted income

   The IFAC code of ethics states that members shall respect the confidentiality of information acquired as a result of professional and business relationship. A member who acquires confidential information during the course of performing professional tax services for a client shall not use or disclose any such information without proper and specific authority, unless there is a legal or professional right or duty to disclose such information.

   In this case, the fundamental principle of confidentiality may be overridden as you may have a legal duty to disclose the un-receipted income of K5.5 million to the proper authorities (ZRA) and not to overlook. However, it will be important for you to inform the supervisor and your firm may have to seek legal advice before making the final decision.

(b) Hire Purchase

Acquisition of assets under a hire purchase agreement by Rebok Plc will be treated as outright purchases since the hire purchase company will effectively provide the finance.

The tax implications for Rebok will be as follows:

(1) The interest element is tax deductible in the computation of taxable business profits and this will amount to:

K46,400 + (K50,720 x 6) – K232,000 = K68,000

(2) Input VAT on the cost will be recoverable and this will amount to:

K232,000 x 4/29 = K32,000

There will be no VAT on the interest as it effectively relate to financing which is an exempt activity.

(3) Rebok Plc will claim capital allowances on the VAT exclusive cost of the asset (excluding interest) which will be allowable deductions when computing the taxable business profits and these will amount to

50% x (K232,000 x 4/29) = K100, 000 per annum.

Electricity

(1) Rebok Plc will not be allowed to claim any input VAT on the electricity which was paid for the director's private accommodation because that input VAT is irrecoverable.

(2) Rebok Plc will be able to add the electricity amount to the emoluments of the new director for the month of October 2019. An amount of K3,712 will be added to the emolument of the new director and taxed under PAYE.

(3) The gross electricity expenses paid by Rebok Plc on behalf of the director will be allowed as an expense for income tax purposes.

Issue of bonds

(1) The issue costs of K100,000 will as the proceeds raised have been used by Rebok Plc for capital expenditure.

(2) The interest will not be tax deductible as the proceeds raised have been used by Rebok Plc for capital expenditure and this will amount to:

K5 million x 10% = K100,000

(3) Capital allowances will be claimable on the cost of the plant of K5,100,000 (i.e. K5,000,000 +K100,000 issue cost) and will amount to

K5,100,000 x 50% = K2,550,000

Installation of equipment

(1) Reverse VAT will apply to this transaction because the installation service provided by the foreign company, Woma Plc, qualifies to be classified as an imported service and Woma Plc did not appoint an agent to act on its behalf for VAT purposes.

(1 mark)

(2) Rebok Plc will have to charge itself reverse VAT of K36,000 (K225,000 x 16%). This will be included as part of Rebok Plc's output VAT.

(3) The VAT will form part of the cost of the equipment as it is not claimable as input VAT.

(4) Rebok Plc will recognize total capital expenditure of K261,000. This is made up of cost net of VAT of K225000 (R250000 x K0.9/R1) and VAT of K36,000 (K225,000 x 16%).

(5) Rebok Plc will claim capital allowance of K130,500 (K261,000 x 50%).

(6) Further, Rebok Plc will have to deduct withholding tax of K45,000 (K225000 x 20%) and remit it to the Zambia Revenue Authority.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

ADVISORY LEVEL

CA 3.5: ADVANCED MANAGEMENT ACCOUNTING

TUESDAY 15 SEPTEMBER 2020

TOTAL MARKS – 100; TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading time. Use it to study the examination paper carefully so that you understand what to do in each question. You will be told when to start writing.

2. This paper is divided into TWO (2) Sections:
   Section A: One (1) Compulsory scenario question.
   Section B: Four (4) Optional scenario Questions. Attempt any Three (3) questions.

3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name must **NOT** appear anywhere on your answer booklet.

4. Do **NOT** write in pencil (except for graphs and diagrams).

5. **Cell Phones** are **NOT** allowed in the Examination Room.

6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.

7. All workings must be done in the answer booklet.

8. Present legible and tidy work.

9. Graph paper (if required) is provided at the end of the answer booklet.

DO NOT OPEN THIS QUESTION PAPER UNTIL YOU ARE INSTRUCTED BY THE INVIGILATOR.

SECTION A

This question is compulsory and must be attempted

<u>QUESTION ONE</u>

Company history

MuchingaPlc (M Plc) was established in 1980. It is involved in the purchasing of various appliances such as personal computers, faxes, play stations and television sets.

Muchinga Plc (M Plc) does not manufacture the consumer appliances. It buys them from the manufacturers and then sells them to retailers, or occasionally, it will contract with a manufacturer to sell a consignment of goods either for a fee or for a commission based on the sales receipts.

In its early days MuchingaPlc (M Plc) had concentrated on the sale of television sets. However, as other markets developed it exploited these as well.

From the start MuchingaPlc (M Plc) has had a selling orientation. Its success has been built upon the expertise of its sales representatives. These were required to have considerable technical and product knowledge as the products they sold were expensive and perceived to be complicated by the retailers and consumers. Often, in the early days of the company, the products were subject to a considerable degree of product failure.

Structure of M Plc

M Plc's headquartersare Lusaka and it has three distribution locations in Zambia. There are 45 people at the headquarters. The head office staff are the company's executive management, together with marketing and finance specialists. The only other staff are the 185 sales representatives who are distributed across the country. The sales representatives work from their homes and largely determine how they spend their own working weeks. Their administration requirements are dealt with by the location nearest to their home. They attend a monthly meeting at this location.

The actual warehousing, transport and distribution are carried out for M Plc by a specialist subcontractor. The subcontractor owns and operates the locations and employs 30 people at each of its locations to deal with MPlc's business.

Corporate planning in M Plc

M Plc has a strategic planning process. Part of this process involves a continuous 'gap analysis' of actual performance against plan. M Plc has been meeting its targets but has been finding this increasingly difficult. Consequently, MPlc's management accountant, together with head office colleagues, has been collecting information to assist in a review of the company's strategies. A number of factors have emerged.

Mission statement

MPlc stated its mission statement as:"our mission is to be a dynamic, marketdriven, global provider of consumer durable appliances judged best in the class by our cherished customers, our people and our shareholders. We believe our strategies to increase our efficiency together with our growth initiatives make us the most competitive appliance distributors in the world."

Management Accountant and Colleagues Review of Strategic Plan

- The marketing executives have indicated that the nature of the products that M Plc sells has changed. Due to improvements in manufacturing and design, the products are now very reliable, with technical failures being negligible. There is a high rate of innovation and so product life cycles are much shorter than they were in the 1980s. It is also noticeable that retailers and consumers are much more knowledgeable about such products, and that the consumers' incomes have risen considerably since the 1980s.
- The managers of the sales force have observed that it has become very expensive to maintain a sales representative and this presents management with a dilemma.Although the current number of sales representatives means that the country is adequately covered, it is felt that the selling operation lacks effectiveness: for example, M Plc has always tried to give a personal service to its customers, but now some of its markets are highly fragmented. This means that calls are being made to outlets where very little business is conducted. The sales representatives feel that these customers should still receive their personal service as many of them have been customers since M Plc was established.
- The M Plc directors think that the markets within which M Plc operates have become much more competitive, particularly as regards market share. They notice a tendency for the competition to be conducted on the basis of price, which has been achieved by reductions in cost structures.
- The management accountant has reviewed the company's information systems. Asfaras compliance with statutory requirements is concerned, M Plc's accounting systems are extremely good.

Required:

(a) In the case study you have just read, M Plc refers to a mission statement.
Outline four(4) contents that a good mission statement should generally have. (4marks)

(b) M Plc has strategic planning process and part of this process is a gap analysis of actual performance against plan. However, it is flawed in many areas and hencethe review by management accountant and his colleagues.

Explain FOUR (4)advantages that could accrue toM Plc as a result of having a formal strategic planning system in place. (4 marks)

(c) (i) Prepare a SWOT analysis for M plc. (8 marks)

(ii) In line with your SWOT analysis in (c) (i), recommend suitable strategies for M Plc. (10 marks)

(d) One of the recommended strategies in part (c) would be to link activities.Some of the directors of M Plc attended a workshop where value chain analysis was presented as an activity linking model .The presenter went on further to say that one of the best ways of performing activities and business process organisation was to apply benchmarking.

Required:

(i) Identify the nine (9) activities of the value chain and explain how value chain analysis can be used to increase customer satisfaction and manage costs more effectively. (3 marks)

(ii) Explain benchmarking and how it could be used to improve the performance of M Plc. (4 marks)

(e) M Plc wishes to add microwave ovens and gas stoves to the current product portfolio and these additions were highly recommended by the finance director. Data relating to the microwave ovens is as below:

1. An initial investment of K2, 500,000 will be required at the beginning of the project. The project has a three year life with a scrap value of K200, 000 at the end of the project. Depreciation is calculated on the straight line basis.
2. Sales revenue will be generated as follows:

Year	K'000
1	8,000
2	18,000
3	10,000

3. Incremental fixed costs will be K2 million in year 1, increasing by 10% in year 2 and 15% in year 3.

4. Microwave oven sales will generate a contribution sales ratio of 40% over the project life.

5. Corporate tax of 35% is payable one year in arrears.

6. K1,000,000 in working capital will be required at the beginning of the project and K1,500,000 in year 1.

7. M Plc uses 15% cost of the capital to evaluate its capital projects

Required:

(i) Advise M Plc whether the investment is worthwhile or not. (5 marks)

(ii) Calculate the sensitivity factor (error margin of the initial investment) andinterpret the meaning of the figure you have calculated. Assume that all other variables in the model remain unchanged. (2 marks)

[Total: 40 Marks]

SECTION B

Attempt any THREE (3) questions in this section

<u>QUESTION TWO</u>

Newington Green Plc (NG Plc) is structured into divisions.Two of its divisions are Division X and Division Y.Selling prices and sales demand data relating to these divisions were compiled by the marketing director as follows:

Division X		Division Y	
Selling Price	Sales Demand	Selling Price	Sales Demand
K10 K15 K20	30,000 20,000 10,000	K40 K45 K50	14,400 10,000 5,600

Cost structure and operating data for Divisions X and Y.

Division X

Division X produces an intermediate product called Dx. Dx is sold on the open market and the remaining output is transferred to another division in NG Plc called Division Y. Division Y uses Dx in the manufacture of its final product, namely the Dy. The costs per unit of Dx are as follows.

Variable production costs	K5.0
Variable selling expenses	K0.5
Fixed production overheads	<u>K2.0</u>
	<u>K7.5</u>

Division X sells a maximum 20,000 units per annum on the open market at a selling price of K15 per unit.

10,000Dx units are transferred to Division Y at a price of K14.50.These 10,000 units are in addition to the open market sales.The K15 selling price is adjusted or discounted by 50 ngwee because selling expenses are avoided or saved on internal transfers.

<u>Division Y</u>

Division Y's unit costs are as follows:

Transfer costs (from Division X)	K14.50
Own variable production costs	K19.00
Variable selling expenses	K0.50
Fixed production overhead	<u>K6.00</u>
	<u>K40.00</u>

Mr Islington Chipeta is in charge of Division Y and he is not happy with the way the transfer price is set.He is of the view that transfers should be made at the marginal cost plus an agreed reasonable markup. His rationale for this view is that Division X cannot sell the 10,000 units at K15 because this extra output has no market.

Required:

(a) (i) Calculate the optimal output and price for Division X if Dxis sold on the open market. (3 marks)

(ii) From the view point of Division Y, calculate optimal output and price for the final product, Dy on the assumption that there are no effective constraints on Division X capacity. Compute also the contribution for the company as a whole based on these independent divisional policy decisions. (3 marks)

(iii) Calculate the optimal output of Division Y based on the transfer price of K14.5. (4 marks)

(iv) Advise on the effect that the current transfer pricing system have had on the NG Plc profits. (3 marks)

(iv) The Division Y manager, Mr Chipeta, is basically suggesting a negotiated transfer pricing system. A negotiated transfer price is an outcome of bargaining between the managers of the supplying and receiving divisions.

Explain two (2) advantages and two (2) disadvantages of negotiated transfer pricing. (4 marks)

(b) A business or operating unit can have both financial and social objectives and at times these can be in conflict.

Required:

Explain what you understand by financial objectives and social objectives and their possible conflicts. Give an example. (3 marks)

[Total: 20 Marks]

QUESTION THREE

The following results have been achieved by the sales department of TapiwaLimited (T Ltd):

	Budget	Actual	Variance
	K'000	K'000	K'000
Sales	800	750	50(A)
Costs from production	500	465	35(F)
Gross profit	300	285	15(A)
Sales representatives' expenses and salaries	150	125	25 (F)
Other departmental expenses	50	70	20 (A)
Departmental net profit	100	90	10(A)
Number of sales representatives	6	5	

The departmental manager has drawn up the budget and had it agreed by the board. Comments about the manager from the sales force are always positive; they always feel encouraged and motivated working in the department, and feel the manager is efficient, organised and a good team leader who is always fair towards the team.

Personal comments on the above budget and actual results include the following:

Finance director: 'The failure to achieve sales, gross and net profit on a budget drawn up by the manager is very poor. The figures are the only things that count at the end of the day and I don't think that we should carryon employing this manager.'

Sales director: 'I think that overall this sales manager has put in a remarkable performance and should receive the annual bonus as agreed despite gross and net profit falling below budget.'

Required:

(a) Assess the strengths and weaknesses of the performance measures applied here and analyse the performance of the manager on a basis you consider appropriate.

(12 marks)

(b) Four departments of T Ltd have adopted the following measures to assess their Managers:

(i) Sales department: sales achieved
(ii) Buying department: ability to achieve purchase prices below those budgeted
(iii) Quality department: improving quality of goods
(iv) Production department: return on capital employed

Currently, the production department's machinery cost K1,000,000 and is producing profits of K200,000. The company's target ROCE is 18%. New machinery would replace the old and would cost K1,500,000 and improve profits by 25% through increased efficiency and cost cutting gains. This would also help to improve the quality of products and help maintain the company's competitive position in the long term.

The same measures increasing sales, reducing costs and thereby increasing profits, increasing quality and return on capital employed - are also used to evaluate the performance of the business as a whole.

Required:

Suggest how the performance measures of the managers are in conflict with those of each other and so with the business as a whole. (8 marks)

[Total: 20 Marks]

QUESTION FOUR

Beautiful Zain Plc (BZ Plc) produces three (3) types of mountain bicycles, A,B and C. It also produces other products. Historically, BZ Plc has allocated overhead costs using total direct labour hours but is now considering introducing the Activity Based Costing (ABC) technique. The company's accountant has produced the following analysis:

Product	**Selling price K**	**Materials K**	**labour K**	**Total labour hours**
A	3.50	1.50	1.00	700,000
B	2.75	0.75	1.00	800,000
C	3.75	1.50	0.80	400,000
Other products	6.50	3.00	2.00	100,000
				2,000,000

The annual cost driver volumes relating to each activity and each type of product(s) are as follows:

	A	**B**	**C**	**Other**
Suppliers of parts	25	25	6	4
Machine hours	100,000	150,000	75,000	25,000
Labour hours per unit	0.5	0.5	0.40	1.0
Set-ups in year	60	30	30	10
Units produced	700,000	800,000	500,000	50,000

The total factory overhead costs amount to K1,200,000 and they are analysed roughly into the following allocations.

	K
Set-up related overhead	260,000
Output-related overhead	700,000
Supplier-related overhead	240,000
	1,200,000

Required:

(a) Calculate the profit per unit for products A, B, C and other products using the following methods to attribute overheads:

(i) The existing method based upon labour hours (4 marks)
(ii) The ABC technique (7 marks)

(b) Comment on the assertion that ABC results in a fairer allocation of overheads and show how the ABC information can be used for cost control. (4 marks)

(c) The Earnings Before Interest Tax Depreciation and Amortisation (EBITDA) has become a popular measure in capital intensive industries or those where companies have high levels of debt.

Required:

Explain what you understand by the EBITDA and discuss four (4) advantages of EBITDA as a measure of financial performance. (5 marks)

[Total 20 Marks]

QUESTION FIVE

Kafulafuta Ltd (K Ltd) has been in business for two (2) years. The company has expanded rapidly and now employs 10 full-time sales representatives marketing 35 different products.

The management team of K Ltd are finding that they are spending so much time on matters such as calculating commissions and inventory requirements such that they have no time to devote to the management of the company or to deciding how the company should develop in the future. In particular they are not clear which products should be continued to be marketed, which products might be discontinue and whether there is a gap in the market which might be exploited.

One other product K Ltd manufactures and sells is a school desk. This is a standardised product and therefore the company uses standard costing to control its performance via variance analysis. At a business conference in Livingstone attended by the production director of K Ltd, a presenter vividly illustrated how the use of Kaizen and Target costing could reduce manufacturing costs in a company. Other presentation sessions were on business ethics and modern budgeting methods. Since inception K Ltd has been operating an annual budgeting process which is felt by many to be too restrictive.

Required:

(a) To keep track of all products sales, K Ltd resolved to install a computerised sales system.

Explain how the Executive Information System and the Decision Support System can assist the management team. (5 marks)

(b) (i) Explain the Kaizen costing technique and distinguish it from Target costing. (6 marks)

(ii)Explain rolling budgeting and how it could be applied to K Ltd. State two (2)

advantages and disadvantages of rolling budgeting. (6 marks)

(c) Business ethics may be defined as the branch of ethics that examines rules and principles within a commercial context as well as presenting possible threats and dilemmas to a professional accountant. Ethics and ethical issues can have a role in strategy and business management, for example, strong ethical policies-that go beyond simply upholding the law-can add value to a brand. Conversely, failing to act ethically can cause social, economic and environment damage, and in doing so can undermine an organisation's long term reputation and prospects.

Required:

Comment on three (3) business ethics and their impact on organisational strategies and performance. (3marks)

[Total: 20 Marks]

END OF PAPER

Modified Internal Rate of Return

$$MIRR = \left[\frac{PV_R}{PV_I}\right]^{\frac{1}{n}}\left(1 + r_e\right) - 1$$

The Black-Scholes option pricing model

$$c = P_a N(d_1) - P_e N(d_2) e^{-rt}$$

Where:

$$d_1 = \frac{\ln(P_a / P_e) + (r + 0.5s^2)t}{s\sqrt{t}}$$

$$d_2 = d_1 - s\sqrt{t}$$

The Put Call Parity relationship

$$p = c - P_a + P_e e^{-rt}$$

Present Value Table

Present value of 1 i.e. $(1 + r)^{-n}$

Where r = discount rate
n = number of periods until payment

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	0·980	0·961	0·943	0·925	0·907	0·890	0·873	0·857	0·842	0·826	2
3	0·971	0·942	0·915	0·889	0·864	0·840	0·816	0·794	0·772	0·751	3
4	0·961	0·924	0·888	0·855	0·823	0·792	0·763	0·735	0·708	0·683	4
5	0·951	0·906	0·863	0·822	0·784	0·747	0·713	0·681	0·650	0·621	5
6	0·942	0·888	0·837	0·790	0·746	0·705	0·666	0·630	0·596	0·564	6
7	0·933	0·871	0·813	0·760	0·711	0·665	0·623	0·583	0·547	0·513	7
8	0·923	0·853	0·789	0·731	0·677	0·627	0·582	0·540	0·502	0·467	8
9	0·941	0·837	0·766	0·703	0·645	0·592	0·544	0·500	0·460	0·424	9
10	0·905	0·820	0·744	0·676	0·614	0·558	0·508	0·463	0·422	0·386	10
11	0·896	0·804	0·722	0·650	0·585	0·527	0·475	0·429	0·388	0·305	11
12	0·887	0·788	0·701	0·625	0·557	0·497	0·444	0·397	0·356	0·319	12
13	0·879	0·773	0·681	0·601	0·530	0·469	0·415	0·368	0·326	0·290	13
14	0·870	0·758	0·661	0·577	0·505	0·442	0·388	0·340	0·299	0·263	14
15	0·861	0·743	0·642	0·555	0·481	0·417	0·362	0·315	0·275	0·239	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	0·812	0·797	0·783	0·769	0·756	0·743	0·731	0·718	0·706	0·694	2
3	0·731	0·712	0·693	0·675	0·658	0·641	0·624	0·609	0·593	0·579	3
4	0·659	0·636	0·613	0·592	0·572	0·552	0·534	0·516	0·499	0·482	4
5	0·593	0·567	0·543	0·519	0·497	0·476	0·456	0·437	0·419	0·402	5
6	0·535	0·507	0·480	0·456	0·432	0·410	0·390	0·370	0·352	0·335	6
7	0·482	0·452	0·425	0·400	0·376	0·354	0·333	0·314	0·296	0·279	7
8	0·434	0·404	0·376	0·351	0·327	0·305	0·285	0·266	0·249	0·233	8
9	0·391	0·361	0·333	0·308	0·284	0·263	0·243	0·225	0·209	0·194	9
10	0·352	0·322	0·295	0·270	0·247	0·227	0·208	0·191	0·176	0·162	10
11	0·317	0·287	0·261	0·237	0·215	0·195	0·178	0·162	0·148	0·135	11
12	0·286	0·257	0·231	0·208	0·187	0·168	0·152	0·137	0·124	0·112	12
13	0·258	0·229	0·204	0·182	0·163	0·145	0·130	0·116	0·104	0·093	13
14	0·232	0·205	0·181	0·160	0·141	0·125	0·111	0·099	0·088	0·078	14
15	0·209	0·183	0·160	0·140	0·123	0·108	0·095	0·084	0·074	0·065	15

SUGGESTED SOLUTIONS

SOLUTION ONE

(a)Contents of a mission statement

1) A purpose

It addresses the reason for the existence of the organization. Is it to create wealth for shareholders and satisfy the needs of stakeholders (including employees, and society at large)?

2) A strategy and strategic scope

A mission statement provides the commercial logic for the business and so defines two things:

- The product or services it offers (its competitive position)
- The competences through which it tries to succeed and its methods of competing.

A business' strategic scope defines the boundaries of its operations. These are set by management. The boundaries may be set in terms of geography, market, business method, product, etc. The decision management take regarding strategic scope define the nature of the business.

3) Policies and standards of behaviour

A mission needs to be translated into everyday actions. For example, if the business mission includes delivering outstanding customer service, then policies and standards should be created that monitor the effectiveness of the policies.

4) Values and culture

The values of a business are the basic, often unstated, beliefs of the people who work in the business. Values may be built upon an underlying philosophy and these may include business principles, loyalty and commitment, guidance on expected behaviour .

(b) Advantages of having a formal system of strategic planning in M plc

(i) It helps identify risks.

(ii) It forces managers to think and can encourage creativity and initiative

(iii) It forces managers to make decisions, highlighting the need to change and adapt, not just 'stand still' and survive.

(iv) Management control can be better exercised if targets are explicit.

(v) It enforces consistency at all levels. Long-, medium- and short-term objectives, plans and controls can be made consistent with one another. Otherwise strategies can be rendered ineffective by budgeting systems and performance measures which have no strategic content.

(vi) It enables the long-term plan for the business to become public knowledge, thereby enabling decision making by a range of staff.

(vii) It proves long-term plans.

(viii) It ensures the activities of different business functions are coordinated and directed towards a common goal.

(ix) Objectives are clarified, management being forced to define what they want to achieve.

(x) It ensures responsibility is allocated by providing a plan which shows how people fit in.

(c) (i) A SWOT analysis compares the Strengths and Weaknesses of the company, and the Opportunities and the Threats presented to it.

1) **Strengths**

- Technical expertise and product knowledge of sales staff.
- The existence of a specialised marketing function at head office, independent of the sales function. However does the firm have a marketing orientation?
- Reduced investment risks and better focus because M Plc does not produce the goods but only distributes and markets them.
- Increasing product reliability
- The increasing variety in the product range (e.g. Microwave ovens) indicates an ability to detect trends in consumer household purchases, with a reasonable focus. M Plc has achieved this growth in the midst of competitiveness and difficulty.
- The firm has a good geographical reach all over Zambia
- The firm has established good relationships with its suppliers and customers.
- M Plc uses a relatively sophisticated strategic planning systems which can be improved upon

2) Weaknesses

M Plc is in a market which is competitive and dynamically sensitive, e.g. prone to recession

- If M plc is a selling and distribution company, it seems rather odd that warehousing, which might be expected to be one of such a company's core competences, is in the hands of outside contractors. This distances M plc with its customers.
- The strategic planning process is relatively unsophisticated
- The company's information systems do not produce relevant decision making information, although they are fine for historical reporting purposes. To provide the minimum possible information as an objectives implies that additional information which might be useful is not supplied.
- The selling function is less effective and costly according to the review.

3) Opportunities

- Increasing consumer disposable income might increase the effective demand for the type of products the company sells, especially the luxury type
- Consumer familiarity with advances in product technology.

- A high rate of innovation might encourage high rate of replacement purchase , or the adoption of new formats (e.g. Smart HD TV's).This provides scope for product and market expansion
- The expertise of the sales force.
- Opportunity to involve sales reps more (they are under utilised)

4) Threats

- Increased competition ,based on price, whereas M Plc has always offered a good service: the competitive dynamics of the market might be changing
- There is some evidence of market saturation in some products (eg Televisions) so growth is unlikely unless generated by new technology, but this is risky.
- Increasing product reliability will mean that products last longer.
- Some retailers (especially large chain stores) will wish to deal with manufacturers directly and not through intermediaries. There is thus a possibility of loss of market share which could inhibit the firm's ability to get good prices from suppliers.
- M Plc depends too much on middlemen (specialist contractors) who may in the future exert their power and twist the balance of scale.

(c)(ii) Strategies for M Plc

Factors to consider before coming up with suitable strategies

M Plc cannot develop a strategy until it knows what the core nature of its business is. Is it simply a wholesaler of volume goods? Or is it unique in that it offers better sales service? Is it just to distribute commodity goods.

M plc must assess its basic orientation. A selling orientation may no longer be appropriate in the company's current competitive conditions. A marketing orientation, whereby the needs of customers (i.e. the retailers selling the goods to the end consumers) are identified and satisfied, will be appropriate.

Another basic issue which the company needs to examine at least is which competitive strategy it is going to adopt: Cost leadership would mean being the most cost efficient warehouse and distributing operation.

Michael porter holds that these three strategies are, in the vast majority of cases, mutually exclusive .There is not enough market information provided in the case study to make a final choice, but some possible detailed strategies are outlined below.

(i) **Sales operation**.

The can be made more effective, whichever competitive strategy is adopted. If cost leadership is preferred, then the cost of the sales force can be reduced, perhaps by changing the service structure (e.g. will more use be made of telephone sales?).Another problem is personal service. This is obviously valued by customers, and might be a source of competitive advantage, yet this puts the company under cost pressure. The company can either:

- Abandon certain customers, to save money;
- Offer a new service package, which would involve fewer visits, but service enhancements in '' other ways;

- Try and increase the effectiveness of each visit, as it is likely that each customer has more than one supplier, by winning new business;
- Extract higher margins from each visit, by driving down purchasing costs, and promoting products for which there is a higher profit margin for M plc
- Reorganise the selling function on an area basis;
- Use the sales function to promote new products and other services the retailers find valuable.

(ii)Marketing focus

Although M plc's business is in sales and distribution, it can still market its services to its customers. It provides both goods and technical expertise .Technical expertise is not necessary for some basic products, but can be valued for some lines of goods.

The sales force might be reorganised into those dealing with the basic selling and distribution function, and those providing technical backup. The technical services can be promoted as an additional service the company provides.

Furthermore, the company must try and assess the needs of the retailers who are its main customers. It already has strong relationships and build on them. It should actively develop a marketing orientation.

(iii) Warehousing and Distribution

At present it is not clear how efficient the warehouse and distribution operation are.When a retailer makes an order, how long does it take to be delivered? What are the systems for ensuring that enough goods are in inventory to meet demand?

The efficiency of the warehouse operation is a crucial part of the total service the company offers. It is therefore imperative to have direct control over each of the locations, and install computerised systems for just in time ordering and delivery to meet its customers' requirements. Retailers who receive their goods the day after they have ordered them will themselves be given a competitive advantage as they can offer a speedy service to their customers. Moreover, if the company is to sell an increased variety of products, it needs to keep a tight control over the warehouse to minimise warehouse costs while maximising service and efficiency.

It should also try to use the warehouse and distribution system as a barrier to entry to competing suppliers. If, for example, it was to establish computerised ordering and involving systems, perhaps even tied to an attractive financing package, this might encourage M plc's customers to use them as a preferred choice.

(iv) Sources

Sourcing is also important, as efficient sourcing can earn the company volume reductions for goods purchased. However, these must be tied in with the overall demand patterns to minimise inventory cost. M Plc must look for both alternative suppliers and channels of distribution. We are not informed as to the relative bargaining power of suppliers.

(v) Information

The management information system (MIS) is clearly inadequate and should offer detailed marketing information about the more successful product line and areas. It should provide relevant data, reliable and quickly. Investment in MIS is required. The strategic planning system should be developed so that it becomes a formal and regular review.

The company should set itself strategic objectives, the attainment of which is the key to profitability in the long term. This can include measures such as overall market share, or if it adopts a niche strategy, the market share or niches it has colonized.

Conclusion:

The objective of this group of strategies will be to improve the competitiveness of M plc by increasing revenue, reducing costs and generally improving the overall performance.

N.B: An alternative approach to part (b) would be for the strategic planners to consider

(i) Growth via product /market strategies (Ansoff's market penetration, product development and market development)

(ii) Improved utilisation of M plc's internal resources, competences and information (restructure the marketing function, sourcing and information)

b) (i) Michael Porter developed the value chain concept and classified activities as either primary (five activities) or secondary (four activities) .These are:

Primary activities

- Inbound logistics –receiving ,storing and distributing inputs;
- Operators-which turn these inputs into the final product or service;
- Outbound logistics-storage and distribution to consumers;
- Marketing and sales-Which make consumers aware of the products or services available ;
- Service-installation and after-sales servicing

Secondary activities (support activities) provide the infrastructure which enables the primary activities to take place are:

- Infrastructure-systems vital to the organisation's strategic capability, which usually support the whole chain, e.g. Planning, finance ,quality management ;
- Human resource management- recruitment, training, development, etc.
- Resource and technology – product or process development, etc.
- Procurement –acquisition of the necessary resource inputs to the primary activities.

Value Chain analysis is a means of increasing customer satisfaction and managing costs more effectively.

A value chain is a linked set of value-creating activities all the way from the basic raw material sources for component suppliers through to the ultimate end-use product or service delivered to the customer. A value-chain analysis is used to analyse, coordinate and optmise linkages in the value chain. Coordinating the individual parts of the value chain together create the conditions to improve customer satisfaction ,particularly in terms of cost efficiency ,quality and delivery .A firm which performs the value chain activities more efficiently ,and at a lower cost ,than its competitors will gain a competitive advantage. Therefore, it is necessary to understand how value chain activities are performed and how they interact with each other .The activities are not just a collection of independent activities but a system of inter-dependent activities which the performance of one activity affects the performance and cost of other activities.

The linkages in the value chain express the relationships between the performance of one activity and its effects on the performance of another activity. A linkage occurs when interdependence exists between activities and the higher the interdependence between activities the greater is the required coordination. Activities in the value chain affect one another. For example, most costly product design or better quality production might reduce the need for after sales service. Furthermore, linkages require coordination .For example, just-in-time (JIT) methodologies require smooth functioning of operations outbound logistics and service activities such as installation. Thus, it is appropriate to view the value chain from the customer's perspective, with each link being seen as the customer of the previous link. If each link in the value chain is designed to meet the needs of its customers, then end-customer satisfaction should ensure .Furthermore, by viewing each link in the value chain as a supplier –customer relationship, the opinions of the customers can be used to provide useful feedback information assessing the quality of service provided by supplier.

(b)(ii)Benchmarking is used by many organisations as a way of achieving process improvements and cost reduction. The objective of benchmarking is to become "best in class· in the chosen areas and to constantly compare your own performance with that of an appropriate comparator. Many business processes are not unique to businesses located in a single industry (which will be M Plc competitors), and therefore best in class performance might be found in a company which undertakes the same process, but in a quite different industry. By exchanging information concerning costs/times/resource requirements of the process, firms may learn from one another, and become aware of any areas of inefficiency which they may have, and thus gain an insight into where their cost reduction efforts should be targeted.

M Plc sells consumer appliances, so it could investigate the possibility of benchmarking its order taking, delivery, inventory holding and similar procedures against those of a similar firm located in a different geographical area. Or, it could perhaps benchmark against a local firm selling and repairing microwave ovens.

(c)

(i) NPV model (K'000)

Years	0	1	2	3	4
Contribution		3,200	7,200	4,000	-
Incremental FC		(2,000)	(2,200)	(2,530)	
		1,200	5,000	1,470	
Tax @ 35%		-	(420)	(1,750)	(514.5)
Cash flow		1,200	4,580	(280)	(514.5)
Initial outlay/scrap	(2,500)	-	-	200	-
Working capital	(1,000)	(500)	-	1,500	-
Net cash flow	(3,500)	(700)	4,580	1,420	(514.5)

DF@ 15%	1.0	0.870	0.756	0.658	0.572
PV	(3,500)	609	3,462	934	(294)
NPV					K1, 211

Advice: Purely on financial grounds, the investment is worthwhile because the NPV is positive.

(ii) Initial investment sensitivity factor

$$SF = \frac{\text{NPV}}{\text{PV of the initial outlay}} \times 100\%$$

$$= \frac{1,211}{2,500} \times 100\%$$

$$= 0.4844 \text{ 0r } 48.44\ \%$$

The initial investment has to increase by 48.44%, i.e. to K3.711 million before the NPV becomes zero. In other words before the decision changes from accepting to being indifferent.

SOLUTION TWO

(a)(ii)Division X Optimal Output and selling price

Price	K10	K15	K20
Variable cost	K5.5	K5.5	K5.5
Contribution per unit	K4.5	K9.5	K14.5
Sales Demand ('000)	30	20	10
Total contribution (K'000)	K135	K190	K145

Comment: From Division X's view point, the optimal policy is to sell 20,000 DX units on the open market at a selling price of K15.

(a)(ii) Division Y optimal Output and selling price

Price	K40	K45	K50
Variable cost	K24.5	K24.5	K24.5
Contribution per unit	K15.5	K20.5	K25.5
Sales Demand ('000)	14.4	10	5.6
Total contribution (K'000)	K223.2	K205	K142.8

Comment: from division Y's view point, the optimal policy is to sell 14,400 DY's at a selling price of K40.

Optimal contribution for the company as a whole

Division X	K190, 000
Division Y	K223, 200
Total	K413, 200

(A)(iii) Optimal Output of Division Y based on TP of K14.5

Price	K40	K45	K50
Variable costs (K14.5 + K19.5)	K34	K34	K34
Contribution per unit	K6.0	K11	K16
Sales Demand ('000)	14.4	10	5.6
Total contribution (K'000)	K86.4	K110	K89.6

Comment: Division Y manager will decide to produce and sell 10,000 DY's at a price of K45 each.

(a)(iv) The total contribution generated by the two divisions at a TP of K14.50 is

Division X (external)	K190, 000
Division X (internal)	K95, 000 (K14.5-K5.0) X 10,000
Division Y	K 110,000
Total	K395, 000

Total NG Plc contribution

In (a) (ii) K413, 200

Shortfall or reduction in profits K18, 200

Conclusion: The effect on company profits as a result of the current transfer pricing policy is to reduce profits to K18,200from ,i.e K413,200 to K395,000.Alternatively, the reduction is from K223,200 to K205,000 = K18,200.This is suboptimal for the company as a whole.

(a)(iv) Advantages and Disadvantage of negotiated transfer prices.

(a)Advantages

(i) It motivates managers to take decision

(ii) If the managers allow bargaining to take place freely, the decision taken usually results in the maximisation of the organisation as whole.

(b)Disadvantages

(i)If one unit is a dominating the other, this weakens the bargaining power of the weaker unit. This means that if the decided price is based on negotiation skills and bargaining power, then the transfer price may not be close to the optimal one.

(ii) This method is not perfect for evaluating divisional performance as the price depends upon the negotiating skills of the managers.

(iii).This methods is also not easily accepted by the tax authorities , as there is no concrete basis for this price and tax evasion may be the purpose behind allowing negotiating.

(b) Financial and social objectives and their possible conflicts

The prime financial objective for businesses is **profit maximisation**. Other objectives may include provision of a **certain level of dividends** for shareholders, and **fulfilling budgetary targets**. Social objectives include provision of social benefits and being a good citizen of the community.

Conflict of objectives

The objectives may come into conflict if a business incurs expenditure that will not contribute to any revenue being earned, but will be a good act of citizenship. Alternatively **improvements in profitability** by **cost reduction** could mean the social welfare provided by the business also being reduced.

In the field of healthcare, increased expenditure can lead to better care provision and hence shorter or non-existent waiting lists, but it will also lead to smaller profits.

SOLUTION THREE

(a) Performance measures used by the finance director are number-based only. The strengths of this method are that it is easy to understand and is an objective method of assessment which remains constant from period to period. However, the weaknesses are that it does not take into account all the facts about the manager's performance; these include qualitative factors and checking the relative measures of performance through the use of ratios and percentages.

In addition, performance is measured by recording the failure to achieve the plan and not by the effort expended in attempting to achieve the plan in possibly adverse trading conditions. Comparison of budget and actual must always be the prime focus of measurement, but other underlying factors must also be considered to provide a full evaluation of the manager's performance. On the basis of budget and actual, the manager has not achieved the agreed target; the initial assessment of performance must be critical.

The sales director's assessment does not take any account of this negative aspect of performance. This assessment looks more at the qualitative aspects of performance and relative performance measures which delve more deeply into the actual results achieved. As the manager's superior, the sales director might be expected to know the manager, how the job is done and the employees' view of their manager which help to give a more rounded picture of the value of that manager to the business.

So the points the finance director will be interested in will be sales, gross and net profit. These do not meet the budget. However, looking at the relationships between the different pieces of information, the following ratios will be relevant:

	Budget	**Actual**	**Variance**
	K’000	**K’000**	**K’000**
Sales per representative	133.33	150.00	16.7 (F)
Gross profit per representative	50.00	57.00	7(F)
Net profit per representative	16.67	18.00	1.3 (F)
Expenses per representative	8.33	14.00	5.7 (A)
Gross profit %	37.50	38.00	0.5%(F)
Net profit %	12.50	12.00	0.5%(A)

Based on these ratios, it appears that departmental performance is ahead of budget in sales, gross and net profit per sales representative and gross profit percentage. Therefore the manager and department need to be praised for achieving this above-budget performance. However, expenses per employee and net profit % are above and below budget and the manager and department will receive criticism for this as well as the below-budget performance in sales, gross and net profit and over-budget performance in other departmental expenses. The strength of ratios is that they give a relative measure of expected and actual performance and highlight under- and over-achievement in relative terms.

Looking at only these measures will still not give a total picture of departmental performance, however. Qualitative factors, too, will need to be taken into account. So the facts that the manager motivates the department strongly, does the job well and efficiently and provides a valuable example in the company to other members of the organisation will be a positive aspect in performance measurement. But again, considering only these qualitative measures and excluding quantitative measures will not give a full picture of performance. Therefore management must consider all measures, quantitative, qualitative and relative, in order to make a full assessment of the manager's performance.

(b) The manager here will be eager to achieve the maximum amount of sales so that measurement of performance will be favourable as a result of the high level of sales. However, achieving such a target may result in sales being made to customers whose ability to pay is limited, thereby leading to increased bad debts. The business will certainly not want to have such a high level of sales if high bad debts will result in this way, going for sales maximisation will not necessarily result in high profits due to such bad debts. Similarly, the more of a product there is on the market the lower the price will fall. In this way the company's alms of Increasing profits as well as increasing sales will not be met. So although the manager may achieve the sales department's aims of increasing sales and gain the bonus, this may conflict with the aims of the company as a whole.

Buying department

The ability to achieve low prices should achieve the company aim of reducing costs. However, lower purchase prices could be achieved at the expense of the quality of those purchases. Lower-quality purchases could result in more material being used, more breakages and greater consumption, which in turn will increase costs and lower the quality of the final product. In this way, the department's aim of reducing costs will be achieved, but will conflict with the company's aim of reducing costs and improving quality.

Quality department

Improved quality is a worthy aim for any business to pursue. However, improving quality costs money. The higher the quality, the more it will cost to achieve. Improving quality as an aim is easily attainable by the manager and the company will gain a reputation for quality. However, this will again conflict with the aim of cost reduction and cost control.

Production department

Current ROCE is K200, 000/K1, 000,000 = 20%; therefore the department is producing a return In excess of target. New equipment will provide profits of K250, 000, which will produce an ROCE of K250, 000/K1, 500,000 = 16.67%, a return below the target. As the manager will not wish to sacrifice the annual bonus, the new Investment will not be undertaken. In this way the department's ROCE and that of the company will be maintained, but the efficiency, quality and profit gains will not be made, thereby not fulfilling the alms of the business.

SOLUTION FOUR

(a)(i)

	A	B	C	Other
	K	K	K	K
Materials	1.50	0.75	1.50	3.00
Labour	1.00	1.00	0.80	2.00
Overhead *	0.30	0.3	0.24	0.60
	2.80	2.05	2.54	5.60
Selling price per unit	3.50	2.75	3.75	6.50
Profit per unit	0.7	0.70	1.21	0.90

(K0.6(W.1) x 0.5/0.5/0.4/1)*

W.1: $OAR = \frac{K1,200,000}{2,000,000} = K0.60$

	Output related	Set-up related	Supplier related	
Costs	K700,000	K260,000	K240,000	
Consumption (machine hours, set-ups, suppliers)	350,000	130	60	
Cost per unit of consumption	K2.00	K2,000	K4,000	
Costs allocated				**Total**
	K	**K**	**K**	**K**
A	200,000	120,000	100,000	420,000
B	300,000	60,000	100,000	460,000
C	150,000	60,000	24,000	234,000
Other	50,000	20,000	16,000	86,000
	700,000	260,000	240,000	1,200,000

Overhead cost per unit:

	Overhead	Units	Overhead per unit
	K		K
A	420,000	700,000	0.600
B	460,000	800,000	0.575
C	234,000	500,000	0.468
Other	86,000	50,000	1.720

(a)(ii) Selling prices, cost prices and margins using ABC:

	A	B	C	Other
	K	K	K	K
Materials	1.50	0.75	1.50	3.00
Labour	1.00	1.00	0.80	2.00
Overhead	0.60	0.575	0.468	1.72
	3.10	2.325	2.768	6.72
Selling price per unit	3.50	2.75	3.75	6.50
Profit per unit	0.40	0.425	0.982	(0.22)

(b) Reallocating overheads on the basis of activities consumed will result in those products which use the most activities being charged with the most overhead. Other products which use most overheads are allocated more of that overhead and this turns a profit into a loss for that product. This gives a fairer allocation of overhead and shows companies which products incur those overheads. This in turn will help companies decide which overheads need to be reduced to reduce associated product costs. So the company will try to reduce supplier-related overheads by reducing the number of suppliers used. This will enable the company to reduce overheads for those products and so reduce the selling price for the product. This will in turn increase market share, sales and profits.

(**c) Earnings before interest, tax and depreciation adjustments (EBITDA)**

EBITDA are calculated by taking operating income and adding back to it depreciation and amortisation expenses. It is used to analyse a company's operating profitability before non-operating expenses (such as interest) and non-cash charges (such as depreciation)

EBITDA indicate the earnings generated by a business's fundamental operating performance, frequently used in accounting ratios for comparison with other companies. Interest on borrowings and tax payable on profits and depreciation (also amortisation) are excluded on the grounds that they can distort the underlying performance.

EBITDA differ from the operating cash flow in a cash flow statement primarily due to the exclusion of payments in taxes or interest as well as changes in working capital.

Advantages of EBITDA

(i) EBITDA is easy to calculate and understand.
(ii) The use of EBITDA (earnings before interest, taxation, depreciation and amortisation) will focus management attention on cash flow from operations and hence is a measure of underlying performance.
(iii) Whilst taxation and interest payable remain important considerations in essence they represent distributions to the government (taxation) and a charge for financing. Neither taxation not interest payable is relevant to the underlying success of the business.
(iv) EBITDA is a useful measure of the managerial performance where managers have no control over acquisition and financing policy since it excludes costs associated with assets (depreciation and goodwill) and debt finance (interest)

(v) EBITDA removes the subjective judgment that can go into calculating depreciation and amortisation, such as useful lives and scrap values.

SOLUTION FIVE

(a)(i) An Executive Information System (EIS)pools data from internal and external sources and makes information available to senior managers in easy access form. The EIS helps senior managers make strategic, unstructured decisions.

An EIS should provide senior managers of K Ltd with easy access to internal and external information. The system summarises and tracks strategically critical information possibly drawn from internal MIS and DSS, but also including data from external sources, e.g. competitors, legislation and external databases.

An EIS is likely to have the following **features.**

- Flexibility
- Quick response time
- Sophisticated data analysis and modelling tools

On the other hand, Decision Support Systems(DSS) combine data and analytical models or data analysis tools to support semi-structured and unstructured decision making.

DSS can be used by K Ltd management to assist in making decisions on issues which are subject to high levels of uncertainty about the problem, the various responses which management could undertake or the likely impactof those actions.

Decision support system are intended to provide a wide range of alternative information gathering and analytical tools with a major emphasis upon **flexibility** and **user-friendliness.**

DSS have more analytical power than other systems enabling them to analyse and condense large volumes of data into a form that helps managers make decisions. The objective is to allow the manager to consider a number of **alternatives** and evaluate them under a variety of potential conditions.

(a)(ii) Kaizen(KC) is the Japanese term for making improvements to a process through small incremental amounts, rather than through large innovations. The major difference between target and kaizen costing is that target costing is applied during the design stage whereas kaizen costing is applied during the manufacturing stage of the product life cycle. With target costing the focus is on the product, and cost reductions are achieved primarily through product design. In contrast, kaizen costing focuses on the production processes and cost reductions are derived primarily through the increased efficiency of the production process. Therefore the potential cost reductions are smaller with kaizen costing because the products are already in the manufacturing stage of their life cycles and a significant proportion of the costs will have become locked-in.

The aim of kaizen costing is to reduce the cost of components and products by a pre-specified amount. Kaizen costing relies heavily on employee empowerment. They are assumed to have superior knowledge about how to improve processes because they are closest to the manufacturing processes and customers and are likely to have greater insights into how costs can be reduced. Thus, a major feature of kaizen costing is that workers are given the responsibility to improve processes and reduce costs. Unlike target costing it is not accompanied by a set of techniques or procedures that are automatically applied to achieve the cost reductions.

(a)(iii) **Rolling budget**

A rolling budget is a budget that needs to be continuously updated by deducting the earliest period and taking into consideration the future period. This approach to budgeting helps to eliminate the adverse impact of environment uncertainties on setting goals by updating the budget in quick succession. This budget encourages a forward-looking attitude.

If K LTD introduced a system of rolling budget, it would **enable location managers to plan ahead and make key decisions in a timely manner.** For example, managers would know how much money is available to recruit new staff within the next 12 month period.

Advantages

1. As rolling budget are prepared on the basis of recent experience by taking into consideration the current period, they are updated with the current changes. Rolling budgets are continuously updated with current information. This helps to minimise the operational variances.
2. Rolling budgets are the most suitable form of budget for organisations working in an uncertain environment, where future costs and/or activities cannot be foreseen reliably.
3. A rolling budget makes the budgeting process responsive to plan influenced by changes in strategy and the market.

Disadvantages

1. A rolling budget increases budgetary work and accordingly may face criticism on the grounds that except in a very uncertain environment, it is not useful to update the budget so frequently.
2. There is the possibility that managers will assign less importance to it.

(b)The following are examples of ethical issues and their impact on an organisations strategies and performance:

Marketing advertising the product

There are many advertisements which are exaggerated (mainly cosmetic products, healthy drinks, washing powders etc.)

An organisation should be fair and truthful in describing its products and its features. By exaggerating the product features, an organisation may earn higher profits but in order to be ethical, it cannot do so.

Therefore, sometimes being truthful in advertising may adversely affect the profitability of an organisation.

Social responsibility environmental protection

Organisation should consider the effects of their operations on the surroundings. Theyshould remember that environmental pollution can be the cause of many disease.

They should be loyal to the people in the society even if they are not their suppliers or customers. Social responsibility may sometimes affect the costs and revenues and thereby performance of the organisation.

Ethical labour practices

Organisations should provide a healthy and safe working environment for their employees.

A good example of this is a well-known software company, Infosys, which has provided a recreation centre for its employees.

An organisation should pay fairly. If it asks its employees to work beyond ordinary Working hours than it should pay for it.

Employees' welfare etc. may affect an organisation's costs and, by following unethical practices, an organisation may save costs. However, in order to be profitability of the organisation.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

ADVISORY LEVEL

CA 3.6: ADVANCED FINANCIAL MANAGEMENT

FRIDAY 18 SEPTEMBER 2020

TOTAL MARKS – 100; TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading time. Use it to study the examination paper carefully so that you understand what to do in each question.

2. This paper is divided into TWO (2) Sections:
   Section A: One (1) Compulsory scenario question.
   Section B: Four (4) Optional scenario Questions. Attempt any Three (3) questions.

3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name must **NOT** appear anywhere on your answer booklet.

4. Do **NOT** write in pencil (except for graphs and diagrams).

5. **Cell Phones** are **NOT** allowed in the Examination Room.

6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.

7. All workings must be done in the answer booklet.

8. Resent legible and tidy work.

9. Graph paper (if required) is provided at the end of the answer booklet.

10. Formulae, Present Value, Annuity and normal distribution tables are attached at the end of the question paper.

DO NOT OPEN QUESTION PAPER UNTIL YOU ARE INSTRUCTED BY THE INVIGILATOR

SECTION A

This question is compulsory and must be attempted.

QUESTION ONE

A recent report by the World Bank has indicated that the demand by the foreign countries for agriculture products (organic) in Zambia is going to increase by more 75% in two years' time. Your client, PLH Plc has approached your consulting firm wanting advice in relation to an acquisition of a small company involved in organic farming, JAMS Ltd. PLH Plc is a mining company listed on the Lusaka stock exchange. The Directors of PHL Plc have been debating on whether to acquire JAMS Ltd through acquisition or to just establish a new subsidiary company in the Agriculture sector. PLH Plc has cash balances of K175 million which are currently invested in short-term money market deposits. The majority of the board members are of the view that PLH Plc should just acquire JAMS Ltd since it's faster.

Despite JAMS Ltd being a quoted company on Lusaka Securities Exchange, about 70% of its shares are still owned by five of its directors. The directors have indicated that they are ready to consider the sale of JAMS Ltd if the offer price for its shares is K542 million. The following financial information has been provided:

Summarized financial data

	PLH Plc		*JAMS Ltd*
	K'm		K'm
Turnover	630		189
Pre- tax operating cash flow	201		155
Taxation (30%)	60.3		46.5
Post- tax operating cash flow	140.7		108.5
Dividend	55		46
Retained earnings	85.7		62.5
Statement of financial position			
Non-current assets (net)	318		78
Current assets	185		34
Current liabilities	149		21
	354		133
Financed by			
Ordinary shares (50n par)	160	*(JAMS 15n par)*	8.5
Reserves	100		72.1
12% Debentures	80		-
10% Bank term loan	14		-
Recent 11% bank loan	-		52.4
	354		133
Current share price	755 ngwee		356 ngwee
Average dividend growth during the last five years	9% p.a.		10% p.a.
Equity beta	0.95		1.03
Industry data:			
Average P/E ratio	8:1		6:1
Average P/E of companies recently taken over, based upon the offer price	10:1		6:1

The risk free rate of return is 8% per annum and the market return 16% per annum.

If the acquisition is successful, some excessive land and buildings of JAMS Ltd would be sold for K7.6 million (after tax). It's also expected that 95 employees of JAMS Ltd would immediately be made redundant at an after tax cost of K8 million. Pre-tax annual wage savings are expected to be K1.5 million and annual Pre-tax advertising and distribution savings are expected to be K0.65 million. The five existing directors of JAMS Ltd would each be paid an annual after tax consultancy fees of K0.51 million for five (5) years for consultancy services if the acquisition succeeds. The project life is expected to be 15 years and after that significant investment will be required.

As a Financial Consultant of PLH Plc, you received a phone call from the Managing Director asking about the reasonableness of the asking price. In telephone conversation with you, the Managing Director mention about the possibility of financing the acquisition with 60% debt.

Ignore inflation

Required:

Write a report to the Board of Directors of PLH Plc covering the following:

(a) Discuss whether PLH Plc should diversify into the agriculture sector through acquisition of JAMS Ltd or setting up its own subsidiary. (8 marks)

(b) Estimate a range of values for JAMS Ltd using the following valuation methods:

(i) Earnings multiples ratios (2 marks)

(ii) Dividend valuation model (4 marks)

(iii) Discounted Cash flows (10 marks)

(c) Advise whether PLH Plc should proceed with the acquisition of JAMS Ltd shares. (6 marks)

(d) Evaluate whether financing the acquisition using debt would be the appropriate source of finance for PLH Plc. (10 marks)

[Total: 40 Marks]

SECTION B

Attempt any THREE (3) questions in this section.

<u>QUESTION TWO</u>

Zico ltd is a public entity that is involved in the tree planting and timber processing business. The timber that the company produces is mostly used in the local construction industry which had seen a boom in the last few years but has started showing signs of slowing down due to lack of liquidity in the market. The company has recently been granted authority to harvest and export raw Mukula tree logs which has very high demand in china and the Middle East. The process of harvesting and transporting Mukula logs requires the use of highly specialized equipment which the company can only source from abroad at huge cost.

Zico's financial performance in the last few years has been a mixture of moderate profits and losses. Consequently the company has no foreign exchange reserves to facilitate the acquisition and importation of the specialized equipment that it requires. The company is considering a number of options to raise the necessary funds including loan syndication, bond issue and listing on the stock exchange.

Credit conditions in the financial market have deteriorated in the last few years due to slow economic growth, high national debt and reduced liquidity. The local currency, the kwacha, has also depreciated against major convertible currencies in the last few months. This has resulted in lending institutions being very cautious in the way they extend credit facilities to businesses.

Zico is seeking to raise K50,000,000 , estimated at USD5 Million when the exchange rate was USD 1= K10. The rate now is USD1 = K15. The Company has hired you as a consultant to provide advisory services on the financing options under consideration.

Required:

(a) Given the conditions described in the financial market above, advise on the factors that the lending institutions would consider in deciding whether to offer a loan to Zico or not. (6 marks)

(b) Assess the relative advantages of loan syndication versus a bond issue to Zico. (7 marks)

(c) Advise the company on whether they should proceed with the acquisition of the specialized equipment or not. (7 marks)

[Total: 20 Marks]

QUESTION THREE

A Limited is a large retail chain store operating in Zambia. It sells top-of the range, expensive clothes to a wealthy clientele throughout the country. Currently, A Limited only operates in Zambia. Its current market capitalisation is ZMW760 million and the current market value of debt is ZMW350 million.

Assume you are a financial manager of A Limited and have been asked to evaluate the proposal to introduce a new range of clothing by establishing a new chain of stores. An initial investigation into the potential markets has been undertaken by a firm of consultants at a cost of ZMW100,000 but this amount has not yet been paid. It is intended to settle the amount due in three months' time. With the help of a small multi-department team of staff you have estimated the following cash flows for the proposed project:

1. The initial investment required would be ZMW46 million, payable on 01 January 2020. This comprises ZMW30 million for non-current assets and ZMW16 million for net working capital.
2. For accounting purposes, non-current assets are depreciated on a straight line basis over three years after allowing for a residual value of 10%. Tax depreciation allowances can be assumed to be the same as accounting depreciation.
3. The value of working capital will be recovered at the end of the project.
4. Net operating cash flows (before taxation) are forecast to be ZMW14 million in 2020, ZMW17 million in 2021 and ZMW22 million in 2022 and should be assumed to arise at the end of each year.
5. The proposed project is to be evaluated over a three-year time horizon.
6. The discount factor for this project is 10%.
7. Corporate tax is payable at a discounted rate of 25% due to the tax incentives negotiated and paid in the same year in which the liability arises.

Required:

(a) Evaluate the proposed project using the following investment appraisal techniques:

(i) Net Present Value(NPV)

(ii) Internal Rate of Return (IRR)

(iii) Modified Internal Rate of Return (MIRR)

(14 marks)

(b) Discuss the merits and demerits of MIRR in comparison with NPV and IRR.

(6 marks)

[Total: 20 Marks]

QUESTION FOUR

Mambwe plc is a Manufacturing Company that was incorporated in Tanzania in 2001. The company manufactures a wide variety of pharmaceutical products including medical equipment. Mambwe plc has recently expanded its operations into Zambia and has just commissioned a manufacturing plant in Lusaka at a cost of K100 million. The funding for the plant was sourced from commercial banks in Zambia, where the economic indicators are projecting an increase in interest rates due to reduced copper production and the looming general elections due in 2021.

The company is seeking to protect itself against possible interest rate increases through a three year interest rate swap for a K70 million. Mambwe plc can currently borrow in the domestic fixed-rate market at 6.30% or floating rate at LIBOR plus 0.75%. LIBOR is currently at 5.30%.

A Swap can be arranged with another company that can borrow at 7.30% fixed rate and floating rate at LIBOR plus 1.30% , through a bank as an intermediary. The bank would charge a fee of K110,000 per year to each party in the swap. Mambwe plc wants to use its better credit rating to secure 65% of any arbitrage savings (before the payment of fees). Any fees paid to the bank are tax deductible while corporation tax is at 25%.

Required:

(a) Discuss the risks that Mambwe plc and the participating bank might be face when undertaking an interest rate swap. (3 marks)

(b) Advise Mambwe plc on the possible advantages and disadvantages of arranging a swap through a bank rather than directly negotiating with counterparty. (5 marks)

(c) Comment on the proposed swap and its benefits to the parties involved. (6 marks)

(d) Given that Mambwe Plc is an International Company registered in Tanzania, discuss the problem of blocked funds and how the company can deal with it in relation to its operations in Zambia. (6 marks)

[Total: 20 Marks]

QUESTION FIVE

ZSIC Life is a leading insurance company which was incorporated in 2008. The company offers assurance, savings and wealth management products. After consecutive years of growth in earnings, the shareholders are considering a public floatation of the company.

One of ZSIC Life's major competitors is X Life, which provides similar products and services. Xlife is listed on the Lusaka Stock Exchange Alternative Market (LuSE – Alt M) and has 5 million shares in issue with a market price of K3.20 each.

Additional information on the two (2) companies for the year ended 31 December 2019 is as follows:

	ZSIC Life	X Life
Net assets at fair value (K'million)	5.5	4.5
Earnings per share (ngwee)	10	5
Dividend per share (ngwee)	2.5	3
Five year historic earnings growth (annual)	25%	15%
cost of equity capital	20%	20%

ZSIC Life has 10 million, K0.50 shares in issue. The anticipated revenue growth rate of ZSIC Life's business is forecasted to average 17.50% per annum.

Required:

(a) Discuss the merits and demerits, to the shareholders of ZSIC Life, of raising financing through a public listing on LuSE as opposed to placing their shares with a private equity or pension fund. (10 marks)

(b) Assuming that a controlling stake in ZSIC Life is bought by a private equity fund at a premium of 40% of the spot value of the equity, estimate and justify the likely range of issue prices for its shares using the:

(i) Value of net assets

(ii) Dividend growth model, with the growth rate implied from the firm's re-investment.

(10 marks)

[Total: 20 Marks]

END OF PAPER

Formulae

Modigliani and Miller Proposition 2 (with tax)

$$k_e = k_e^i + (1 - T)(k_e^i - k_d)\frac{V_d}{V_e}$$

Two asset portfolio

$$s_p = \sqrt{w_a^2 s_a^2 + w_b^2 s_b^2 + 2w_a w_b r_{ab} s_a s_b}$$

The Capital Asset Pricing Model

$$E(r_i) = R_f + \beta_i (E(r_m) - R_f)$$

The asset beta formula

$$\beta_a = \left[\frac{V_e}{(V_e + V_d(1 - T))}\beta_e\right] + \left[\frac{V_d(1 - T)}{(V_e + V_d(1 - T))}\beta_d\right]$$

The Growth Model

$$P_o = \frac{D_o(1 + g)}{(r_e - g)}$$

Gordon's growth approximation

$$g = br_e$$

The weighted average cost of capital

$$WACC = \left[\frac{V_e}{V_e + V_d}\right]k_e + \left[\frac{V_d}{V_e + V_d}\right]k_d(1 - T)$$

The Fisher formula

$$(1 + i) = (1 + r)(1 + h)$$

Purchasing power parity and interest rate parity

$$S_1 = S_0 x \frac{(1 + h_c)}{(1 + h_b)} \qquad F_0 = S_0 x \frac{(1 + i_c)}{(1 + i_b)}$$

Modified Internal Rate of Return

$$MIRR = \left[\frac{PV_R}{PV_I}\right]^{\frac{1}{n}} \left(1 + r_e\right) - 1$$

The Black-Scholes option pricing model

$$c = P_a N(d_1) - P_e N(d_2) e^{-rt}$$

Where:

$$d_1 = \frac{\ln(P_a / P_e) + (r + 0.5s^2)t}{s\sqrt{t}}$$

$$d_2 = d_1 - s\sqrt{t}$$

The Put Call Parity relationship

$$p = c - P_a + P_e e^{-rt}$$

Present Value Table

Present value of 1 i.e. $(1 + r)^{-n}$

Where r = discount rate
n = number of periods until payment

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	0·980	0·961	0·943	0·925	0·907	0·890	0·873	0·857	0·842	0·826	2
3	0·971	0·942	0·915	0·889	0·864	0·840	0·816	0·794	0·772	0·751	3
4	0·961	0·924	0·888	0·855	0·823	0·792	0·763	0·735	0·708	0·683	4
5	0·951	0·906	0·863	0·822	0·784	0·747	0·713	0·681	0·650	0·621	5
6	0·942	0·888	0·837	0·790	0·746	0·705	0·666	0·630	0·596	0·564	6
7	0·933	0·871	0·813	0·760	0·711	0·665	0·623	0·583	0·547	0·513	7
8	0·923	0·853	0·789	0·731	0·677	0·627	0·582	0·540	0·502	0·467	8
9	0·941	0·837	0·766	0·703	0·645	0·592	0·544	0·500	0·460	0·424	9
10	0·905	0·820	0·744	0·676	0·614	0·558	0·508	0·463	0·422	0·386	10
11	0·896	0·804	0·722	0·650	0·585	0·527	0·475	0·429	0·388	0·305	11
12	0·887	0·788	0·701	0·625	0·557	0·497	0·444	0·397	0·356	0·319	12
13	0·879	0·773	0·681	0·601	0·530	0·469	0·415	0·368	0·326	0·290	13
14	0·870	0·758	0·661	0·577	0·505	0·442	0·388	0·340	0·299	0·263	14
15	0·861	0·743	0·642	0·555	0·481	0·417	0·362	0·315	0·275	0·239	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	0·812	0·797	0·783	0·769	0·756	0·743	0·731	0·718	0·706	0·694	2
3	0·731	0·712	0·693	0·675	0·658	0·641	0·624	0·609	0·593	0·579	3
4	0·659	0·636	0·613	0·592	0·572	0·552	0·534	0·516	0·499	0·482	4
5	0·593	0·567	0·543	0·519	0·497	0·476	0·456	0·437	0·419	0·402	5
6	0·535	0·507	0·480	0·456	0·432	0·410	0·390	0·370	0·352	0·335	6
7	0·482	0·452	0·425	0·400	0·376	0·354	0·333	0·314	0·296	0·279	7
8	0·434	0·404	0·376	0·351	0·327	0·305	0·285	0·266	0·249	0·233	8
9	0·391	0·361	0·333	0·308	0·284	0·263	0·243	0·225	0·209	0·194	9
10	0·352	0·322	0·295	0·270	0·247	0·227	0·208	0·191	0·176	0·162	10
11	0·317	0·287	0·261	0·237	0·215	0·195	0·178	0·162	0·148	0·135	11
12	0·286	0·257	0·231	0·208	0·187	0·168	0·152	0·137	0·124	0·112	12
13	0·258	0·229	0·204	0·182	0·163	0·145	0·130	0·116	0·104	0·093	13
14	0·232	0·205	0·181	0·160	0·141	0·125	0·111	0·099	0·088	0·078	14
15	0·209	0·183	0·160	0·140	0·123	0·108	0·095	0·084	0·074	0·065	15

Annuity Table

Present value of an annuity of 1 i.e. $\frac{1 - (1 + r)^{-n}}{r}$

Where r = discount rate
n = number of periods

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	1·970	1·942	1·913	1·886	1·859	1·833	1·808	1·783	1·759	1·736	2
3	2·941	2·884	2·829	2·775	2·723	2·673	2·624	2·577	2·531	2·487	3
4	3·902	3·808	3·717	3·630	3·546	3·465	3·387	3·312	3·240	3·170	4
5	4·853	4·713	4·580	4·452	4·329	4·212	4·100	3·993	3·890	3·791	5
6	5·795	5·601	5·417	5·242	5·076	4·917	4·767	4·623	4·486	4·355	6
7	6·728	6·472	6·230	6·002	5·786	5·582	5·389	5·206	5·033	4·868	7
8	7·652	7·325	7·020	6·733	6·463	6·210	5·971	5·747	5·535	5·335	8
9	8·566	8·162	7·786	7·435	7·108	6·802	6·515	6·247	5·995	5·759	9
10	9·471	8·983	8·530	8·111	7·722	7·360	7·024	6·710	6·418	6·145	10
11	10·37	9·787	9·253	8·760	8·306	7·887	7·499	7·139	6·805	6·495	11
12	11·26	10·58	9·954	9·385	8·863	8·384	7·943	7·536	7·161	6·814	12
13	12·13	11·35	10·63	9·986	9·394	8·853	8·358	7·904	7·487	7·103	13
14	13·00	12·11	11·30	10·56	9·899	9·295	8·745	8·244	7·786	7·367	14
15	13·87	12·85	11·94	11·12	10·38	9·712	9·108	8·559	8·061	7·606	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	1·713	1·690	1·668	1·647	1·626	1·605	1·585	1·566	1·547	1·528	2
3	2·444	2·402	2·361	2·322	2·283	2·246	2·210	2·174	2·140	2·106	3
4	3·102	3·037	2·974	2·914	2·855	2·798	2·743	2·690	2·639	2·589	4
5	3·696	3·605	3·517	3·433	3·352	3·274	3·199	3·127	3·058	2·991	5
6	4·231	4·111	3·998	3·889	3·784	3·685	3·589	3·498	3·410	3·326	6
7	4·712	4·564	4·423	4·288	4·160	4·039	3·922	3·812	3·706	3·605	7
8	5·146	4·968	4·799	4·639	4·487	4·344	4·207	4·078	3·954	3·837	8
9	5·537	5·328	5·132	4·946	4·772	4·607	4·451	4·303	4·163	4·031	9
10	5·889	5·650	5·426	5·216	5·019	4·833	4·659	4·494	4·339	4·192	10
11	6·207	5·938	5·687	5·453	5·234	5·029	4·836	4·656	4·486	4·327	11
12	6·492	6·194	5·918	5·660	5·421	5·197	4·988	4·793	4·611	4·439	12
13	6·750	6·424	6·122	5·842	5·583	5·342	5·118	4·910	4·715	4·533	13
14	6·982	6·628	6·302	6·002	5·724	5·468	5·229	5·008	4·802	4·611	14
15	7·191	6·811	6·462	6·142	5·847	5·575	5·324	5·092	4·876	4·675	15

Standard normal distribution table

	0·00	0·01	0·02	0·03	0·04	0·05	0·06	0·07	0·08	0·09
0·0	0·0000	0·0040	0·0080	0·0120	0·0160	0·0199	0·0239	0·0279	0·0319	0·0359
0·1	0·0398	0·0438	0·0478	0·0517	0·0557	0·0596	0·0636	0·0675	0·0714	0·0753
0·2	0·0793	0·0832	0·0871	0·0910	0·0948	0·0987	0·1026	0·1064	0·1103	0·1141
0·3	0·1179	0·1217	0·1255	0·1293	0·1331	0·1368	0·1406	0·1443	0·1480	0·1517
0·4	0·1554	0·1591	0·1628	0·1664	0·1700	0·1736	0·1772	0·1808	0·1844	0·1879
0·5	0·1915	0·1950	0·1985	0·2019	0·2054	0·2088	0·2123	0·2157	0·2190	0·2224
0·6	0·2257	0·2291	0·2324	0·2357	0·2389	0·2422	0·2454	0·2486	0·2517	0·2549
0·7	0·2580	0·2611	0·2642	0·2673	0·2704	0·2734	0·2764	0·2794	0·2823	0·2852
0·8	0·2881	0·2910	0·2939	0·2967	0·2995	0·3023	0·3051	0·3078	0·3106	0·3133
0·9	0·3159	0·3186	0·3212	0·3238	0·3264	0·3289	0·3315	0·3340	0·3365	0·3389
1·0	0·3413	0·3438	0·3461	0·3485	0·3508	0·3531	0·3554	0·3577	0·3599	0·3621
1·1	0·3643	0·3665	0·3686	0·3708	0·3729	0·3749	0·3770	0·3790	0·3810	0·3830
1·2	0·3849	0·3869	0·3888	0·3907	0·3925	0·3944	0·3962	0·3980	0·3997	0·4015
1·3	0·4032	0·4049	0·4066	0·4082	0·4099	0·4115	0·4131	0·4147	0·4162	0·4177
1·4	0·4192	0·4207	0·4222	0·4236	0·4251	0·4265	0·4279	0·4292	0·4306	0·4319
1·5	0·4332	0·4345	0·4357	0·4370	0·4382	0·4394	0·4406	0·4418	0·4429	0·4441
1·6	0·4452	0·4463	0·4474	0·4484	0·4495	0·4505	0·4515	0·4525	0·4535	0·4545
1·7	0·4554	0·4564	0·4573	0·4582	0·4591	0·4599	0·4608	0·4616	0·4625	0·4633
1·8	0·4641	0·4649	0·4656	0·4664	0·4671	0·4678	0·4686	0·4693	0·4699	0·4706
1·9	0·4713	0·4719	0·4726	0·4732	0·4738	0·4744	0·4750	0·4756	0·4761	0·4767
2·0	0·4772	0·4778	0·4783	0·4788	0·4793	0·4798	0·4803	0·4808	0·4812	0·4817
2·1	0·4821	0·4826	0·4830	0·4834	0·4838	0·4842	0·4846	0·4850	0·4854	0·4857
2·2	0·4861	0·4864	0·4868	0·4871	0·4875	0·4878	0·4881	0·4884	0·4887	0·4890
2·3	0·4893	0·4896	0·4898	0·4901	0·4904	0·4906	0·4909	0·4911	0·4913	0·4916
2·4	0·4918	0·4920	0·4922	0·4925	0·4927	0·4929	0·4931	0·4932	0·4934	0·4936
2·5	0·4938	0·4940	0·4941	0·4943	0·4945	0·4946	0·4948	0·4949	0·4951	0·4952
2·6	0·4953	0·4955	0·4956	0·4957	0·4959	0·4960	0·4961	0·4962	0·4963	0·4964
2·7	0·4965	0·4966	0·4967	0·4968	0·4969	0·4970	0·4971	0·4972	0·4973	0·4974
2·8	0·4974	0·4975	0·4976	0·4977	0·4977	0·4978	0·4979	0·4979	0·4980	0·4981
2·9	0·4981	0·4982	0·4982	0·4983	0·4984	0·4984	0·4985	0·4985	0·4986	0·4986
3·0	0·4987	0·4987	0·4987	0·4988	0·4988	0·4989	0·4989	0·4989	0·4990	0·4990

This table can be used to calculate $N(d)$, the cumulative normal distribution functions needed for the Black-Scholes model of option pricing. If $d_i > 0$, add 0·5 to the relevant number above. If $d_i < 0$, subtract the relevant number above from 0·5.

SUGGESTED SOLUTIONS

SOLUTION ONE

To: Board of Directors- PLH Plc
From: Financial Consultant
Date: xxxxxxxxxxxxxxxxxxx
Subject: Evaluation of diversification proposal

The report presents the findings of the evaluation of the proposed diversification into the agriculture sector. The report discusses the strategies of achieving the diversification (i.e. acquisition of JAMS or setting a subsidiary) and the appropriateness of using debt financing.

Acquisition Vs Organic growth

Acquisitions are probably only desirable if organic growth alone cannot achieve the targets for growth that a PHL PLc has set for itself. Organic growth takes time. With acquisitions, entire existing operations are assimilated into the company at one fell swoop. Acquisitions can be made without cash. PLH Plc may offer shares in itself to the shareholders of the JAMS Ltd rather than cash. As long as this type of share exchange transaction is acceptable to both the buyers and sellers the deal can proceed on those terms.

However, acquisitions do have their strategic problems. They might be too expensive. Some might be resisted by the directors JAMS Ltd. Acquisitions might be referred to the government under the terms of anti-monopoly legislation. Customers of JAMS Ltd might resent a sudden takeover and consider going to other suppliers for their goods. In general, the problems of assimilating new products, customers, suppliers, markets, employees and different systems of operating might create 'indigestion' and management overload in the acquiring company.

Advise on Acquisition

The three valuation methods have produced the price range of K635.49million to K810.9million which is below the proposed offer price of K542million. This may indicate that the company is under- priced by the directors. The present value of the operating cash flows (which is possibly the best of the three approaches) gives the lowest valuation of K635.9million suggesting further that JAMS Ltd could be underpriced.

PLH Plc. can make accept the offer at this price and if the acquisition of JAMS Ltd would be in line with PLH's long-term strategic objectives, then it is recommended that the acquisition should proceed. However, it’s worth to note that the valuations methods used have limitations. For example, the present value method has ignored any likely changes in the pattern of the cash flows following the acquisition as well as any strategic plans that the company may have for such a long time frame.

Evaluation of debt as a method of financing

Relative lower cost of debt compared with equity

One of the advantages of debt is that, due to the tax shield on interest payments, it is a relatively cheaper form of financing than equity (whose dividends are paid out of earnings **after** tax). As such we would expect the higher level of gearing to lead to a fall in the weighted average cost of capital.

Signalling and agency effects
Companies tend to prefer debt to equity as a method of financing. This is mainly due to the tax shield offered by interest payments on debt. If the company increases its level of debt financing, the market could interpret this as meaning that management believe the company is undervalued. There is a significant agency effect arising from the legal obligation to make interest payments. Managers are less inclined to divert money towards financing their own incentives and perks if they know they have such legal obligations to meet.

Alteration of capital structure
One of the problems with debt financing is that it could be viewed as increasing the risk of the company to equity holders, given that there is a legal obligation to pay interest before dividends can be paid. As a result, investors may require a higher rate of return before they will be tempted to invest money in the company.

Financial risk
Using debt to finance the business creates financial risk. **Financial risk** can be seen from different points of view.

a) **The company as a whole:** If a company builds up debts that it cannot pay when they fall due, it will be forced into liquidation.
b) **Lenders:** If a company cannot pay its debts, the company will go into liquidation owing lenders money that they are unlikely to recover in full. Lenders will probably want a **higher interest yield** to compensate them for higher financial risk and gearing.
c) **Ordinary shareholders:** A company will not make any distributable profits unless it is able to earn enough profit from operations to pay all its interest charges, and then tax. The lower the profits or the higher the interest-bearing debts, the less there will be, if there is anything at all, for shareholders. Ordinary shareholders will probably want a **bigger expected return** from their shares to compensate them for a **higher financial risk**. The market value of shares will therefore depend on gearing, because of this premium for financial risk that shareholders will want to earn.

Financial risk can be measured using gearing ratios. The current gearing level is 36% (94/260). Assuming the acquisition proceeds based on the offer price of K542million and debt is used as a form of finance, the gearing ratio will increase to 197% (513.4/260). The implication is that the company would be extremely high geared indicating high financial risk. PLH Plc may eventually go into financial distress with this level of gearing. Therefore, financing the acquisition entirely with debt is not appropriate. PLH Plc can consider mixing the financing and reduce on the level of debt finance.

SIGN

FINANCIAL CONSULTANT

Appendix 1

a)
i) P/E ratios

Since JAMS Ltd operates in a different sector, the comparative P/E ratio valuation must be based upon the average P/E ratios in that sector. The P/E ratio of 6 will therefore be used.

Value of JAMS Ltd is **K651 million** (6 x K108.5m)

ii) Dividend valuation model

$$P_o = \frac{D_o (1+g)}{K_e - g}$$

ke = Rf + β (E(Rm) – Rf)
Ke = 8% + 1.03 (16% - 8%)
= 16.24%

P_o = 46 (1.10)/0.1624 – 0.10
= K810.9million

iii) Cash flow valuation method

	K'm
Current pre-tax operating cash flow	155
Post -acquisition adjustments:	
Annual wage savings	1.5
Advertising/distribution savings	0.65
	157.15
Taxation (30%)	47.15
Annual post tax cash flow	110

The other post tax cash flows to be taken into account are:

	K'm
a) Redundancy costs	8
b) Sale of land and buildings	7.6
c) Consultancy service (0.51m x 5)	2.55

Cost of capital

Market value (57 x 3.56)	= K202.92
Market value of debt	=K52.4
Total	K255.32

Cost of debt = 11% x (1-0.3) = 7.7%

WACC = 16.24% x 203.49/255.32 + 7.7% x 52.4/255.32

= 12.94 + 1.58

=14.52% Say 15%

Discounted cash flows using 15% as discount rate:

		K'm
Annual post tax cash flow (110 x 5.847)	=	643.17
Redundancy costs (8 x 1.000)	=	(8)
Sale of land & buildings (7.6 x 1.000)	=	7.6
Consultancy services (2.55 x 2.855)	=	(7.28)
Present value of cash flows		635.49

Value of the company **K635.49million**

Debt financing effect:

	K'm
Current debt PLH Plc	94
Current debt JAMS	52.4
Debt financing (542-175)	367
	513.4

s/n	Details	Mark Allocation
a)	2marks per valid point	8
b)	Earnings multiples	2
	Dividend valuation model	4
	PV cash flow	4
	WACC	6
c)	2marks per valid point	6
d)	2marks per valid point	10
	Total	**40**

SOLUTION TWO

(a) Factors to consider in deciding whether to offer a loan or not

- Ability to repay:
- Collateral (security):
- Exchange rate impact:
- Shortage of liquidity:
- Business continuity:

An explanation on any three of the above or alternative points.

(b) Syndication is where one bank brings together a number of other banks to provide a much larger loan facility than would be possible if the banks did it individually. The overall handling and management of the loan facility will be done by the leading bank which will be able to leverage on the vast resources of all the banks involved in the syndication. The cost of a syndicated loan would most likely be higher than it would be if it was to be offered by a single bank. Zaficco may therefore find this option more appropriate in the economic circumstances described in the scenario.

A bond issue is where the debt is securitized and floated onto the capital market normally with a fixed interest coupon rate and a fixed redemption date. It is a formal contract to repay borrowed money with interest at fixed intervals. Bonds provide the borrower with external funds to satisfy long-term funding requirements, they can be traded in the capital market and have a defined term. Some bond issues can be syndicated in that a number of borrowers of similar risk are combined by the investment bank chosen to manage the issue.

Zico is operating in an environment that is characterized by low liquidity, slow economic growth, high national debt and depreciation of the local currency. The relative advantages of loan syndication to zico are that it can provide possible access to a wider base of funding resources which may not be achievable through a bond issue. A syndication also reduces the costs of issue.

(c) Advise on whether Zico should proceed with the acquisition of the specialized equipment or not**.**

In determining whether Zico should proceed with the acquisition of specialized equipment or not, regard has to be had of the realizable returns from this investment. A number of investment appraisal techniques can be employed to determine whether it is a worthy while investment or not. These include the use of Net present value method (NPV), Internal rate of return (IRR) and Adjusted Present Value Method (APV).

In the case of Zico, there is no enough information to apply any of the above mentioned techniques. This means that the decision can only be based on a careful analysis of the information given in the scenario. A review of the information shows Zico is operating in an environment that is characterized by the following challenges:-

- Weakening local currency: this means that the loan repayment would require a higher local currency equivalent to service the same loan repayments. Zico can protect itself from this foreign exchange exposure risk by using forex hedging techniques. This is made easier by the fact that Zico is likely to boost its export earnings after the acquisition of the equipment. The exchange loses would therefore be compensated for by increased earnings through higher exchange gains on the revenues.

- Low liquidity: this challenge could threaten the company's ability to meet its obligations on day today basis. Shortage of liquidity can affect the availability of working capital to keep operations at the same or higher level. This indicates that that the slump in business that Zico has seen in the recent past is likely to continue on the same negative path. Even the increased forex earnings through exchange rate gains would not be of much help when there is no enough liquidity in the market.

- Slow economic growth: the slow economic growth suggests that the local construction industry which had thus far been a major consumer of Zico's processed timber is unlikely to grow in the near future. The company should therefore not place much confidence on the local consumers and the resultant loss of market would make it difficult for it to continue in business as before.

The above highlighted shows that Zico is better advised not to proceed with the acquisition of the specialized equipment. The economic outlook shows that Zico would struggle to meet the loan repayments if this loan was acquired.

SOLUTION THREE

PART A

Calculation of NPV
The NPV calculation should be performed using a discount rate of 10%.

Year:	0	1	2	3
All figures in ZMW Millions				
Non-current assets	(30.00)			
Working capital	(16.00)			
Residual value – non-current assets				3.00
Residual value – Working capital				16.00
Net Operating Cash flows (OCFs)	(46)	14.00	17.00	22.00
Tax at 25% on OCFs		(3.50)	(4.25)	(5.50)
Tax relief on TDA's (Note 1)		2.25	2.25	2.25
Cash flows after tax	(46.00)	12.75	15.00	37.75
Discount factor @ 10%	1	0.909	0.826	0.751
DCF	(46.00)	11.59	12.39	28.35
NPV	7.13			

Tax relief on TDA's are ZMW30m x 90% ÷ 3 x 25%
(Non-current assets less estimated residual value divided by life of the investment multiplied by the tax rate)

Calculation of Internal rate of return (IRR)

Discount factor @ 18%	1.00	0.847	0.718	0.609
DCF	(46.00)	10.80	10.77	22.99
NPV				(1.44)

Modified Internal Rate of Return (MIRR) 1	12.75	1.1881(= 1.092)		15.15
2	15.00		1.09	16.35
3	37.75	1.00		37.75
				69.25

(69.25/46)1/3- 1 = 0.146
So MIRR = 14.6%

PART B

Discuss the advantages and limitations of MIRR in comparison with NPV and IRR

MIRR Vs IRR
MIRR is intended to address some of the deficiencies of IRR; notably that it eliminates the possibility of multiple rates of return and seeks to adjust the IRR so that it has the same reinvestment assumption as NPV (ie: that the cash inflows of a project are reinvested at the company's cost of capital). MIRR rankings are therefore consistent with the NPV rule, which is not always the case with IRR. However, there are weaknesses:

1. If the actual reinvestment rate is greater than the cost of capital, then MIRR will underestimate the project's true return and therefore potential projects are rejected unnecessarily.
2. The determination of the life of the project can have a significant effect on the actual MIRR if the difference between the project's IRR and the entity's cost of capital is large.

MIRR vs NPV
The MIRR, like IRR, is biased towards projects with short payback periods which is not the case with NPV. It could be argued that this bias is advantageous as a short payback means that funds are available earlier for reinvestment. However, MIRR (again like IRR) gives a rate and as such gives no indication of the size of a project, whilst NPV does.
Ultimately despite its advantages, MIRR does not appear to be understood or used as extensively in practice as NPV and IRR.

SOLUTION FOUR

(a) Risk exposure for the bank and Mambwe plc are:

- Market risk: the risk that the interest rates may change in such a way that an entity would have been better off if it didn't enter into the swap arrangement in the first place.
- Default risk: the risk that counterparty to the swap will default on their obligations.
- Gap or Mismatch risk: the risk that the bank is normally exposed to as a result of the difference in size and or maturity of the transactions desired by the parties to the swap. Banks normally provide a 'warehousing' function in swap transactions.

(b) Advantages of arranging a swap through a bank

-Banks play a matching role by bringing together counterparties with equal and opposite swapping requirements. This would be very difficult and time consuming for a company to achieve.

- Banks have developed a specialization in swapping agreements and are able to quickly provide standard legal swaps agreements.

- Banks have a very low risk of default if they are the counterparty to a swapping agreement.

(c) Benefits of the proposed swap.

	Fixed rate	floating rate
Mambwe plc	6.30	LIBOR + 0.75
Counterparty	7.30	LIBOR + 1.30
Difference	1.00	0.55

There is a potential arbitrage saving of 0.45% from undertaking the

swap. On a K70 million, this amounts to K315,000. Mambwe is seeking to keep 65% of this saving(65% of K315,000) = K204,750. Balance of K110,250 would go to counterparty entity annually.

The bank would charge each party K110,000 per year. Net of tax = K82,500.

Net savings for counterparty entity =K110,250 – K82,500 = K27,750.

Net savings for Mambwe plc = K204,750 = K82,500 =K122,250.

The swap appears beneficial to all parties concerned.

(d) Blocked funds occur when exchange controls are introduced in a country to restrict the flow of foreign currency into and out of the country. These measures are usually put in place to achieve a number of objectives which may include the need to protect the local currency and to protect foreign currency reserves.

Typically, a government may put in place regulations such as :-

- Restricting the types of transactions for which payment in forex is allowed.
- Restricting the amount forex that an individual or a company can access which in turn reduces their ability to import goods and services.
- Restricting access to forex by limiting the number of authorized forex dealers and imposing dealer limits on a periodic basis.

Mambwe Plc may face the challenge of blocked funds as it may need to repatriate funds for dividend and other payments to its parent company in Tanzania. The company may also face problems with payments for any raw material that it imports for its manufacturing needs.

Options to try and overcome the challenge of blocked funds

- Management fees may be charged by parent company for managing the international value chain.
- High interest Loan facilities can be extended to the Zambian subsidiary by the parent company which can then be used to transfer profits to the parent company.
- The parent company can impose royalties on its subsidiary which can be set at a level that reduces the impact of blocked funds.
- The parent can arrange to be buying raw material for the subsidiary and re-sell the same at a high profit to the subsidiary in Zambia.

<u>SOLUTION FIVE</u>

5 (a)

The two major sources of large-scale equity finance are either through a public listing on a recognized stock exchange or through the private equity market. The former represents the traditional approach for firms who have grown beyond a certain size and where the owners wish to float, in whole or in part, their equity stake within the firm, or where they wish to gain access to new, large scale equity finance. The following may have to be fulfilled before a firm can raise capital on the Lusaka stock exchange (LuSE):

- Formalize the company's status as a public limited company (Plc) with rights to issue its shares to the public. This requires converting a company's registration with PACRA to a Plc.
- Registering the shares to be listed with the Securities and Exchange Commission.
- Fulfilling the listing requirements of LuSE which may entail the publication of a prospectus, which is an audited document containing, among other things, projections of future earnings and profitability.

<u>Benefits of a public listing to ZSIC Life would include:</u>

- Repositioning the company for growth and as a leading company
- Broaden its shareholding to include individual and institutional investors
- Provide an exit route for existing shareholders

<u>Disadvantages of public listing include:</u>

- The procedure for gaining a public listing is lengthy, costly and requires professional sponsorship from ZamOiling firms.
- a company will be exposed to hostile take overs by other companies
- regulatory oversight by LuSE and the Securities and Exchange Commission
- Being subjected to greater public scrutiny.
- LuSE requires that listed companies comply with the companies act and its code of corporate governance.

<u>Private equity finance (PEF) is the name given to finance raised from investors organised through the mediation of a venture capital company or a private equity business. Benefits of PEF include:</u>

- The fact that it does not impose the same regulatory regime as the public market.

- Transaction costs tend to be lower and there is evidence to suggest that private equity finance offers companies the ability to restructure and take long term decisions which may have adverse short-term effects.
- An investment in the form of equity would increase the borrowing capacity of ZSIC Life.
- Private equity investors will normally bring some industry experience.

Disadvantages of PEF include:

- It can be an expensive source of finance
- An issue of shares may reduce control of the company, by existing shareholders
- Private equity investors usually have a short investment horizon

5 (b)

(i) Net assets value

At the lower end, the firm's net assets at fair value would be the issue price or realizable value of the equity between ZSIC Life and the Private Equity Fund (PEF). This is 55 ngwee per share which would represent the lower end of any negotiating range.

Since the PEF is acquiring a CONTROLLING STAKE, valuation of the shares at a premium of 40% using the fair value of net assets would give an issue price of 77ngwee [1.4 X 55] per share.

(ii) Dividend valuation model

Estimating the share price using the dividend valuation model would place the share price at the upper end, using the latest DPS of 2.50 ngwee and the cost of equity capital of 20%. As was the case above, since the PEF is acquiring a CONTROLLING STAKE, using the dividend growth model would give a higher price of 80.50 ngwee [1.4 X 57.50], which is the recommended share price for ZSIC Life to commence negotiations with the private equity fund.

ZSIC Life could potentially use three potential growth rates: the historic earnings growth, which at 25% is greater than the firm's equity cost of capital of 20% and is therefore not sustainable in the long-term, the anticipated growth rate of the firm's revenue of 17.50%, and as requested by the question, the rate implied from the firm's re-investment as follows:

$g = br_e = (EPS - DPS)(r_e) = [(10 - 2.50)/10]*(0.20) = 0.15*100 = 15\%$

The value of the firm using the growth model is:

$Po = Do(1+g)/(r_e - g) = 2.50(1+0.15)/(0.20 - 0.15) = 57.50$ ngwee per share

The share price is a spot estimate of the value of a dividend stream in the hands of a minority investor. If the option to float is taken then a share price of 57.50 ngwee is achievable especially if a portion of the equity and effective control are retained.

However, since the shares have been sold to a private equity investor then it is appropriate to value the firm at a premium in order to take into account the benefits of control which can be substantial if the purchaser is able to generate synergies in terms of revenue enhancement, cost efficiency or more favorable access to capital market.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

ADVISORY LEVEL

CA 3.7: PUBLIC SECTOR AUDITS AND ASSURANCE

FRIDAY 18 SEPTEMBER 2020

TOTAL MARKS – 100; TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading time. Use it to study the examination paper carefully so that you understand what to do in each question. You will be told when to start writing.

2. This paper is divided into TWO (2) Sections:
   Section A: One (1) Compulsory scenario question.
   Section B: Four (4) Optional Questions. Attempt any Three (3) questions.

3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name must **NOT** appear anywhere on your answer booklet.

4. Do **NOT** write in pencil (except for graphs and diagrams).

5. **Cell Phones** are **NOT** allowed in the Examination Room.

6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.

7. All workings must be done in the answer booklet.

8. Present legible and tidy work.

9. Graph paper (if required) is provided at the end of the answer booklet.

DO NOT OPEN THIS QUESTION PAPER UNTIL YOU ARE INSTRUCTED BY THE INVIGILATOR.

SECTION A

This question is compulsory and must be attempted.

QUESTION ONE

The Ministry of Transport is responsible for the procurement and disposal of all Government vehicles. The budget for the Ministry of Transport for 2018 includes K525 million for the purchase of motor vehicles for Permanent Secretaries.

Standing orders require that all procurement above K200 million should be done through the Public Procurement Division. Cabinet recommended that all motor vehicle purchases should be streamlined and that only one make of vehicle should be bought. This way it will be easier and cheaper for the Government to maintain these vehicles. This recommendation was approved by cabinet and the Public Procurement Division was instructed to implement it immediately.

The Minister of Transport asked the Permanent Secretary why the procurement cannot be done by the Ministry rather than the Procurement Division. On learning that the amount involved was above the limit that the Ministry is allowed, the Minister suggested that the buying of the vehicles should be split into two so that the amount is within the authority of the Ministry. The Minister indicated that it will be faster to buy the vehicles if the ministry did it because it is allowed to appoint agents who source the vehicles on behalf of the ministry. He further requested the Permanent Secretary that since he is the chair of the Ministry's Tender Committee, he wants the committee to award a tender for the supply of some of the vehicles to New Motor Supplies Ltd a company owned and run by the wife of the Minister. In return for the award of a contract to New Motor Supplies Ltd, the Minister told the Permanent Secretary that in the next disposal of Government vehicles awaiting approval from Cabinet he can choose five vehicles he wishes to buy at the minimum price that will be determined by the Ministry and these vehicles will not be available for public auction.

Cabinet Office authorized the Ministry of transport to sell off all the vehicles that have not been running for over three (3) years. The Ministry of Transport Permanent Secretary will be required to furnish Cabinet details of all vehicles that will be sold off through auction by a private auctioneer.

Without calling for a Tender Committee meeting, the Permanent Secretary awarded contracts for the supply of brand new vehicles to the Ministry to three (3) suppliers including New Motor Supplies Ltd. He further appointed Public Auctioneers to conduct an auction on behalf of the ministry for all vehicles on the list that should be disposed of. The Permanent Secretary fraudulently prepared minutes purporting that a Tender Committee sat to approve the award of contracts for the supply of motor vehicles to suppliers and the award of the contract to Public Auctioneer to auction vehicles on behalf of the Ministry.

The conditions for the supply of motor vehicles state that the Ministry of Transport shall make advance payments to the suppliers of 75% of the contract price on signing the contract. The balance of 25% will be paid on delivery of the vehicles to the ministry.

Motor Supplies Ltd only supplied and delivered half the vehicles contracted for and the company was paid the 25% balance on these vehicles despite that not all the vehicles were supplied. Efforts to get the company supply the remaining vehicles proved difficult because the company kept on promising to supply the remaining vehicles before the end of the year.

Required:

(a) Explain the purpose of assessing the risk of material misstatement in public sector auditing. (4 marks)

(b) Explain your understanding of the concept of materiality in compliance auditing.

(6 marks)

(c) (i) Describe the need for a compliance audit with respect the procurement and disposal of motor vehicles by the Ministry of Transport. (4 marks)

(ii) Identify and explain the matters that should be considered during the compliance audit of the procurement and disposal of motor vehicles by the Ministry of Transport. (6 marks)

(d) Describe the audit work that should be carried out on the acquisition and disposal of Government vehicles. (10 marks)

(e) Identify and explain four (4) weaknesses in the procurement system of motor vehicles by the ministry of transport. (4 marks)

(f) Identify and explain the matter in the above scenario that would call for a forensic investigation. (4 marks)

(g) Explain the objective of the forensic investigator as an expert witness in a legal case. (2 marks)

[Total: 40 Marks]

SECTION B

There are four (4) questions in this section. Attempt any THREE (3) questions.

<u>QUESTION TWO</u>

(a) You have concluded the financial audit of Safety Insurance Ltd a wholly owned Government institution.

You are reviewing the current audit working papers for the year just ended. In the section for internal controls, the audit team has observed the following internal control weaknesses.

1. Documents used to support payments made are not initialed by the person approving payment and they are not stamped with a 'PAID' stamp to evidence that payment has been made.

2. The Financial Accountant is responsible for the maintenance of the cash book and the preparation of bank reconciliations. In the year under review, bank reconciliations have only been prepared four (4) times due to the fact that the Financial Accountant is very busy.

Required:

(i) Explain the use of a management letter in public sector auditing. (2 marks)

(ii) Using the information above, suggest the contents of the management letter that should be written to the management of Safety Insurance Ltd. (6 marks)

(b) You work for the Office of the Auditor General (OAG). You have been assigned to carry out a performance audit of a project under the Lusaka City Council.

Following the successful completion of the supply clean water project to the five selected peri-urban areas of Lusaka under the sponsorship of the American government at the end of 2017, a further grant of $1.5million was given to the Lusaka City Council by the American government whose purpose is to finance the construction of three blocks of water borne toilets in each of the five peri-urban areas. The grant amount was determined based on a budget prepared by consultants who were engaged by the American government to assess and evaluate the cost of constructing the toilets. The project duration was one year and the project ended on 31 December 2018 and all the funds had been spent.

The Lusaka City Council was given the mandate to carry out this project and the funds were transferred into a dedicated bank account under the council. Under the conditions of the grant, the city council was required to procure all the supplies required for the project. The actual construction works were required to be given to contractors selected through competitive bidding.

During the audit, you establish that in three of the peri-urban areas all three blocks of toilets were completed and were ready for commissioning. In the remaining two (2) areas, only two (2) incomplete blocks of toilets each had been constructed.

You further establish that the tender process was not made public to enable as many contractors as possible bid for the works. Instead, the Council went for selective bidding and they invited contractors on their list to bid for these works contrary to the grant conditions which required works to be awarded through public tender.

Required:

(i) State three (3) performance audit questions that should be considered in the performance audit of public toilets project. (3 marks)

(ii) Describe three (3) audit procedures that will be performed for each area of the project to construct water borne toilets in line with the principles of economy, efficiency and effectiveness. (9 marks)

[Total: 20 Marks]

QUESTION THREE

(a) The last three (3) years has seen a shift in Zambia from paying for goods and services by cash and cheque payments. The country has experienced a rapid increase in electronic payment systems and Bank of Zambia regulations are aimed at reducing the amount of cash in circulation through encouraging electronic payments.

The electronic payments systems are a wide variety of products including the following:

1. Requiring payments above a set limit being made by bank transfers rather than the issuance of cheques.
2. The use of electronic payment system whereby companies have direct access to their banks and make payments electronically from their offices.
3. Telecommunication service providers offering a range of services including sending and receiving of money using their networks.
4. Increased use of debit cards in paying for goods and services in the retail sector thereby greatly reducing the amount of cash handled by the large retail shops.

The migration to the above modes of transacting have enormous benefits including the reduced risk of handling large sums of money and reduced documentation when making and receiving payments. On the other hand, increased use of electronic payment systems has seen an increase in cyber-crime in the country.

Required:

(i) Discuss the main causes of the increase in cyber-crime in modern business.

(2 marks)

(ii) Describe any three (3) main threats of cyber-crime faced by users of electronic payment systems. (6 marks)

(b) Zambezi is a member country of the International Organization of Supreme Audit Institutions (INTOSAI). Zambezi requested for an independent evaluation of the effectiveness of its Supreme Audit Institution (SAI) by the International Organization of Supreme Audit Institutions (INTOSAI).

You are part of an International Organization of Supreme Audit Institutions (INTOSAI) team that has been assigned to carry out an evaluation of Zambezi's Supreme Audit Institution (SAI).

The following information about the Supreme Audit Institution (SAI) has been gathered:

The head of the Supreme Audit Institution (SAI) worked for the Government of Zambezi as the Head of Government Accounting. He was appointed head of the Supreme Audit Institution (SAI) at the expiry of the contract of the previous job holder. He held the position of Head of Government Accounting for twenty (20) years. He had three (3) years to go before retirement until when the President of Zambezi appointed him the head of the Supreme Audit Institution (SAI). At the time of his appointment, he indicated that he had interest in standing as a member of parliament in the next general elections on the ruling party ticket.

Soon after taking over the position as Head of the Supreme Audit Institution (SAI) he undertook a restructuring of the institution which resulted in the retirement of three (3) Directors. The three (3) retired Directors were replaced by people who previously worked as Directors at Cabinet Office and the Ministry of Finance. He wanted a strong team with vast experience in Government operations and people that he knew very well and would be comfortable to work with.

Cabinet Office required that the three (3) Directors who left Cabinet Office and the Ministry of Finance for the Supreme Audit Institution (SAI) should be replaced. A committee, which included the Head of the Supreme Audit Institution (SAI), was set up to interview people to take up the vacant positions. The Head of the Supreme Audit Institution (SAI) was key in the selection process because as an accountant he understood well the skills required for these senior positions.

All reports arising from audits carried out by the Supreme Audit Institution (SAI) are subject to the approval of the Head of the Supreme Audit Institution (SAI) before they are published.

Required:

(i) Discuss four (4) benefits of the independent review of the operations of the Supreme Audit Institution (SAI) of Zambezi. (4 marks)

(ii) Evaluate and explain four (4) ethical issues that may exist in the Supreme Audit Institution (SAI) of Zambezi. (8 marks)

[Total: 20 Marks]

QUESTION FOUR

You are a Senior Auditor in the Office of the Auditor General (OAG) and have been assigned to the Ministry of Finance to undertake a compliance audit. You are leading a team of six (6) Auditors, most of whom are new to this type of audit. In an effort to seek to understand the audit environment, you visit the Ministry of Finance website and found the following:

The Ministry of Finance in Zambia is responsible for mobilization and management of public resources for sustainable national development. The Ministry if headed by a Minister whose mandate is drawn from the Ministry of Finance (Incorporation) Act, Chapter 349 of the Laws of Zambia.

The administrative and technical team is headed by the Secretary to the Treasury who is assisted by four (4) Permanent Secretaries as follows:

1. Economic Management and Finance – The role of the Economic Management Department is to put in place or design a macroeconomic policy framework that facilitates sustainable economic growth and stability. In this regard, the Economic Management and Finance function is responsible for the development of effective monetary and fiscal policies that would guide domestic resource mobilization, as well as Government medium and long-term expenditure.

2. Budget and Economic Affairs (EBA) – This function is responsible for coordination of budget preparation and implementation in order to provide the framework for timely collection and allocation of financial resources for national development.

   Accountant General – The Public Finance Act requires that the Accountant General, among other things, monitors accounting processes and reports on the budget execution involving all public funds appropriated by Parliament and disbursed by Budget Office.

   The major Departmental responsibilities are to formulate sound financial management principles through financial policies, Regulations, Processes, Procedures, and Systems, Financial Management Reports.

3. Controller of Internal Audit – The functions of the Controller of Internal Audit are to provide independent and objective assurance to the Secretary to the Treasury on the proper financial management and expenditure of public funds appropriated to public bodies. The Controller of Internal Audit is also responsible for providing assurance that money appropriated by Parliament or raised by the Government are disbursed and applied for the purpose for which it was intended in accordance with the principles of efficiency, effectiveness and economy.

After analyzing the above information, you are requested by new members of your team to write short notes on a number of issues regarding Compliance auditing.

Required:

(a) Differentiate between Regularity and Propriety. (2 marks)

(b) Differentiate the respective objectives when a compliance audit is conducted together with financial audit. (4 marks)

(c) Identify and explain the three (3) parties in a compliance audit of the Ministry of Finance. (6 marks)

(d) Identify and explain four (4) methods you would use to obtain evidence of compliance in the Ministry of Finance. (8 marks)

[Total: 20 Marks]

QUESTION FIVE

The Supreme Audit Institution (SAI) is referred to as the National Audit Office in a country called Elsa. The country has excellent governance structures which supports the ideals of accountability and transparency. It is mandatory for every public entity to have an Audit Committee aimed at strengthening the financial reporting systems.

In Elsa, the Head of the National Audit Office, who is also known as the Auditor General (AG), is a senior Government Official reporting to the Chief Justice. The Chief Justice is appointed by an association of respected traditional churches. Some Non-Governmental Organizations (NGOs) started questioning the objectivity and independence of the National Audit Office and its staff. They want the National Audit Office to adopt the requirements for independence and objectivity for both the SAI and the SAI staff according to ISSAI 30 *Code of Ethics*.

You are an experienced Audit Supervisor in Elsa's National Audit Office. You have been given the responsibility by the Auditor General (AG) to establish an office in a rural area which has attained district status. Government wants to establish all critical institutions in the district before releasing huge sums of money which were approved by Parliament.

Government has advised you to work closely with the traditional leadership. At a recent meeting organized by the indunas to officially welcome you, the Paramount Chief suggested the following:

1. The nephew to the Paramount Chief who lost the elections for area Member of Parliament should be employed as an Auditor. He is a CA graduate with two (2) years practical experience.
2. The local National Audit Office should prepare a corrective plan to address the deficiencies identified by National Audit Office staff last year. This relates to a public entity which provides solar electricity in the area. The Paramount Chief sits on the Board of the Directors for this public entity and was concerned with the number of deficiencies and wants these to be reduced significantly.
3. The audit staff should be transferred on a regular basis to other areas.
4. The Paramount Chief has promised you 10 acres of fertile land if you work well with the traditional leadership.
5. Promote learning and knowledge sharing, as well as capacity building in the local National Office.

Required:

(a) Explain the requirements for independence and objectivity for both the SAI and SAI staff according to ISSAI 30 *Code of Ethics.* (8 marks)

(b) Evaluate each of the suggestions made above, commenting on the ethical and professional issues raised. (12 marks)

[Total: 20 Marks]

END OF PAPER

SUGGESTED SOLUTIONS

SOLUTION ONE

a) **Purpose of assessing risk of material misstatements in public sector auditing:**

One of the general principles of public sector audits in accordance with ISSAI 100 is that the public sector auditors should manage the risk of material misstatement so that they do not give a report and opinion that is not appropriate under the circumstances.

The objectives of identifying and assessing risk by the public sector auditors include:

- Enabling the public sector auditor to concentrate his efforts on the riskier areas and as such make the best use of the available resources.
  By so doing, the risk of not detecting material misstatements will be reduced by the public sector auditors.
- Enable the public sector auditor to respond appropriately to the risks so identified including allocating staff with requisite skills and experience and determining the nature and timing of audit procedures that should be carried out.

b) **Materiality in a compliance audit**

The concept materiality includes nature, context and value. Materiality may focus on quantitative factors such as the number of persons or entities affected by the particular subject matter or the monetary amounts involved as well as the misuse of public funds, regardless of the amount. Materiality is often considered in terms of value, but the inherent nature or characteristics of an item or group of items may also render a matter material (qualitative factors).

Quantitative materiality is determined by applying a percentage to a chosen benchmark as a starting point. This involves the exercise of professional judgment and reflects, in the auditor's judgment, the measures that user(s) of the information are most likely to consider important. Quantitative materiality is mostly used in attestation engagement. In some cases, the qualitative factors are more important than the quantitative factors. Public expectations and public interest are examples of qualitative factors that may impact the auditor's determination of materiality.

Based on the selected subject matter, materiality is determined by identifying the level of non-compliance that is likely to influence the decisions of the intended user(s). In identifying materiality, the auditor pays attention to specific areas of legislative focus, public interest or expectations, requests and significant public funding as well as fraud.

Materiality is applied by the auditor in planning and executing the audit, and in evaluating the effect of instances of non-compliance. In the planning phase, assessing materiality helps the auditor to identify the audit questions which are of importance to the intended user(s). In performing the audit, the auditor uses materiality in the decision of the extent of audit procedures to be executed and the evaluation of audit evidence. In evaluating and concluding the audit, the auditor uses materiality to evaluate the scope of work and the level of non-compliance to determine the impact on the conclusion/opinion.

c) **i. Need for a compliance audit in procurement& disposal of motor vehicles:**

The objective of a compliance audit by the public sector auditor is to gather evidence and conclude whether or not an activity has been performed in accordance with a given criteria.

In the case of the procurement and disposal of motor vehicles by the ministry of transport, there are general guidelines that must be followed in procuring and disposing of the motor vehicles. The guidelines will have been put in place with the objective to ensure that the procurement and disposal of motor vehicles is conducted transparently and in a manner that will not result in a loss or misuse of public funds.

The public sector auditor will wish to establish whether or not there has been compliance with the regulations and if not to recommend corrective action so that the laid down procedures are followed.

ii. Matters that should be considered in the compliance audit of:

Procurement of motor vehicles:

1. The government guidelines with regards procedures with regards procurement contracts that are entered into.
2. Consideration of whether the procurement of motor vehicles is budgeted for and the availability of funds.
3. Compliance with the requirement that the ministry can only procure motor vehicles if the amount involved is below K200million
4. Evidence that the procurement procedures have been done in accordance with the laid down procedures.
5. The risk involved in procurement and that there could be fraud within the ministry in the procurement of motor vehicles. The fraud risk factor is generally high in procurement contracts.
6. Delivery of all motor vehicles contracted to be procured to ensure no vehicles go missing or payment made for vehicles not supplied.

Disposal of motor vehicles:

1. Controls over the disposal of motor vehicles by the ministry to ensure that only vehicles that are supposed to be disposed of are the ones that have been disposed of.
2. Evidence of any authorization from cabinet office for the disposal of the motor vehicles.
3. Adherence to the laid down procedures including the selection of the auctioneer who will do this on behalf of the ministry of transport.
4. The amounts at which the vehicles are disposed of compared to prevailing prices.

d) Audit procedures with regards acquisition of motor vehicles:

- Obtain evidence that the procurement of the motor vehicles was approved.
- Confirm that tender procedures have been followed in awarding contracts to supply motor vehicles as provided for in the guidelines.
- Obtain evidence that the purchase of motor vehicles was budgeted for by inspecting the approved budget.
- Confirm that the purchased motor vehicles have been recorded in the asset register.
- For a sample of motor vehicles physically inspect the motor vehicles testing for existence.
- Inspect the registration documents of the motor vehicles and confirm registered in the name of the government.
- Verify that all suppliers have fulfilled their obligations to supply the vehicles as agreed in the procurement agreement.

Audit procedures with regards disposal of motor vehicles:

- Confirm that the disposals have been authorized as required by inspecting the authorization.
- Confirm that the purchased motor vehicles have been removed from the asset register.
- Confirm that the sales proceeds have been recorded correctly as receipt in the cash book and banked in the relevant government account.
- Re-compute the calculation of the profit or loss on disposal.
- Ensue that the procedure for appointing the auctioneer was carried out in accordance with the regulations.

e) Weaknesses in the procurement system of motor vehicles:

- The use of middlemen by the ministry of transport to source and supply motor vehicles to it. This could result in the ministry to pay more for the vehicles that it could have paid had the ministry dealt with the suppliers directly.
- The paying of 75% advance payment to suppliers is a weakness in that it could result in fraudulent suppliers getting away with the amount without fulfilling their obligation to supply the vehicles.
- The fact that the ministry is able to go around the requirement that only procurements below a given threshold can be done by the ministry by splitting the procurement in two or more phases which fall within the given threshold. The guidelines should be clear so that they cannot be circumvented through such means and the procurement should not have been carried out by the ministry of transport.
- There are obvious weaknesses in internal controls in that the permanent secretary was able to award supply contracts to suppliers without a formal tender committee meeting. He forged the minutes of the purported meeting at which the award was made. This should have been prevented by suitable and adequate controls in place.

f) Matter that can be subject of a forensic investigation in the procurement and disposal of motor vehicles in the Ministry of Supply:

A number of issues in the procurement and disposal of motor vehicles in the Ministry of Supply could call for a forensic investigation. This is particularly the case in that the people involved are the controlling officer and the minister of the ministry of supply.

Specifically the following matters call for a forensic investigation:

1. The award of the contracts to suppliers of motor vehicles whereby no tender committee sat to do this and yet there are minutes suggesting that the award was done per procedure.
2. The award of a contract to supply vehicles to a company in which the wife of the minister owns the company.
3. How the permanent secretary managed to circumvent the procedures for disposing of vehicles and was able to choose and buy vehicles that never went through the appointed auctioneer.

g) The objective of a forensic investigator as an expert witness:

The forensic investigator may be called in to be an expert witness in a court case.

When called to do so, the objective, the objective of the forensic investigator will be to help the court to come to a fair judgment. The forensic investigator should in this case not only serve the interest of the one who appointed him but rather to be objective and help the court make the correct conclusion and judgment.

SOLUTION TWO

a) Use and contents of the management letter:

i. The use of a management letter in public sector auditing:

A management letter is a means through which the public sector auditor communicates the deficiencies that come to their attention during the audit to the management of an audited entity.

It may be considered as a byproduct of an audit that is performed by the public sector auditor.

ii. Contents of the management letter to management of Safety Insurance Ltd:

A management letter will contain details of matters of internal control weaknesses that came to the attention of the audit team during the audit of Safety Insurance Ltd. It will be sent to management under cover of a letter which will state that the letter is for internal use only and that the weaknesses contained in the letter are those that the auditors came across and there could be others not detected by the audit process.

In most cases the management letter will have a summary of main findings briefly explaining each of the findings. This is useful for the Chief Executive Officer who may not have the time to read through the main body of the report.

Then there will be the main body of the report which will contain the following paragraphs using the information in the question:

Brief description of the internal control weakness:

Supporting documents for making payments are not stamped with a PAID stamp after payment has been made.

Potential effect of the weakness:

Not stamping supporting documents with a PAID stamp can result in the same documents being used for fraudulent payments resulting in the loss of money by the entity.

Recommendation:

All supporting documents must be stamped PAID after payment has been made. This responsibility must be assigned to an individual who should be made accountable for this responsibility.

Management's comment:

We agree with the observations and recommendations made. We shall implement this with immediate effect.

b) i. Performance audit questions – water borne toilets project

Economy:
Has the construction of water borne toilet in the five peri-urban areas been done at the best price (minima cost) without compromising on quality?

Efficiency:
Has the $1.5million grant been spent in such a way that the maximum output has been achieved?

Effectiveness:
Has the project resulted in achieving the project objective off construction three blocks of waterborne toilets in each of the five peri-urban areas?

ii. Performance audit work on water borne toilets project:

Economy:

- Obtain evidence of the cost of constructing each block of water borne toilet and confirm if cost is within budgeted cost.
- Obtain and review the procurement procedures followed by the Lusaka City Council.
- For a sample of purchases of materials and supplies, confirm that the procurement procedures have been adhered to.
- Review invoices for supplies and materials purchases and confirm the best price has been paid.

Efficiency:

- Establish the output in terms of the number of water borne toilets have been constructed from the inputs in terms resources.
- Obtain evidence on whether the same output would have been achieved using lesser input resources.

Effectiveness:

- Read through the grant agreement and obtain the objective of the project namely to construct three waterborne toilets each in the five designated areas.
- Establish the output at the end of the project and determine the achievement of the project.
- Obtain written representations from management explaining the possible reason for failing to meet the desired objectives.

SOLUTION THREE

a) i. Main causes of cyber-crime in modern business:

Modern business processes whereby there is an increased use of information technology has resulted in the increase in cyber-crime.

This is achieved by unauthorized aces to an entity's information system and coming crime. The increased connectivity of information system outside the organization has exposed many organization to cyber-crime.

ii. Main threats of cyber-crime:

Direct theft:
This arises where criminals gain access to computer systems of a company and a crime such as theft of funds.
This usually happens when the criminals are able to steal funds through accessing the company information system and transfer the money into their accounts or the accounts of their choice.

Malicious damage:
This is a threat where criminals simply want to damage an organization's systems mainly to cause harm and damage to the organization. For example simply deleting data in organization's system or installing software that will corrupt data.

Data theft:
This is where hackers gain access to unauthorized data and get it for fraudulent use. This could be confidential data say of customer details in a bank.

Ransom-ware attacks:
This is the gaining access to an organization's system and then demand a ransom in order to restore the system.

Denial of service attack:
This threat does not involve gaining access into the system. This can be done by the hackers by simply keeping the organization's systems flooded with traffic so that access by clients becomes more difficult and frustrating. The hackers may also request a ransom in order to allow the systems to be restored.

b) i. Benefits of independent review of the operations of the Supreme Audit Institution (SAI) of Zambezi:

- The Supreme Audit Institution (SAI) will benefit from the skills and benefits of the team that carries out the evaluation.
- It helps the Supreme Audit Institution (SAI) recognize its shortcomings because the evaluators are independent of the institution and thereby objective in their review.

- The Supreme Audit Institution (SAI) will benefit from knowledge sharing since the evaluators are from different member countries of INTOSAI.
- The Supreme Audit Institution (SAI) achieve its objective of being a role model through having its own operations being independently evaluated.

ii. Ethical issues of the Supreme Audit Institution(SAI) of Zambezi:

1. **Head of the Supreme Audit Institution(SAI) held senior Finance position in government:**
   The fact that the head of the Supreme Audit Institution (SAI) of Zambezi previously worked for the government as Head of Government Accounting before taking on the role of Auditor General may suggest that there is likely to be an element of self-review threat. Most of the systems that are in use will most probably been designed or approved by him in his former position as Head of Government Accounting.

2. **Intention to stand as member of parliament in elections:**
   The intention by the Head of Supreme Audit Institution (SAI) to stand as a member of parliament under the ticket of the ruling may bring about lack of political neutrality on the part of the head of the Supreme Audit Institution (SAI) of Zambezi.

   This may further cause the head of the Supreme Audit Institution (SAI) to lack the required levels of integrity. He will most likely wish to please his sponsors in the elections that he wishes to context.

3. **Involvement in recruiting senior staff to fill up vacancies:**
   The involvement of the head of the Supreme Audit Institution (SAI) in selecting directors to replace those who left government service to join the Supreme Audit Institution (SAI) results in a self-interest threat.

   The head of the Supreme Audit Institution (SAI) will be expected to audit and give an opinion on the activities carried out by staff he had a hand in selecting. This could result in lack of independence and ultimately lack of objectivity.

4. **Recruitment of three directors from government:**
   The three directors who left to join the Supreme Audit Institution (SAI) may face self-review and familiarity threats. They have just left employment in government and they have taken up senior positions in the Supreme Audit Institution. It is likely that they will be involved in

the audit process of the entities they previously worked for resulting in loss of objectivity because of the aforementioned.

SOLUTION FOUR

(a) Regularity and propriety:

Regularity means compliance with formal criteria such as relevant laws, regulations and agreements while Propriety is simply observance with general principles of sound financial management and proper conduct by public officials

(b) Objectives of a compliance audit with a financial audit:

In audit of financial statements, the auditors' objective is to obtain reasonable assurance about whether the financial statements are free from material misstatement, thereby enabling the auditor to express an opinion whether the financial statements are prepared, in all material respects, in accordance with an applicable financial reporting framework.

In a compliance audit in connection with the audit of financial statements, the overall objective is to obtain reasonable assurance about whether the activities, financial transactions and information reflected in the financial; statements are in material respects, in compliance with the authorities that govern them.

(c) Parties to the compliance audit of the Ministry of Finance:

Public-sector audits which include Compliance auditing involve at least three separate parties: the auditor, a responsible party and intended users. The relationship between the parties should be viewed within the context of the specific constitutional arrangements for each type of audit.

- The auditor: In public-sector auditing the role of auditor is fulfilled by the Head of the SAI and by persons to whom the task of conducting the audits is delegated. The overall responsibility for public-sector auditing remains as defined by the SAI's mandate.
- The responsible party: In public-sector auditing the relevant responsibilities are determined by constitutional or legislative arrangement. The responsible parties may be responsible for the subject matter information, for managing the subject matter or for addressing recommendations, and may be individuals or organizations.
- Intended users: The individuals, organizations or classes thereof for whom the auditor prepares the audit report. The intended users may be legislative or oversight bodies, those charged with governance or the general public.

(d) Methods of obtaining audit evidence:

- Observation:

  This is the most basic ways to gather evidence during an audit. Simply looking around is a very powerful way to understand how an organization works. Is the place organized or cluttered? Is communication formal or informal? Smart auditors immerse themselves in the organization they are auditing and look at it from every angle. Here are some especially powerful pieces of audit evidence you can look for:

- **Inspection/Examination of records:**

  Records are historical artifacts. They tell what has happened in the past. Auditors generally accept records as statements of fact. If we have a credible record that indicates something happened, then we can usually conclude the action happened. Of course, records are not required of everything that happens in an organization

- **Inquiry**

  An interview is a structured discussion. Unlike a normal discussion that can meander over a wide variety of topics, an interview has a specific objective. Your objective is to capture factual information about the process being audited. The interviewer must plan and control the discussion so the required facts are gathered in the most efficient manner possible. In general, certain cues help an auditor know if the interview they're leading can be considered objective evidence

- **External confirmation**

  An external confirmation is audit evidence obtained as a direct written response to the auditor from a third party (the confirming party), in paper form, or through electronic or other medium. Requesting external confirmations is a commonly used audit procedure in an audit of financial.

- **Analytical procedures**

  Analytical procedures include comparison of financial information (data in financial statement) with prior periods, budgets, forecasts. It also includes consideration of predictable relationships, such as gross profit to sales, payroll costs to employees, and financial information and non-financial information

SOLUTION FIVE

(a) ISSAI 30 Requirements for independence and objectivity for both the SAI and the SAI staff:

Requirement for the SAI

- The SAI must be independent, even though it is a government body.
- The SAI should adopt policies for ensuring that its staff (especially at senior level) do not develop relationships with audited entities that may put their independence and objectivity at risk.
- The SAI should not provide non-audit services to an audited entity, where this would involve assuming some managerial responsibilities.

Requirement for the SAI staff

- SAI staff should be independent from political influence and free from political bias.
- SAI staff should not audit their own work.
- SAI staff should not audit an entity where they have recently been employed, without appropriate safeguards.
- SAI staff should avoid circumstances where personal interests could affect decision-making, or where relationships with the management of an audited entity could affect decision-making.
- SAI staff should refuse gifts, gratuities or preferential treatment that could affect their independence or objectivity

(b) Evaluation of the ethical and professional issues raised:

The Code of Ethics requires independence both in fact and in appearance. Independence in appearance does not exist when a "reasonable and informed third party, having knowledge of relevant information", has reasonable doubts about the integrity, objectivity or professional skepticism of an individual auditor. It is not sufficient to be independent and objective: it is necessary to be seen by others as trustworthy, independent and objective. This is the guiding principle for all public sector auditors. The evaluation of the suggestions made by the Paramount Chief will be based on the ethical guidance above.

(i) The nephew to the Paramount Chief who lost the elections for area Member of Parliament should be employed an Auditor – Political neutrality will be questionable and the reports may not be trusted. Stakeholders may think he may be using the audits to sort out political opponents or those who hold different views. The nephew may be employed in other roles not directly related to audits since he is qualified.

(ii) The local National Audit Office should prepare a corrective plan to address the deficiencies identified by National Audit Office staff last year – This will mean taking over management responsibility, which could lead to a serious self-review threat. Participation in the management of an audited entity is not permitted. Management responsibilities for an audited entity must remain with its management. It will be difficult for the local National Office to criticize its own work and no safeguards could be in place to reduce this ethical threat to an acceptable level. This should be politely declined.

(iii) The audit staff should be transferred on a regularly basis – This is acceptable in order to guard against familiarity threat. However, the transfers must be conducted in accordance with the National Audit Office's policies and procedures.

(iv) The Paramount Chief has promised you 10 acres of fertile land if you work well with the traditional leadership – This may result in a self-interest threat and objectivity is likely to be impaired. You may want to impress the traditional leadership at all costs. It will be important to refuse this gesture by politely referring to the National Audit Office's policies and procedures. This should not be leading.

(v) Promote learning and knowledge sharing, as well as capacity building in the local National Office – SAI are expected to set high standards of conduct and behavior that can act as a role model for others in the public sector. This must be done in accordance with the SAIs policies and procedures.

The National Audit Office should be consulted before the final decisions are taken.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

ADVISORY LEVEL

CA 3.8: PUBLIC SECTOR FINANCIAL MANAGEMENT

FRIDAY 18 SEPTEMBER 2020

TOTAL MARKS: 100; TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading time. Use it to study the examination paper carefully so that you understand what to do in each question.

2. This paper is divided into TWO (2) sections:
   Section A: One (1) compulsory scenario question.
   Section B: Four (4) Optional scenario Questions. Attempt any three (3) questions.

3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name must **NOT** appear anywhere on your answer booklet.

4. Do **NOT** write in pencil (except for graphs and diagrams).

5. **Cell Phones** are **NOT** allowed in the Examination Room.

6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.

7. All workings must be done in the answer booklet.

8. Present legible and tidy work.

9. Graph paper (if required) is provided at the end of the answer booklet.

10. Present Value and Annuity tables are attached at the end of this paper.

DO NOT OPEN THIS QUESTION PAPER UNTIL YOU ARE INSTRUCTED BY THE INVIGILATOR.

SECTION A

This question is compulsory and must be attempted.

QUESTION ONE

The Zambia Institute of Chartered Accountants (ZICA) has entered into a Public Private Partnership (PPP) with a Real Estate Investment Trust (REIT), and the Public Service Pension Fund (PSPF), to construct an office complex at its secretariat in Lusaka.

The project will require an initial investment of K115 million on construction costs and K2 million on working capital. The investment in working capital is expected to increase to K5 million at the end of the first year, and would be recovered at the end of the fifth year after the defects and liability period.

An additional cost of K10 million, including apportioned fixed overheads of K5 million would be incurred on access roads and landscaping after completion of construction at the end of the third year.

The office complex is projected to have the following cash inflows:

Period (Years)	4 – 6	7 - 11	12 - 15
Annual Cash Flow (K'000)	45,000	36,000	24,000

The partners plan to finance the project with the following capital structure:

Source	**cost %**	**Book values (K million)**
Equity	18	100
Preference shares	15	20
Zero Coupon Bonds	10	30

NOTE: Students are strongly advised to use present value annuity tables.

Required:

(a) Compute the project's Social Opportunity Cost (SOC). (5 marks)

(b) Determine its NPV and advise whether it is viable to undertake from a financial point of view. (16 marks)

(c) Explain the following PPP models or arrangements that are commonly used:
   (i) Service or Management Contract
   (ii) Lease
   (iii) Concession or BOOT scheme

(9 marks)

(d) While the benefits of PPPs can be significant, they have been criticized by various stakeholders, for instance the concession of Zambia Railways is widely believed to have been a failure, following its inability to meet key project objectives.

Explain five (5) potential benefits and limitations of PPPs, using examples of projects in Zambia. (10 marks**)**

[Total: 40 Marks]

SECTION B

There are FOUR (4) questions in this section. Attempt any THREE (3)

<u>QUESTION TWO</u>

Governments and Public Sector Institutions are faced with Fiscal Risks which can be very significant and their consequences devastating on an economy and hence the provision of public goods not fully realised. The International Monetary Fund (IMF) categorised the fiscal risks in order to make it easier to understand them in order for individual governments manage them.

Required:

(a) Explain the various categories that the IMF recommended in order to understand the fiscal risks. (10 marks)

(b) Discuss how Governments can manage specific fiscal risks. (10 marks)

[Total: 20 Marks]

<u>QUESTION THREE</u>

The Public Financial Management Strategy for country Y was concluded five years ago. The government of Country Y is not interested in formulating a new strategy because they are convinced that there is no need of reforms in Public Financial Management (PFM) despite the last Public Expenditure and Financial Accountability Framework (PEFA) highlighting weaknesses in Accounting and Reporting, Budget Classification and Weakness in Public Access to information at Local Government Level. The following is an excerpt from the recent findings of country Y's PEFA assessment at the Local Government level. A score of A is the best and D is the Worst.

P1-4 Budget Classification

Indicator/Dimension	Score	Brief Explanation
P1-4 Budget Classification	D	Does not use GFS/Classification of Government budget and accounts according to International Standards

This indicator assesses the extent to which the government budget and accounts classification are consistent with international standards.

During a meeting of district councils held at the Ministry of Local Government and Housing, the Town Clerks and the District Secretaries informed the meeting that they did not see the need to consider public financial management reforms as a priority. The revenue that the council was raising is allocated to paying emoluments, capital projects and social welfare.

They further indicated that as councils strengthening of public financial management system was a responsibility of the Central Government. They also expressed frustrations at the power play regarding implementation of fiscal decentralization. They indicated that the current reserves were not enough to be spent on strengthening systems considering central Government has not fully implemented fiscal decentralization citing lack of capacity at lower levels.

However, the Ministry of Local Government officials indicated that they had done a risk analysis of investing in PFM policy at Local Government and will include implementation of E-procurement and E-payments, online collection of revenue through the internet and skills training which will be presented to Central Government. There were four possible outcomes which were considered possible with the following Net Present values (NPVs) and probabilities:

Outcome	NPV	Probability	Benefits Expected Value
Low	K(50)m	0.1	K(5)m
Medium	K100m	0.5	K50m
High	K150m	0.3	K45m
Highest	K200m	0.1	K20m
Expected Value			**K110m**

The cost of implementing the PFM policy at Local Government have an expected value of K75m, resulting in expected net benefit of K35m NPV.

Required:

(a) Explain to the Town Clerks and District Secretaries, three (3) essential outcomes of PFM measurements framework and five (5) examples of other procurement frameworks and guidance documents that is used in addition to the Public Expenditure Framework. (8 marks)

(b) Outline methods the councils could employ to ensure its budget classification conforms to international standards. (6 marks)

(c) Comment on the risk analysis to be presented to Central Government and advise the decision makers on why they should proceed to implement the policy. (6 marks)

[Total: 20 Marks]

QUESTION FOUR

Expenditure and Service delivery survey (ESDS) for Bush Works Republic was undertaken by the World Bank in 2016 to evaluate the impact of funds provided to schools by the Treasury. Education has been recognized by the government of Bush Works as a key part of development not only through the benefits of skills acquisitions but in promoting gender equity. However, while education in the government of Bush Works expanded in the early 70s, the growth stalled in the 1990s.

The education system has continued to face challenges such as lack of efficient and effective use of resources, high teacher absenteeism, low education quality, insufficient teaching and learning material, high internal inefficiency and low time on task.

The Ministry of General Education has been grappling with how best they could measure performance annually and also how they could influence the level of performance of staff.

Required:

(a) Discuss five (5) performance measures, including financial and non-financial measures, which may be used to measure performance of the education system. (14 marks)

(b) Discuss the motivational factors likely to influence the level of performance and suggest ways in which efforts may be made to quantify such factors. (6 marks)

[Total: 20 Marks]

QUESTION FIVE

A South West African Country recently appointed a District Governor, Mr. Golia Turnaround, to manage the affairs of a District. The District budget was largely funded from the Central Government grants (60%); these being general grants, matching grants, and sometimes special grants. The balance of the budget, (40%) was from local revenues such as property, water and sewerage taxes and packing fees.

The District Governor called for an extraordinary council meeting where all councillors were mandated to attend. The meeting was a one agenda meeting to discuss the council's liquidity situation as it was noted from the recent past that short-term obligations were not honoured promptly. This, resulted into stakeholder relationship being affected negatively and some services not being provided satisfactorily to the District communities.

The meeting observed that the Council Treasurer, Ms Koli Sekete, was a holder of a degree in Horticulture. It was further noted that the council revenues were not receipted and banked promptly. Cash flow statements were not prepared by the council treasurer. Upon being asked, she responded that the statement (cash flow) was not necessary as she knew when, and how much to pay creditors at a particular time and also when to collect debts, so there was no need to prepare a cash flow statement even if it was noted that the District Governor then informed the extraordinary council meeting that with immediate effect, the council was going to send the Treasurer, Ms Koli Sekete for a 6-months diploma course in Treasury Management for non-accountants at a local University. The District Governor further explained to the committee members that the Government has adopted many aspects of treasury management and that this was going to be centralised since the Ministry of Finance maintains Single Treasury Accounts to assist in the centralisation of treasury management.

Required:

(a) Explain the importance of cash flow forecasting and why you think it is critical in the treasury management. (4 marks)

(b) Explain the various ways that payment systems for the Single Treasury Account are implemented. (6 marks)

(c) Explain the advantages of a centralised treasury management system. (10 Marks)

[Total: 20 Marks]

END OF PAPER

Formulae

Modigliani and Miller Proposition 2 (with tax)

$$k_e = k_e^i + (1 - T)(k_e^i - k_d)\frac{V_d}{V_e}$$

Two asset portfolio

$$s_p = \sqrt{w_a^2 s_a^2 + w_b^2 s_b^2 + 2 w_a w_b r_{ab} s_a s_b}$$

The Capital Asset Pricing Model

$$E(r_i) = R_f + \beta_i (E(r_m) - R_f)$$

The asset beta formula

$$\beta_a = \left[\frac{V_e}{(V_e + V_d(1 - T))}\beta_e\right] + \left[\frac{V_d(1 - T)}{(V_e + V_d(1 - T))}\beta_d\right]$$

The Growth Model

$$P_o = \frac{D_o(1 + g)}{(r_e - g)}$$

Gordon's growth approximation

$$g = br_e$$

The weighted average cost of capital

$$WACC = \left[\frac{V_e}{V_e + V_d}\right]k_e + \left[\frac{V_d}{V_e + V_d}\right]k_d(1 - T)$$

The Fisher formula

$$(1 + i) = (1 + r)(1 + h)$$

Purchasing power parity and interest rate parity

$$S_1 = S_0 x \frac{(1 + h_c)}{(1 + h_b)} \qquad F_0 = S_0 x \frac{(1 + i_c)}{(1 + i_b)}$$

Modified Internal Rate of Return

$$MIRR = \left[\frac{PV_R}{PV_I}\right]^{\frac{1}{n}}\left(1 + r_e\right) - 1$$

The Black-Scholes option pricing model

$$c = P_a N(d_1) - P_e N(d_2) e^{-rt}$$

Where:

$$d_1 = \frac{\ln(P_a / P_e) + (r + 0.5s^2)t}{s\sqrt{t}}$$

$$d_2 = d_1 - s\sqrt{t}$$

The Put Call Parity relationship

$$p = c - P_a + P_e e^{-rt}$$

Present Value Table

Present value of 1 i.e. $(1 + r)^{-n}$

Where r = discount rate

n = number of periods until payment

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	0·980	0·961	0·943	0·925	0·907	0·890	0·873	0·857	0·842	0·826	2
3	0·971	0·942	0·915	0·889	0·864	0·840	0·816	0·794	0·772	0·751	3
4	0·961	0·924	0·888	0·855	0·823	0·792	0·763	0·735	0·708	0·683	4
5	0·951	0·906	0·863	0·822	0·784	0·747	0·713	0·681	0·650	0·621	5
6	0·942	0·888	0·837	0·790	0·746	0·705	0·666	0·630	0·596	0·564	6
7	0·933	0·871	0·813	0·760	0·711	0·665	0·623	0·583	0·547	0·513	7
8	0·923	0·853	0·789	0·731	0·677	0·627	0·582	0·540	0·502	0·467	8
9	0·941	0·837	0·766	0·703	0·645	0·592	0·544	0·500	0·460	0·424	9
10	0·905	0·820	0·744	0·676	0·614	0·558	0·508	0·463	0·422	0·386	10
11	0·896	0·804	0·722	0·650	0·585	0·527	0·475	0·429	0·388	0·305	11
12	0·887	0·788	0·701	0·625	0·557	0·497	0·444	0·397	0·356	0·319	12
13	0·879	0·773	0·681	0·601	0·530	0·469	0·415	0·368	0·326	0·290	13
14	0·870	0·758	0·661	0·577	0·505	0·442	0·388	0·340	0·299	0·263	14
15	0·861	0·743	0·642	0·555	0·481	0·417	0·362	0·315	0·275	0·239	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	0·812	0·797	0·783	0·769	0·756	0·743	0·731	0·718	0·706	0·694	2
3	0·731	0·712	0·693	0·675	0·658	0·641	0·624	0·609	0·593	0·579	3
4	0·659	0·636	0·613	0·592	0·572	0·552	0·534	0·516	0·499	0·482	4
5	0·593	0·567	0·543	0·519	0·497	0·476	0·456	0·437	0·419	0·402	5
6	0·535	0·507	0·480	0·456	0·432	0·410	0·390	0·370	0·352	0·335	6
7	0·482	0·452	0·425	0·400	0·376	0·354	0·333	0·314	0·296	0·279	7
8	0·434	0·404	0·376	0·351	0·327	0·305	0·285	0·266	0·249	0·233	8
9	0·391	0·361	0·333	0·308	0·284	0·263	0·243	0·225	0·209	0·194	9
10	0·352	0·322	0·295	0·270	0·247	0·227	0·208	0·191	0·176	0·162	10
11	0·317	0·287	0·261	0·237	0·215	0·195	0·178	0·162	0·148	0·135	11
12	0·286	0·257	0·231	0·208	0·187	0·168	0·152	0·137	0·124	0·112	12
13	0·258	0·229	0·204	0·182	0·163	0·145	0·130	0·116	0·104	0·093	13
14	0·232	0·205	0·181	0·160	0·141	0·125	0·111	0·099	0·088	0·078	14
15	0·209	0·183	0·160	0·140	0·123	0·108	0·095	0·084	0·074	0·065	15

Annuity Table

Present value of an annuity of 1 i.e. $\frac{1 - (1 + r)^{-n}}{r}$

Where r = discount rate
n = number of periods

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	1·970	1·942	1·913	1·886	1·859	1·833	1·808	1·783	1·759	1·736	2
3	2·941	2·884	2·829	2·775	2·723	2·673	2·624	2·577	2·531	2·487	3
4	3·902	3·808	3·717	3·630	3·546	3·465	3·387	3·312	3·240	3·170	4
5	4·853	4·713	4·580	4·452	4·329	4·212	4·100	3·993	3·890	3·791	5
6	5·795	5·601	5·417	5·242	5·076	4·917	4·767	4·623	4·486	4·355	6
7	6·728	6·472	6·230	6·002	5·786	5·582	5·389	5·206	5·033	4·868	7
8	7·652	7·325	7·020	6·733	6·463	6·210	5·971	5·747	5·535	5·335	8
9	8·566	8·162	7·786	7·435	7·108	6·802	6·515	6·247	5·995	5·759	9
10	9·471	8·983	8·530	8·111	7·722	7·360	7·024	6·710	6·418	6·145	10
11	10·37	9·787	9·253	8·760	8·306	7·887	7·499	7·139	6·805	6·495	11
12	11·26	10·58	9·954	9·385	8·863	8·384	7·943	7·536	7·161	6·814	12
13	12·13	11·35	10·63	9·986	9·394	8·853	8·358	7·904	7·487	7·103	13
14	13·00	12·11	11·30	10·56	9·899	9·295	8·745	8·244	7·786	7·367	14
15	13·87	12·85	11·94	11·12	10·38	9·712	9·108	8·559	8·061	7·606	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	1·713	1·690	1·668	1·647	1·626	1·605	1·585	1·566	1·547	1·528	2
3	2·444	2·402	2·361	2·322	2·283	2·246	2·210	2·174	2·140	2·106	3
4	3·102	3·037	2·974	2·914	2·855	2·798	2·743	2·690	2·639	2·589	4
5	3·696	3·605	3·517	3·433	3·352	3·274	3·199	3·127	3·058	2·991	5
6	4·231	4·111	3·998	3·889	3·784	3·685	3·589	3·498	3·410	3·326	6
7	4·712	4·564	4·423	4·288	4·160	4·039	3·922	3·812	3·706	3·605	7
8	5·146	4·968	4·799	4·639	4·487	4·344	4·207	4·078	3·954	3·837	8
9	5·537	5·328	5·132	4·946	4·772	4·607	4·451	4·303	4·163	4·031	9
10	5·889	5·650	5·426	5·216	5·019	4·833	4·659	4·494	4·339	4·192	10
11	6·207	5·938	5·687	5·453	5·234	5·029	4·836	4·656	4·486	4·327	11
12	6·492	6·194	5·918	5·660	5·421	5·197	4·988	4·793	4·611	4·439	12
13	6·750	6·424	6·122	5·842	5·583	5·342	5·118	4·910	4·715	4·533	13
14	6·982	6·628	6·302	6·002	5·724	5·468	5·229	5·008	4·802	4·611	14
15	7·191	6·811	6·462	6·142	5·847	5·575	5·324	5·092	4·876	4·675	15

Standard normal distribution table

	0·00	0·01	0·02	0·03	0·04	0·05	0·06	0·07	0·08	0·09
0·0	0·0000	0·0040	0·0080	0·0120	0·0160	0·0199	0·0239	0·0279	0·0319	0·0359
0·1	0·0398	0·0438	0·0478	0·0517	0·0557	0·0596	0·0636	0·0675	0·0714	0·0753
0·2	0·0793	0·0832	0·0871	0·0910	0·0948	0·0987	0·1026	0·1064	0·1103	0·1141
0·3	0·1179	0·1217	0·1255	0·1293	0·1331	0·1368	0·1406	0·1443	0·1480	0·1517
0·4	0·1554	0·1591	0·1628	0·1664	0·1700	0·1736	0·1772	0·1808	0·1844	0·1879
0·5	0·1915	0·1950	0·1985	0·2019	0·2054	0·2088	0·2123	0·2157	0·2190	0·2224
0·6	0·2257	0·2291	0·2324	0·2357	0·2389	0·2422	0·2454	0·2486	0·2517	0·2549
0·7	0·2580	0·2611	0·2642	0·2673	0·2704	0·2734	0·2764	0·2794	0·2823	0·2852
0·8	0·2881	0·2910	0·2939	0·2967	0·2995	0·3023	0·3051	0·3078	0·3106	0·3133
0·9	0·3159	0·3186	0·3212	0·3238	0·3264	0·3289	0·3315	0·3340	0·3365	0·3389
1·0	0·3413	0·3438	0·3461	0·3485	0·3508	0·3531	0·3554	0·3577	0·3599	0·3621
1·1	0·3643	0·3665	0·3686	0·3708	0·3729	0·3749	0·3770	0·3790	0·3810	0·3830
1·2	0·3849	0·3869	0·3888	0·3907	0·3925	0·3944	0·3962	0·3980	0·3997	0·4015
1·3	0·4032	0·4049	0·4066	0·4082	0·4099	0·4115	0·4131	0·4147	0·4162	0·4177
1·4	0·4192	0·4207	0·4222	0·4236	0·4251	0·4265	0·4279	0·4292	0·4306	0·4319
1·5	0·4332	0·4345	0·4357	0·4370	0·4382	0·4394	0·4406	0·4418	0·4429	0·4441
1·6	0·4452	0·4463	0·4474	0·4484	0·4495	0·4505	0·4515	0·4525	0·4535	0·4545
1·7	0·4554	0·4564	0·4573	0·4582	0·4591	0·4599	0·4608	0·4616	0·4625	0·4633
1·8	0·4641	0·4649	0·4656	0·4664	0·4671	0·4678	0·4686	0·4693	0·4699	0·4706
1·9	0·4713	0·4719	0·4726	0·4732	0·4738	0·4744	0·4750	0·4756	0·4761	0·4767
2·0	0·4772	0·4778	0·4783	0·4788	0·4793	0·4798	0·4803	0·4808	0·4812	0·4817
2·1	0·4821	0·4826	0·4830	0·4834	0·4838	0·4842	0·4846	0·4850	0·4854	0·4857
2·2	0·4861	0·4864	0·4868	0·4871	0·4875	0·4878	0·4881	0·4884	0·4887	0·4890
2·3	0·4893	0·4896	0·4898	0·4901	0·4904	0·4906	0·4909	0·4911	0·4913	0·4916
2·4	0·4918	0·4920	0·4922	0·4925	0·4927	0·4929	0·4931	0·4932	0·4934	0·4936
2·5	0·4938	0·4940	0·4941	0·4943	0·4945	0·4946	0·4948	0·4949	0·4951	0·4952
2·6	0·4953	0·4955	0·4956	0·4957	0·4959	0·4960	0·4961	0·4962	0·4963	0·4964
2·7	0·4965	0·4966	0·4967	0·4968	0·4969	0·4970	0·4971	0·4972	0·4973	0·4974
2·8	0·4974	0·4975	0·4976	0·4977	0·4977	0·4978	0·4979	0·4979	0·4980	0·4981
2·9	0·4981	0·4982	0·4982	0·4983	0·4984	0·4984	0·4985	0·4985	0·4986	0·4986
3·0	0·4987	0·4987	0·4987	0·4988	0·4988	0·4989	0·4989	0·4989	0·4990	0·4990

This table can be used to calculate $N(d)$, the cumulative normal distribution functions needed for the Black-Scholes model of option pricing. If $d_i > 0$, add 0·5 to the relevant number above. If $d_i < 0$, subtract the relevant number above from 0·5.

SUGGESTED SOLUTION

SOLUTION ONE

(a). WACC = 18[100/150] + 15[20/150] + 10[30/150]
= 12+ 2 + 2 = **<u>16%</u>**

(b).

	Construction costs Km	Working capital Km	Roads & Landscaping Km	Cash in - flows Km	Net cash in flows Km	DF 16%	PV Km
0	(115)	(2)			(117)	1	(117)
1		(3)			(3)	0.862	(2.586)
2					-		-
3			(5)		(5)	0.641	(3.205)
5		5			5	0.476	2.38
4 - 6				45	50	1.439	71.950
7 - 11				36	36	1.344	48.384
12 - 15				24	24	0.546	13.104
						NPV	**10.647**

PVIFA@16%, years 1- 6	3.685
Less PVIFA@16%, year 1 - 3	<u>(2.246)</u>
PVIFA@16%, years 4 - 6	**1.439**
PVIFA@16%, years 1- 11	5.029
Less PVIFA@16%, year 1-6	<u>(3.685)</u>
PVIFA@16%, years 7- 11	**1.344**
PVIFA@16%, years 1- 15	5.575
Less PVIFA@16%, year 1-11	<u>(5.029)</u>
PVIFA@16%, years 12- 15	**0.546**

Financially, the shopping mall complex is worth undertaking, since it has a positive NPV of <u>K10.647 million.</u>

(c) Types of PPP Models

(i) **Service contract** – The private sector performs a specific operational service for a fee ie meter reading or revenue collection for a utility. Under a **management contract**, the private sector is paid a fee for operating and maintaining a government owned business with set targets by GRZ.

(ii) Under a **lease arrangement**, the private sector is responsible for maintenance, but the government retains ownership.

(iii) A **concession** is when the private sector finances a project and is responsible for operations and maintenance, with ownership reverting to government at the end of the concession. A **BOOT** scheme is similar to a concession; however, it applies to green field projects. The private sector player builds, operates and transfers the asset after the concession.

(d) PPP Benefits

- Private sector provides finance that public sector may not afford
- Achievement of efficiency and effectiveness in allocation of risks
- Encourages innovation by focusing on performance indicators and outputs
- Private sector incentivized to complete projects and meet service levels through tying to payments
- Extensive due diligences are conducted , reducing financing risks

PPP limitations

- Private sector financing may be expensive
- Public sector pays for the transfer of risk to private sector
- Long – term financing requires long – term service contracts, which may be inflexible
- Public sector may incur significant penalties for early termination ie lost profits
- Management of PPPs require financial, legal, commercial and procurement skills that may not be available in government

SOLUTION TWO

(a) In order to understand fiscal risk, the IMF recommends the following categorisation: Endogenous or exogenous

- Endogenous risks-those generated from government activities, or which can be influenced by government actions-e.g. expenditure above budget limits;
- Exogenuos risks-those that arise from actions or events outside of government control-e.e.global commodity price volatility.
- Continuous or discrete risks
  - Continuous risks-regular events that cause outturns which differ from forecasts and which can be incorporated into fiscal settings-e.g. global commodity price volatility is an ongoing risk that can impact on fiscal forecasts and which can be modelled and incorporated into fiscal models.
  - Discrete risks-those that occur irregularly, or may never have occurred. The likelihood of such risks could be:
    i. Probable-in which case they should be provisioned for in budgets and medium-term expenditure forecasts-e.g. defaults on loans provided by the government to enterprises or individuals;
    ii. Possible-likely to occur at some point but not in the near-term-e.g. the call on government guarantee;
    iii. Remote-potentially significant but hard to predict when, if ever, they will occur-e,g. natural disasters.

(b) Governments manage by the following actions:

i. Budget Contingencies:
Budgets should be set with adequate and transparent allocations for contingencies that may arise during budget execution due to macro-economic shocks. Advanced risk management requires the budget to have an allocation for contingencies which can be called upon should risk crystalize.

ii. Asset and liability management:
A high level of risk management practice would entail that all liabilities and significant asset acquisitions and disposals are authorised by law, and that the risks surrounding the balance sheet are disclosed and managed according to a published strategy.

In Zambia, liabilities related to foreign borrowing have had a significant impact on public sector finances, with repayments in US$ denominated Eurobonds in particular increasing significantly as a result of the deprecation of the Kwacha.
Mitigation techniques for such risks include hedging and insurance instruments and overall ceilings on liabilities to ensure that repayments remain affordable within a range of plausible public finance positions.

iii. Guarantees:
Government's guarantee exposure should be disclosed and authorised by law. Best practice would see all government guarantees, the gross exposure created by them and their probability of being called, published at least annually. The maximum value of the guarantees should also be authorised.

iv. Public Private Partnerships:

Obligations under private public partnerships (ppp) should be regularly disclosed and actively managed. Advanced risk management would see the government publish, on at least an annual basis, its total rights, obligations and other exposures under ppp contracts and expected annual receipts and payments over the life of the contacts.

Risk mitigation techniques include ensuring that there are overall limits on PPP commitments, that all PPP's are subject to cost benefit analysis to ensure that they provide better value for money than alternative delivery mechanisms, and effective risk transfer to the private sector.

v. Financial sector exposure:

Government's potential exposure to risks relating to the financial sector should be analysed, disclosed and managed.

Best practice would see the quantification and disclosure of explicit support to the financial sector on at least an annual basis, with regular assessment of financial sector stability based on a plausible range of macroeconomic and financial market scenarios.

Mitigation techniques include regulation to increase the ability of banks to absolve losses and the transfer of risk through a requirement on banks to fund insurance schemes.

vi. Natural Resources:

Government's interest in exhaustible natural resource assets and their exploitation should be valued, disclosed and managed by the publishing annual estimates of the volume and value of major natural resources under different price and extraction scenarios as well as the volume and value of the previous year's sales and fiscal revenue.

vii. Environmental risks:

The Government should identify and discuss the main fiscal risks from natural disasters, quantifying them on the basis of historical experience and managing them according to a published strategy. Such techniques can include minimising human presence in areas of high risk , regulating through the use of environmental standards and building codes, and mandating insurance. Provision can also be made by creating natural disaster fund.

viii. Fiscal coordination:

Financial risk management at the fiscal level of overall government spending, revenue, and borrowing requires coordination across the public sector, including subnational governments and public corporations.

Mitigation can include reduction in the size of the state-owned enterprise sector to reduce fiscal impact and explicit no bail-out clauses on state-owned enterprises and subnational governments.

SOLUTION THREE

a) **Explain to the Town Clerks and District Secretaries, three essential outcomes of PFM measurements framework and five examples of other procurement frameworks and guidance documents that is used in addition to the Public Expenditure Framework.**

The Public Financial Management Framework should provide :

- An overview of the PFM systems
- An understanding of how the system will affect PFM outcomes, including the delivery of public goods and services and fiscal sustainability
- Provide the foundation from which reforms can be planned and made

Other PFM measurement framework or guidance documents

- Public Expenditure Tracking Survey
- OECD principles of Budgetary Governance
- The Open Budget Index
- SIGMA principles of public administration
- The IMF fiscal Transparency Code
- CIPFA whole system approach.

b) **Outline methods the councils could employ to ensure its budget classification conforms to international standards**

- This activity must be included in respective councils strategic plans. This will facilitate for effective interaction with other stakeholders
- There must be political will from the highest offices of the council so that this activity continues to enjoy the support
- The department driving this agenda must be allowed to operate freely and interact with other departments without interference.
- The councils should manage this activity by making use of the existing and available staff. Where capacity is lacking, the council should ensure skills development is undertaken.
- There must be effective measurement and monitoring of progress by setting performance benchmarks
- Council should work closely with Central Government, by establishing a feedback reporting mechanism.

c) **Comment on the risk analysis to be presented to Central Government and advise the decision makers on why they should proceed to implement the policy.**

The analysis shows 10% chance of a net cost to policy (low outcome) but a 90% chance of net benefits of K75m or over (medium, high, highest outcomes)

Projects should go ahead despite the risk of net cost or low

benefit because of the following benefits of PFM:

- Enhance democratic governance
- Sustains macro- economic stability
- Promotes effective use of public resources
- Contributes to poverty reduction by ensuring equity distribution of resouces
- Help prevent corruption and foster aid effectiveness

SOLUTION FOUR

1 a) Discuss five performance measures, including financial and non-financial measures , which may be used to measure performance of the education system.

b) Discuss the motivational factors likely to influence the level of performance and suggest ways in which efforts may be made to quantify such factors.

(a) Discuss five performance measures, including financial and non-financial measures , which may be used to measure performance of the education system.

- Pupil teacher ratio: the ministry may want to examine this ratio to ensure that pupils are receiving the proper attention. The lower your pupil teacher ratio the better.
- Cost per pupil: This calculates every cost a school incurs to educate each pupil. This may include teacher and staff salaries, book cost, food stuff cost.
- Graduation rate: This KPI measures the number of students who completed their school within normal time frame.
- Pupil attendance rate: measures the number of pupils that have achieved say 90% attendance during an academic year.
- Budget allocation to Education sector: Measures government commitment to allocate resources to the education sector.
- Enrolment rate: Measures number of pupils enrolled in various institutions.
- Gender parity index: Measures the ratio of female to male pupils.
- Dropout rate: measures the proportion of pupils who leave the school system without completing a given grade in a given year.
- Number of pupils receiving bursaries: Measures number of learners receiving bursaries.
- Number of children with special needs: Measures number of children with special needs enrolled in the school system.

(b) Discuss the motivational factors likely to influence the level of performance and suggest ways in which efforts may be made to quantify such factors.

- Recognizing high performers – this can be done through awards or promotion of such individuals
- Power: Individuals should be given the leverage to take action and perhaps actions and output of others
- Affiliation: feeling part of the team and having some social connection to colleagues. This can be achieved through social clubs, sporting events or dinner as a way of generating this sense of belonging.

SOLUTION FIVE

(a) A critical element of any system of treasury management is cash flow forecasting. This involves the forecasting of cash inflows relating to revenue that is received from taxes and other sources, and cash outflows related to expenditure on areas such as personal emoluments, debt servicing, and discretionary payments.

As part of budget implementation planning prior to the start of the financial year, cash plans should be developed that should be integrated with the budget plan and provide a forecast of expected monthly cash inflows and outflows.

(b) There are a number of ways in which payments systems can be implemented within a Single Treasury Account. These include:

- ✓ A single account and centralised controls- Under this System, all requests for payments and justifying documentation are sent by individual public sector organisations to the Treasury. The Treasury is then responsible for making the payments from the single account and managing outstanding invoices and arrears.

- ✓ Payments are made directly by public sector organisations using the Single Treasury Account- Control is maintained by the Treasury by setting limits for the overall level of transactions that can be made but individual transactions are not controlled.

- ✓ Payments are made by public sector entities from their own sub-accounts of the Single Treasury Account-In this case, control is maintained by the Treasury by providing cash to the sub-accounts as payments are made or payment orders accepted up to a specified limit. The accounts are cleared at the end of each day and a consolidated position of balances achieved.

c) The advantages of centralised treasury management include:

i. Centralised liquidity management:
Cash is consolidated which avoids having a mix of cash surpluses and overdrafts in different local bank accounts. This facilitates bulk cash flows, enabling lower bank charges.

ii. Consolidated view of cash requirements across the public sector:
Enables central view of expected borrowing requirements, and enables borrowing to be arranged in bulk which can provide for lower interest rates;

iii. Larger volumes of cash are available to invest:
This provides better short-term investment opportunities

iv. Skilled and experienced staff:
A centralised specialised function enables the employment of experts who have knowledge of borrowing and investment opportunities and the use of techniques such as hedging.

v. Better control:

Centralisation can enable the exercise of better control through the use of standardised procedures and risk monitoring

END OF SOLUTIONS