Zambia Institute of Chartered Accountants

QUESTION AND ANSWER

FOR

DECEMBER 2018

CA ZAMBIA PROGRAMME

CA ZAMBIA PROGRAMME EXAMINATIONS

KNOWLEDGE LEVEL

CA 1.1: FINANCIAL ACCOUNTING

MONDAY 10 DECEMBER 2018

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 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.

Section A – (COMPULSORY)

Attempt all Ten (10) multiple choice questions.

Each of the following sub-questions has only <u>one</u> correct answer. Write the <u>letter</u> of the correct answer you have chosen in your answer booklet. Marks are indicated against each question.

1.1 Namoonga started a new business with opening capital of K20,000,000. The net assets at the end of the year amounted to K35,000,000. During the year drawings amounted to K8,800,000.

How much profit did Namoonga make in the year?

A. K26,760,000
B. K24,360,000
C. K23,240,000
D. K23,800,000

(2 marks)

1.2 An item of Inventory has been damaged through handling at an isolated store of MM. The inventory cost K1,235,000, and its normal sales value is K1,875,000. MM could decide to repair it at a cost of K600,000, thereafter sell it at K1,750,000.

At what amount should the item of inventory be included in the statement of financial position?

A. K1,750,000
B. K1,235,000
C. K1,150,000
D. K1,100,000

(2 marks)

1.3 The International Accounting Standards Board (IASB) issued the Framework for the Preparations of Financial Statements. Which of the following is not discussed in this IASB's conceptual framework?

A. Concepts of capital and capital maintenance
B. Formats of financial statements
C. Recognition of elements in financial statements
D. Measurement of elements in financial statements

(2 marks)

1.4 The balance according to the Bank Statement for the month of March 2017 was K13,530,000. The bank reconciliation prepared for that month contained the following:

Unpresented cheques: K412,000
Deposits not yet credited: K700,000

What was the bank balance according to the Cash Book on 31 March 2017?

A. K14,068,000
B. K13,242,000
C. K13,818,000
D. K13,980,000

(2 marks)

1.5 The Trial Balance of EFF failed to agree and the following errors were discovered after investigation:

1. An electricity bill for K250,000 was debited to the telephone account
2. A cash purchase of K850,000 was entered correctly in the bank account but was entered in the purchases account as K880,000.
3. A bank overdraft of K230,000 was listed as a debit balance in the trial balance.

Which of the following is the correct opening entry in the Suspense Account?

A. K490,000
B. K480,000
C. K240,000
D. K260,000

(2 marks)

1.6 R & D wishes to Trade as a partnership. Which two (2) of the following are advantages of this type of organization?

(1) Partners' limited liability.
(2) Ability to raise additional capital.
(3) The separate identity of the partnership business.
(4) Exemption from submitting financial statements that become publicly available.

A. 2 and 4
B. 2 and 3
C. 1 and 2
D. 1 and 4

(2 marks)

1.7 ROB and ERT are running a partnership business. The following is an extract from their partnership appropriation section of the Income statement for the year to 30 September 2017.

	ROB	***ERT***
Share of profits	K9,500,000	K13,200,000
Partners salaries	K3,200,000	K 2,400,000
Interest on drawings	K 650,000	K 470,000
Interest on capital	K1,750,000	K 1,460,000

Which of the following is the correct partnership profit before appropriations?

A. K23,510,000
B. K13,430,000
C. K24,630,000
D. K30,390,000

(2 marks)

1.8 Which two (2) of the following are disadvantages of a limited liability company?

(1) Raising additional finance.

(2) Requirement for the company to publish annual financial statements.

(3) Shareholders limited liability.

(4) Requirement to have financial statements audited.

A. 2 and 4
B. 2 and 3
C. 1 and 4
D. 1 and 2

(2 marks)

1.9 M & M, a limited liability company, has the following balances:

Ordinary share capital of K2,000 each	K8,000,000
Share premium	K2,500,000
Retained earnings	K4,800,000

The company makes a rights issue of one ordinary share for each four held, at a price of K3,500 and all shares were subscribed for.

What are the revised account balances that will appear in the statement of financial position after the issue of shares?

	Ordinary shares	Share premium	Retained Earnings
A.	K16,000,000	K 2,500,000	K10,800 000
B.	K10,000,000	K 4,000,000	K 4,800 000
C.	K22,000,000	K 2,500,000	K10,800 000
D.	K16,000,000	K 8,500,000	K 4,800 000

(2 marks)

1.10 The financial statements of FG plc prepared for the year ended 31 October 2017 contained the following information:

Retained earnings at the end	K5,400,000
Dividend paid	K7,500,000
Transfer to General Reserve	K2,000,000
Bonus issue of shares (utilizing retained earnings)	K4,800,000
After tax Profit from Income Statement	K13,220,000

What was the opening balance on the Retained Earnings Account?

A. K 6,740 000
B. K11,280 000
C. K 6,480 000
D. K13,220 000

(2 marks)

[Total: 20 Marks]

SECTON 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)

The following are financial statements of **MUKULA Limited**:

MUKULA Limited Income Statement for the year ended 30 April 2018

	K'000
Sales revenue	26,540
Cost of sales	(17,950)
Gross profit	8,590
Distribution costs	(1,230)
Administration expenses	(2,555)
Operating profit	4,805
Investment income	35
Interest paid	(670)
Profit before tax	4,170
Income tax expense	(1,500)
Profit for the period	2,670

MUKULA Limited Statement of Financial Position as at:

	30 April 2018	30 April 2017
	K'000	K'000
Non-current Assets:		
Plant property and equipment	3,790	3,120
Intangible assets	2,530	1,100
Investments		205
	6,320	4,425

Current Assets:		
Inventories	1,700	1,050
Receivables	3 850	2,170
Cash in hand	215	15
Total Assets	**12,085**	**7,660**
Equity		
Share capital (K1,000 per share)	2,150	1,150
Share premium	1,750	1,500
Revaluation	1,090	900
Retained earnings	2,420	1,620
	7,410	5, 170
Non-current Liabilities		
Long term loan	2,470	550
Current Liabilities		
Trade payables	375	120
Interest payable	580	890
Taxation	1,250	930
Total Equity and Liabilities	**12,085**	**7,660**

Additional information

1. Property that had cost K840,000 with a carrying value of K460,000 was sold for K310,000. The profit or loss on disposal was included within cost of sales.

2. The following is an extract from the schedule of Non-current assets:

	30 April 2018	**30 April 2017**
	K'000	**K'000**
Property, plant and equipment Cost	7,250	5,890
Accumulated depreciation	(3,460)	(2,770)
Carrying amount	3,790	3,120

3. 1,000 Ordinary shares with a par value of K1,000 were issued during the year at a premium of K250 per share.

4. Proceeds from sale of Non-current asset investments amounted to K245,000. The profit or loss on disposal of these investments was included in cost of sales.

5. Dividend paid was charged to Retained Earnings.

Required:

Prepare **MUKULA Limited's** Statement of Cash flows for the year ended **30 April 2018** in line with IAS 7, using the indirect method.

[Total: 20 Marks]

QUESTION THREE

TWALUMBA, a sole trader, has given you the following Trial Balance for adjusting before preparing the Income Statement and Statement of Financial position for the year ended 30 April 2018:

	Debit	Credit
	K'000	K'000
Sales		131,940
Purchases	33,000	
Sales Returns	260	
Purchases Returns		315
Opening Inventory	6,900	
Trade Receivables	14,125	
Trade Payables		16,070
Discounts Allowed	755	
Discounts Received		559
Wages and Salaries	20,600	
Electricity	1,000	
General Expenses	2,340	
Bank	13,710	
Premises	70, 000	
Motor Vehicles	5,000	
Equipment	3,500	
Capital		25,000
Drawings	3,000	
Suspense	----------	306
Totals	174,190	174,190

TWALUMBA has given you the following information:

1. Discounts allowed of K55,000 were doubled but posted correctly to the ledger accounts.
2. Purchases returns of K108,000 had been posted to the debit of sales returns.
3. TWALUMBA's bank informed her that a cheque for K400,000 from one of her customers was returned, marked: "insufficient funds". The customer has, however, assured TWALUMBA that the debt will be settled.
4. The bank balance includes a fixed deposit account of K8,000,000 on which interest of 6% has been credited by the bank. There is no record of this transaction in TWALUMBA's books.
5. A customer who is also a supplier has agreed to an account set-off of the amount owed of K630,000.
6. Closing inventory was valued at K9,069,000.
7. It had been discovered that an electricity bill of K90,000 that had been accrued at 30 April 2017 was not brought down as an opening balance on the electricity account.

Required:

(a) Prepare the suspense account showing the correction of the errors above that would clear the suspense account. (4 marks)

(b) Prepare TWALUMBA's Income Statement for the year ended 30 April 2018, after correcting all the errors and adjustments in 1 to 7 above. (8 marks)

(c) Prepare TWALUMBA's Statement of Financial Position as at 30 April 2018.

(8 marks)

[Total: 20 Marks]

<u>QUESTION FOUR</u>

(a) The IASB Framework for the Preparation of Financial Statements states that there should be a balance between the objectives of making financial information relevant and also reliable.

Required:

(i) Define the terms *relevance* and *reliability* according to the IASB Framework. (4 marks)

(ii) Timeliness, Cost and Benefits are constraints in the provision of relevant and reliable financial information.

Explain how these constraints can be overcome in order to provide relevant and reliable financial information. (4 marks)

(b) MAINZA and MULENGA commenced a hair dressing business trading as Twin-sisters' Hair Salon on 1 July 2017. They introduced capital of K40,000,000 and K20,000,000 respectively. MAINZA made drawings of K900,000 on 1 October 2017, while MULENGA's drawings on 1 January 2018 were K600,000. The partnership Agreement provides for:

1. A salary of K8,000,000 per annum to be paid to MAINZA.
2. Interest on partners' capital at the rate of 6% per annum.
3. Interest on drawings at the rate of 20% per annum.
4. Any remaining profit or loss to be shared between Mainza and Mulenga in the ratio of 2:1 respectively.

Further, MAINZA who has some basic knowledge of accounting prepared draft accounts for the period ended 31 March 2018. The accounts showed a loss of K4,500,000. It was discovered that when preparing these accounts, MAINZA charged expenditure of K35,500,000 for purchase of a motor vehicle on 1 July 2017, to the Income Statement as an expense. The vehicle has an estimated life of 5 years and no depreciation has been charged on the cost yet.

Required:

(i) Calculate the corrected total profit to be shared between the partners for the period to 31 March 2018. (2 marks)

(ii) Produce the Partnership appropriation account for the period ended 31 March 2018. (5 marks)

(iii) Prepare each Partner's current account as at 31 March 2018. (5 marks)

[Total: 20 Marks]

QUESTION FIVE

You are employed as a financial accountant for Mwiinga, a sole trader who has engaged two trainee accounting clerks, Musonda and Maboshe. As Mwiinga operates an integrated computerized system for payables and receivables, he has divided responsibilities for Receivables and payables control accounts and personal accounts of customers and suppliers between the two trainees as follows:

Musonda – responsible for preparation and maintenance of control accounts for receivables and payables in the nominal ledger

Maboshe – Responsible for recording and maintaining the receivables and payables ledger.

It is at end of the accounting year and you have just discovered that the following errors have been committed by Musonda and Maboshe:

(i) Sales invoices totaling K600,000 had been omitted from Mwiinga's accounting records.
(ii) Irrecoverable debts of K12,000 were not recorded in the general ledger.
(iii) One of Mwiinga's suppliers gave him a cash discount of K20,000 which both his trainee accountants recorded as though it was a purchase invoice.
(iv) A contra entry offsetting a balance of K150,000 due to a supplier against the receivables ledger account for the same company had not been recorded in the control accounts.
(v) One of the purchase invoices for K175,300 was entered in the accounting records as K153,700.
(vi) One of the entries in the purchases day book was entered as K76,500 instead of K67,500.

(vii) One account balance in the receivables ledger was overstated by K8,000.

(viii) A payment made to a supplier of K225,000 was treated as if it was a receipt from a customer. The control accounts were otherwise correctly recorded for this.

(ix) The total of discounts allowed of K45,200 from the cash book was not included in the control account.

(x) Mwiinga received a refund of K39,000 for previously overpaying his suppliers. This has not been included in the control account.

(xi) Credit balances in the payables ledger amounting to K28,550 had been included in the payables list as though they were debit balances.

(xii) Cash received from a customer of K167,600 was not recorded in the receivables ledger.

(xiii) Sales returns amounting to K83,800 had been omitted from a personal customer account.

Prior to the discovery of these errors, Mwiinga's trainee accounting clerks obtained the following details from the ledgers (balances before the above transactions):

		'K'
Receivables Control account balances b/f:	Debit	1,873,200
Payables Control account balances b/f:	Credit	1,728,300
List of Receivables balance (net) b/f	Debit	1,700,400
List of payables balance (net) b/f	Credit	1,785,200

Required:

Prepare the following corrected control and ledger accounts for Mwiinga:

(a) Corrected receivables ledger control balance account (5 marks)

(b) Corrected receivables ledger total balance (5 marks)

(c) Corrected payables ledger control account balance (5 marks)

(d) Corrected payables ledger total balance (5 marks)

[Total: 20 Marks]

QUESTION SIX

Rodent Limited is a manufacturing company based in Lusaka. Mr. Book is the Chief Accountant of Rodent Limited. He has given you balances from the books of Rodent Limited Company at the close of its Financial Year to 31 December 2017 as follows:

Inventory:	**K**
Manufactured goods	56,870
Work-in-progress	18,990
Raw materials	23,030
Manufacturing wages	369,780
Administrative salaries & expenses	81,160
Fuel and power	95,540
Office and general expenses	23,690
Plant repairs	9,810
Travelling expenses	11,030
Factory expenses	30,780
Motor running expenses	18,970
Materials purchased	190,370
Rent, rates and insurance	26,200
Light and Heat	8,480
Sales of finished goods	1,068,880

Additional Information

1. The year-end valuation of Inventory shows manufactured goods of K53,250, work-in-progress of K30,560, and raw materials of K22,520.
2. Year-end adjustments for accruals and prepayments are required as to:

	Prepayments	**Accruals**
	K	**K**
Office and general expenses	2,340	3,680
Rates	3,240	
Light and Heat	-	480

3. Depreciation to be provided for the year for Machinery and Plant K7, 860, Motor vehicles K3, 360 and Office equipment K370.
4. Receivables to the value of K4, 060 are to be written off as irrecoverable.
5. Rent, Rates and Insurance and Light and Heat are to be apportioned as to seven eighths to factory and one-eighth to office.
6. The factory department of Rodent Limited transfers manufactured goods to the retail department at a 20% profit margin. Rodent Limited issues inventory on a FIFO basis.

Required:

(a) Prepare a manufacturing Account the year ended 31 December 2017
(8 marks)

(b) Calculate the amount at which manufactured goods were transferred to the retail department.
(2 marks)

(c) Prepare the statement of profit or loss for the year ended 31 December 2017
(10 marks)

[Total: 20 Marks]

END OF PAPER

CA 1.1: FINANCIAL ACCOUNTING –

SOLUTION ONE

Section A Multiple Choice Questions

1.1	D
1.2	C
1.3	B
1.4	C
1.5	A
1.6	A
1.7	D
1.8	A
1.9	B
1.10	C

SECTION B

SOLUTION TWO

(a) MUKULA Limited

Statement of Cash flows for the year ended 30 April 2018

	K'000	K'000
Cash flows from Operating activities		
Profit before tax	4,170	
Adjusted for:		
Interest charge	670	
Investment income	(35)	
Depreciation	1,070	
Loss on disposal of NCA (W1)	150	
Profit on sale of investment (W2)	(40)	`
Operating profit before working capital changes:	5,985	
Increase in inventories (1,700 – 1,050)	(650)	
Increase in receivables (3,850 – 2,170)	(1,680)	
Increase in payables (375 – 120)	255	
Cash generated from operations	3,910	
Interest paid (W3)	(980)	
Income tax paid (W4)	(1,180)	
Net cash from Operating activities		1,750
Cash flows from Investing activities		
Purchase of tangible NCA (W5)	(2010)	
Purchase of intangible NCA (W6)	(1430)	
Disposal proceeds on sale of NCA	310	
Proceeds on NCA investment	245	
Income on investment	35	
Net cash used in Investing activities		(2,850)
Cash flows from Financing activities		
Issue of shares (W7)	1,000	
Share premium (W8)	250	
Long-term Loan (2,470 – 550)	1,920	
Dividends paid (W9)	(1,870)	
Net cash from Financing activities		1,300
Net increase in cash and cash equivalents (Note)		200
Cash and cash equivalents at 1.05.2017 (Note)		15
Cash and cash equivalents at 30.04.2018 (Note)		215

Workings:

1. Loss on sale of Non-current assets

Net book value	K460,000
Sale proceeds	K310,000
Loss	(K150,000)

2. Profit on sale of investment

Book value of investment	K205,000
Sale proceeds	K245,000
Profit	K 40,000

3. Interest paid

Interest payable account

	K 000		K 000
2018 Cash	980	2017 Bal. b/f	890
30/4/2018 Bal. c/d	580	30/4/2018 IS expense	670
	1,560		1,560

4. Income tax paid

Income tax payable

	K 000		K 000
2018 Cash	1,180	1/5/2017 Bal. b/f	930
30/4/2018 Bal. c/d	1,250	30/4/2018 IS expense	1,500
	2,430		2,430

5. Purchase of Non-current asset

Property, plant and equipment account

	K 000		K 000
Balance b/d	5,890	Disposal (Property)	840
Revaluation	190		
Acquisition (bal. fig.)	2,010	Balance c/d	7,250
	8,090		8,090

6. Purchase of Intangible assets

	K'000
Balance 30/4/2018	2,530
Less: Balance 30/4/2017	1,100
Therefore, addition	1,430

7. Issue of shares

1,000 shares x K1,000/share (par value) K1,000,000

8. Share premium

1,000 shares x K250/share (premium) K250,000

9. Dividends paid

	K'000
Retained earnings 1.05.2017	1,620
Profit for the year	2,670
Retained earnings 30.04.2018	(2,420)
Therefore, dividend paid	1,870

10. 10. Depreciation charge for the year

Accumulated depreciation

	K 000		K 000
		Bal. b/d	2,770
Disposal (840-460)	380		
Bal. c/d	3,460	Charge for year (bal. fig)	1,070
	3,840		3,840

SOLUTION THREE

a)

TWALUMBA'S SUSPENSE ACCOUNT

	K 000		K 000
		Per Trial Balance	306
Sales Returns	108		
Purchases Returns	108		
Electricity bill accrued	90		
	306		306

b) TWALUMBA

INCOME STATEMENT for the year ended 30 April 2018

	K' 000	K'000	K'000
Sales		131 940	
Less Sales Returns (260 – 108)		152	
			131 788
Opening Inventory		6 900	
Purchases	33 000		
Less Purchases Returns (315+108)	423		
		32 577	
		39 477	
Closing Inventory		9 069	
Cost of sales			30 408
Gross Profit			101 380
INCOME			
Interest received		480	
Discount received		559	
			1 039
			102 419

EXPENSES		
Discount allowed (755 – 55)	700	
Wages and Salaries	20 600	
Electricity (1,000 – 90)	910	
General Expenses	2 340	
		(24 550)
Net Profit		77 869

c) STATEMENT OF FINANCIAL POSITION as at 30 April 2018

	K' 000	**K'000**	**K'000**
Non- current Assets			
Premises		70 000	
Motor Vehicles		5 000	
Equipment		3 500	
			78 500
Current Assets			
Inventory		9 069	
Trade Receivables (14 125+55+400-630)		13 950	
Bank (13710-400+480)		13 790	
			36 809
			115 309
Equity			
Capital		25 000	
Add: Net Profit		77 869	
		102 869	
Les: Drawings		(3 000)	
			99 869
Non-current Liabilities			
Nil			
Current Liabilities			
Trade Payables (16,070-630)			15 440
			115 309

SOLUTION FOUR

a) (i)

Relevance :

Relevance refers to the predictive and confirmatory roles of information.

Information has the quality of relevance when it influences the economic decisions of users by helping them evaluate past, present and future events or confirming, or correcting their past evaluations.

Reliable:

Reliability refers to faithful representation of events so that those who depend on the information are not misled.

Information has the quality of reliability when it is free from material error and bias, and can be depended upon by users to represent faithfully that which it either purports or to represent or could reasonably be expected to represent.

(ii)

- The preparer of financial information may seek to include all aspects of transactions to make financial statements understandable and faithful.
- Yet, he may spend too much time fetching information which is difficult to obtain. If he provides information at a time later than it is needed, then the financial information may not be relied upon. So the pursuit of relevance must be balanced with the need for reliability, not compromised.
- In order to eliminate bias and material error, the preparer of financial statements may spend an inordinate amount of time and cost, even on issues that are not material at all. So it is important to balance these qualities so that the information is provided within reasonable time, at minimum cost and maximum benefit.
- A trade-off between the qualitative characteristics may be necessary in order to achieve an appropriate balance between qualities and the objective of financial statements.
- Generally, benefits of providing information must exceed costs if it is to be worth doing it. Sometimes, however, the costs may be paid by some other party than the user of information. So evaluations would be subjective when done by two or more parties. What is important is to be aware that there are these constraints on provision of financial information that is useful to a wide range of users.

b)

(i) MAINZA and MULENGA Partnership

Adjustment of profit

	K 000
Loss as given	(4 500)
Add: Motor Vehicle	35 500
	31 000
Less: Depreciation 35 500/5 x9/12	5 325
Total adjusted profit	25 675

(ii) MAINZA and MULENGA Partnership

Appropriation account for the year ended 31 March 2018

			K'000
Revised net profit			25 675
	MAINZA	MULENGA	
	K 000	K 000	
Salary			
MAINZA: 8 000 x 9/12	6 000		-
Interest on capital:			
MAINZA: 0.06 x 40 000 x9/12	1 800		
MULENGA: 0.06 x 20 000 x9/12		900	
Interest on drawings:			
MAINZA: 0.20 x 900 x6/9	(120)		
MULENGA: 0.20 x 600 x3/9		(40)	
Sub-totals	7 680	860	(8540)
			17 135
Share of profits			
MAINZA 2 x 17 135/3	11 423		
MULENGA 1 x 17 135/3		5 712	17 135
Grand Totals	**19 103**	**6 572**	

iii)

Partners' Current accounts

	MAINZA	MULENGA		MAINZA	MULENGA
	K'000	**K'000**		**K'000**	**K'000**
Drawings	900	600	Salary	6 000	-
Interest on drawings	120	40	Interest on capital	1,800	900
31/3/2017 Bal c/d	18,203	5,972	Share of profits	11,423	5,712
	19,223	6,612		19,223	6,612

SOLUTION FIVE

(a) Corrected receivables ledger control balance account

Balances before corrections (net)	1, 873,200 (Dr)
Adjustments:	
Omitted sales invoices	600,000
Omitted irrecoverable debts	(12,000)
Payables control contra	(150,000)
Discounts allowed	(45,200)
Corrected receivables ledger control balance (net)	2,266,000 Dr

(b) Corrected receivables ledger total balance

Total balances before corrections(net)	1,700,400 Dr
Adjustments:	
Omitted sales invoices	600,000
Overstated customer balance	(8,000)
Payment wrongly posted as receipt	225,000
Cash receipt omitted	(167,600)
Omitted sales returns	(83,800)
Corrected receivables ledger total balance	2,266,000

(c) Corrected payables ledger control account balance:

Balance before corrections (net)	1,728,300 (Cr)
Adjustments:	
Discounts received wrongly posted as invoice	(40,000)
Receivables contra	(150,000)
Transposed invoice amount	21,600
Transposed invoice amount	9,000
Refund from suppliers	39,000
Corrected payables control account balance (net)	1,607,900

(d) Corrected payables ledger total balance

Total balance before corrections	1,785,200
Adjustments:	
Discounts received wrongly posted as invoice (x2)	(40,000)
Transposed invoice amounts	21,600
Transposed invoice amounts	9,000
Omitted payment to supplier	(225,000)
Credit balance wrongly included as debit (28550 x 2)	57,100
Corrected payables ledger total balance	1,607,900

SOLUTION SIX

(a) **Manufacturing Account**

Raw materials	**K**	**K**
Opening Inventory		23,030
Purchases		190,370
Total inventory available		213,400
Less: Closing inventory		(22,520)
Cost of raw materials consumed		190,880
Direct Labour Wages		369,780
Prime Cost		560,660
Add: Production overheads:		
Lighting & Heating (8,480 + 480)⅞	7,840	
Rent, rates & insurance (26,200 – 3,240)⅞	20,090	
Depreciation – Machinery & plant	7,860	
Factory expenses	30,780	
Fuel & power	95,540	
Plant & repairs	9,810	
		171,920
Add: Opening Work In Progress	18,990	
Less: Closing Work In Progress	(30,560)	
		(11,570)
Cost of Finished Goods		**721,010**

(b) **Manufactured goods transfer price**

721,010 x 100/80 = 901,263

(c) Rodent Statement of Profit or Loss for year ended 31 December 2017

		K		**K**
Sales				1,068,880
Cost of goods sold				
Opening Inventory		56,870		
Manufactured goods transfer price		901,263		
Cost of goods available for sale		958,133		
Less: Closing Inventory of finished goods		(53,250)		
				904,883
Gross Profit				163,997
Less Unrealised profit in:				
Closing Inventory	53,250 X 20%	(10,250)		
Opening Inventory	56,870 X 20%	11,374		1,124
Manufacturing Profit	901,263 X 20%			180,253
Expenses:				
Administrative salaries & wages			81,160	
Travelling expenses			11,030	
Office & general expenses	(23,690 +3,680-2340)		25,030	
Rent, Rates and insurance	(26,200-3240) x 1/8		2,870	
Light and Heat	(8,480 + 480) x 1/8		1,120	
Motor vehicle running expenses			18,970	
Motor vehicle depreciation			3,360	
Depreciation office equipment			370	
Bad debts written off			4,060	
				(147,970)
Net Profit				**197, 404**

CA ZAMBIA PROGRAMME EXAMINATIONS

KNOWLEDGE LEVEL

CA 1.2: BUSINESS STATISTICS

WEDNESDAY 12 DECEMBER 2018

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 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.

7. Present legible and tidy work.

8. Formulae are provided in a separate booklet.

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

SECTION A – (COMPULSORY)

Attempt all the ten (10) multiple choice questions.

QUESTION ONE

Each of the following questions has only ONE 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 A mining consultancy firm conducts aptitude test for applicants for a job. A sample of 25 candidates' results was collected and as shown in the table below:

Marks	2	4	6	8	10
Number of students	6	4	7	5	3

What is the mean mark obtained by the candidates?

A. 30
B. 25
C. 5.6
D. 140

(2 marks)

1.2 A building contractor estimates the probabilities for the number of days required to complete a certain type of construction project as follows:

Days (X)	1	2	3	4	5
P(X=x)	0.134	0.245	0.341	0.202	0.280

What is the probability $P(X > 3)$

A. 0.482
B. 0.341
C. 0.518
D. 0

(2 marks)

1.3 It has been found that there is a correlation between the height of individuals (y) and the weight (x). A study of 100 children below the age of 18 years gave the following summary results regarding their heights (y) and the weights (x):

$$\sum x = 15,000, \sum x^2 = 2,272,500, \ \sum y = 6,800, \ \sum y^2 = 463,025, \ \sum xy = 1,022,250$$

Find the Pearson's correlation coefficient, r, between height and weight.

A. 0.8
B. 0.7
C. 0.6
D. 0.5

(2 marks)

1.4 A fast food chain decides to conduct a study to determine if the influence of advertising on number of sales. The correlation coefficient is used to assess the level of advertising on number of sales.

Which of the following correctly states the range of the correlation coefficient r?

A. 0 and 1
B. -1 and 0
C. greater than 0
D. -1 and 1

(2 marks)

1.5 Two events A and B are such that P(A)=0.3 and P(AUB)=0.8 and P(A∩B)=0.2.

Find the value of P(B).

A. 0.5
B. 0.8
C. 0.7
D. 1.3

(2 marks)

1.6 If one of the events in a set of events must occur, then that set of events is:

A. Mutually exclusive
B. Collectively exhaustive
C. A sample space
D. A joint event (2 marks)

1.7 Which of the following best expresses the General Addition Rule as used in probability?

A. $P(A \cup B) = P(A) + P(B)$
B. $P(A \cup B) = P(A) + P(B) + P(A \cap B)$
C. $P(A \cup B) = P(A) - P(B) + P(A \cap B)$
D. $P(A \cup B) = P(A) + P(B) - P(A \cap B)$ (2 marks)

1.8 The relationship between number of beers consumed (x) and blood alcohol content (y) was studied in 16 male college students by using least squares regression. The following regression equation was obtained from this study:

$\hat{y} = -0.0127 + 0.018x$

The above equation implies that:

A. Each beer consumed increases blood alcohol by 1.27%
B. On average it takes 1.8 beers to increase blood alcohol content by 1%
C. Each beer consumed increases blood alcohol by an average of amount of 1.8%
D. Each beer consumed increases blood alcohol by exactly 0.018

(2 marks)

1.9 In which of the following forecasting technique, data uses past experience is analysis?

A. Judgemental forecast
B. Time series forecast
C. Associative Model
D. All of the above

(2 marks)

10.0 If the value of the quartile range is 24 then the quartile deviation is:

A. 48
B. 24
C. 72
D. 12

(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) Below is a summary sample data relating the number of study hours spent by eight students outside of class during a three week period for a course in business statistics and their scores in an examination given at the end of that period. If x represents the study hours and y represents the examination grade obtained by the eight students;

$$\sum_{i=1}^{8} x = 129 \qquad \sum_{i=1}^{8} y = 350 \qquad \sum_{i=1}^{8} x^2 = 2581 \qquad \sum_{i=1}^{8} y^2 = 17900 \qquad \sum_{i=1}^{8} xy = 6725$$

(i) Calculate the coefficient of correlation from the data above. (5 marks)
(ii) Comment on the result in (i) above. (2 marks)

(b) During a particular summer month, the 25 sales people in a heating and air conditioning firm sold the following number of central air-conditioning units:

3	18	37	52	67
6	19	40	54	
8	23	41	56	
9	27	44	59	
12	31	46	61	
16	33	48	65	

Required:

Calculate each of the following:

(i) The average number of air-conditioning units sold (3 marks)

(ii) The range (2 marks)

(iii) The median (2 marks)

(iv) Standard deviation (3 marks)

(v) Find the 1st quartile and the 3rd quartile and hence calculate inter-quartile range. (3 marks)

[Total: 20 Marks]

QUESTION THREE

A study of speeding violations and drivers who use cell phones was conducted by the Road Transport and Safety Agency (RTSA) and produced the following results:

	Speed violation in the last year	No speed violation in the year
Cell phone user	60	60
Not a cell phone user	15	65

Required:

(a) If a driver is chosen at random, what is the probability that:

(i) The driver is a cell phone user? (2 marks)

(ii) The complement to the driver of a cell phone user? (1 mark)

(iii) The driver had speed violation in the last year? (1 mark)

(iv) The driver is a cell phone user and had speed violation in the last year? (2 marks)

(v) The driver is a cell phone user or had speed violation in the last year? (4 marks)

(vi) The driver is not a cell phone user or had speed violation in the last year? (4 marks)

(b) Given that the driver had no speed violation in the last year, what is the probability that the driver is a cell phone user? (3 marks)

(c) If A is an event that a driver is a cell phone user and B is an event that a driver had speed violation last year, are events A and B independent? Explain your answer. (3 marks)

[Total: 20 Marks]

QUESTION FOUR

(a) Education and crime rate ratings for selected Zambian cities are given below. **Education** rating is an index for public/teacher ratio, academic options in higher education: The higher the rating the better and other factors and crime is the **crime** rate per 100 people.

City	Education (x)	Crime (y)
Lusaka	30	25
Chipata	31	16
Ndola	32	20
Livingstone	35	12
Kitwe	35	10
Mongu	36	13

(i) Draw a scatter diagram and comment. (3 marks)

(ii) Find the least squares line for the data. (3 marks)

(iii) Compute and interpret the correlation coefficient. (3 marks)

(iv) Compute and interpret the coefficient of determination. (2 marks)

(v) Estimate the crime rate for an education rating 34. (2 marks)

(b) Tests on two types of electric light bulbs show the following:

Type A, lifetime distributed normally with an average life of 1150 hours and a standard deviation of 30 hours.

Type B, long-life bulb, an average lifetime of 1900 hours, with standard deviation 50 hours.

Required:

(i) What percentage of bulbs of type A could be expected to have a life of more than 1200 hours? (4 marks)

(ii) What percentage of type B would you expect to last longer than 1800 hours?

(3 marks)

[Total: 20 Marks]

QUESTION FIVE

(a) Explain what is meant by the following terms in relation in time series analysis:

(i) Secular Trend (1 mark)

(ii) Seasonal variations (1 mark)

(iii) Cyclical variations (1 mark)

(iv) Irregular variations (1 mark)

(b) The following data relate to the sales of LATEX Limited.

Year	2000	2001	2002	2003	2004	2005
Sales (K)	10	20	30	56	40	60

(i) Fit a straight line Trend by the method of least squares and tabulate the trend values. (11 marks)

(ii) Eliminate the trend using additive model. What are the residuals of this time series? (2 marks)

(iii) Estimate the likely sales for the year 2006. (1 mark)

(iv) What is the annual increase in the sales? (1 mark)

(v) What is the monthly increase in the sales? (1 mark)

[Total: 20 Marks]

QUESTION SIX

(a) The following data set provides a snapshot of the financial performance of Lubu Corporation.

	2010	2011	2012	2013
Earnings per share	K2.78	K2.13	K3.41	K3.83
Revenues (billions)	K11.87	K12.57	K13.43	K14.92
Net Incomes (billions)	K1.51	K1.17	K1.89	K2.12
Book value per share	K14.35	K10.98	K12.67	K13.98

Required:

(i) State how many variables there are? (1 mark)

(ii) State whether the data are qualitative or quantitative? (1 mark)

(iii) State whether they are cross –sectional or time series data? (2 mark)

(iv) Explain your answer to part (iii) (1 mark)

(b) State whether each of the following variables is qualitative or quantitative:

(i) Annual sales (1 mark)
(ii) Soft –drink size (small, medium, large) (1 mark)
(iii) Empty classification (GS1 through GS18) (1 mark)
(iv) Earnings per share (1 mark)
(v) Method of payment (cash, check, credit card) (1 mark)

(c) The data below relates to the number of successful sales made by the light bulbs salesmen employed by XYZ electronics.

Number of sales	Number of salesmen
0 =< 10	10
10 =< 20	20
20 =< 30	30
30 =< 40	50
40 =< 50	40
50 =< 60	30

Required:

(i) Find the mean sales (2 marks)

(ii) Find the modal sales (2 marks)

(iii) Compute the coefficient of variation (6 marks)

[Total: 20 Marks]

END OF PAPER

CA 1.2: BUSINESS STATISTICS – SOLUTIONS

SOLUTION ONE

1.1

$$\frac{(2\times 6)+(4\times 4)+(6\times 7)+(8\times 5)+(10\times 3)}{6+4+7+5+3}$$

$$=\frac{140}{25}=5.6$$

The answer is C

1.2 $P(X>3)=0.202+0.280=0.482$

The answer is A

1.3 $\boldsymbol{r=\frac{n\sum xy-\sum x\sum y}{\sqrt{[n\sum x^2-(\sum x)^2][n\sum y^2-(\sum y)^2]}}}$

$$=\frac{100(1022{,}250)-(15000)(6800)}{\sqrt{[100(2272{,}500)-15{,}000^2][100(463025)-6800^2]}}$$

$$\boldsymbol{=\frac{225000}{\sqrt{2250000\times 62500}}=\frac{225000}{375000}=0.6}$$

Correct answer is C

1.4 Correct answer is D

1.5

Correct answer is C

$$\boldsymbol{P(A\cup B)=p(A)+P(B)-P(A\cap B)}$$

$$\boldsymbol{P(B)=0.8-0.3+0.2=0.7}$$

1.6 The correct answer is B

The event are said to be collectively exhaustive if one of the events in a set of events must occur.

1.7 The correct answer is D

$$P(A\cup B)=P(A)+P(B)-P(A\cap B)$$

1.8 The correct answer is D

The general regression equation is

$$Y = a + bX$$

Where,

$X =$ Independent variable

$Y =$ Dependent variable

$a = Y -$ intercept, (i.e. value of dependent variable when value of independent variable is zero)

$b =$ slope of the said line (i.e. the amount of change in the value of the dependent variable per unit change in independent variable)

1.9 The correct answer is B

Time series is the study of the past but with the main purpose of **identifying patterns in past events** which can be used to **forecast future values** and events.

1.10 The correct answer is D

We know that,

$$\text{Quartile deviation} = \frac{Interquartile \quad Range}{2}$$

$$= \frac{24}{2}$$

$$= 12$$

Section B

SOLUTION TWO (COMPULSORY)

a.
(i)

$\sum_{i=1}^{8} x = 129$	$\sum_{i=1}^{8} y = 350$	$\sum_{i=1}^{8} x^2 = 2581$	$\sum_{i=1}^{8} y^2 = 17900$	$\sum_{i=1}^{8} xy = 6725$

$$\boldsymbol{r = \frac{n\sum xy - \sum x \sum y}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}}}$$

$$= \frac{8(6725) - (129)(350)}{\sqrt{[8(2581) - 129^2][8(17900) - 350^2]}}$$

$$= \frac{8{,}650}{\sqrt{4{,}007 \times 20{,}700}}$$

$$= \frac{8{,}650}{9{,}107.41} = 0.9498$$

(ii) COMMENT: There is a highly positive correlation between hours spent on studies and the final grade after the exam. Every unit increase in study hours increases the chance of getting a higher grade.

b.

(i) **The arithmetic mean**

$$\boldsymbol{\bar{X} = \frac{\sum x}{n}}$$

$$= \boldsymbol{\frac{875}{25} = 35}$$

(ii) **Range:** $67 - 3 = 64$

(iii) **Median**= the 13th observation = 37

(iv) **Standard deviation =** $\boldsymbol{\sqrt{\frac{\sum x^2 - \frac{(\sum x)^2}{n}}{n}}}$

$$= \boldsymbol{\sqrt{\frac{4061 - \frac{875^2}{25}}{25}} = 19.63}$$

(v) **The lower quartile** $Q_1 = the\ seventh\ observation = 18$

The Upper quartile $Q_3 = 19th\ observation = 52$

The inter-quartile range is $Q_3 - Q_1 = 52 - 18 = 34$

SOLUTION THREE

Let A =event that a driver is a cell phone user

B =event that a driver had a speed violation in the last year

We are given,

$$P(A\cap B)=\frac{60}{200}=0.3, P(A\cap B^{c})=\frac{60}{200}=0.3, P(A^{c}\cap B)=\frac{15}{200}=0.075, P(A^{c}\cap B^{c})=\frac{65}{200}=0.325$$

i. $P(A)=P(A\cap B)+P(A\cap B^{c})=0.3+0.3=0.6$ or P(CU) = 120/200 = 0.6

ii. $P(A^{c})=1-P(A)=1-0.6=0.4$

iii. $P(B)=P(A\cap B)+P(A^{c}\cap B)=0.3+0.075=0.375$ 0r P(B) = 75/200 = 0.375

iv. $P(A\cap B)=\frac{60}{200}=0.3$

v. $P(A\cup B)=P(A)+P(B)-P(A\cap B)=0.6+0.375-0.3=0.975-0.3=0.675$

$P(A^{c}\ \ or\ \ B)=P(A^{c})+P(B)-P(A^{c}\cap B)=0.4+0.375-0.075=0.775-0.075=0.7$

vi. $P(A/B^{c})=\frac{P(A\cap B^{c})}{P(B^{c})}=\frac{0.3}{1-0.375}=\frac{0.3}{0.625}=0.48$

(e) Events A and B are said to be independent if and only if the probability

$P(A\cap B)=P(A)P(B)$ i.e. $P(A\cap B)=0.3, P(A)P(B)=(0.6)(0.375)=0.225$

$\therefore P(A\cap B)\neq P(A)P(B)$

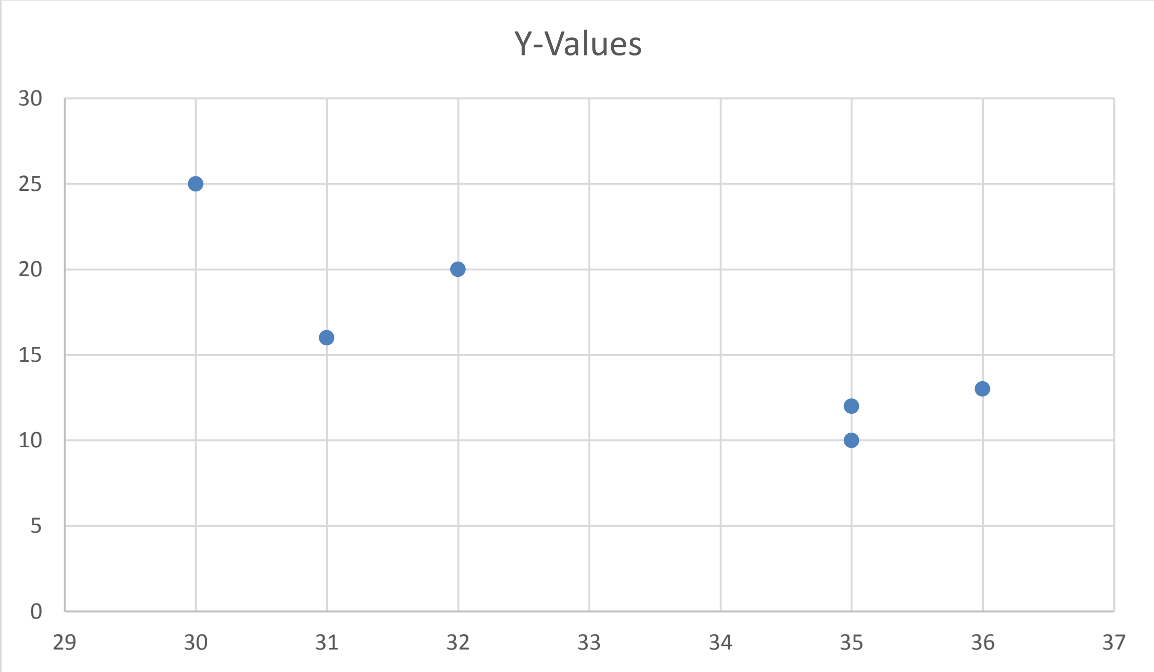
$0.3\neq 0.225$

Hence events A and B are **not** independent

SOLUTION FOUR

(a)

i. The scatter diagram



Yes there is a negative relationship

ii.

X	Y	XY	X^2	Y^2
30	25	750	900	625
31	16	496	961	256
32	20	640	1024	400
35	12	420	1225	144
35	10	350	1225	100
36	13	468	1296	169
Sum: $\sum X = 199$	$\sum Y = 96$	$\sum XY = 3124$	$\sum X^2 = 6631$	$\sum Y^2 = 1694$

$n = 6$

$$\bar{x} = \frac{\sum x}{n} = \frac{199}{6} = 33.2; \quad \bar{y} = \frac{\sum y}{n} = \frac{96}{6} = 16$$

$$SS_{xx} = \sum x^2 - \frac{\left(\sum x\right)^2}{n} = 6631 - \frac{199^2}{6} = 30.8$$

$$SS_{xy} = \sum xy - \frac{\left(\sum x\right)\left(\sum y\right)}{n} = 3124 - \frac{(199)(96)}{6} = -60$$

$$SS_{yy} = \sum y^2 - \frac{\left(\sum y\right)^2}{n} = 1694 - \frac{96^2}{6} = 158$$

$$\hat{\beta}_1 = \frac{SS_{xy}}{SS_{xx}} = \frac{-60}{30.8} = -1.95$$

$$\hat{\beta}_0 = \bar{y} - \hat{\beta}_1 \bar{x} = 16 + (1.95)(33.2) = 80.74$$

$$\hat{y} = \hat{\beta}_0 + \hat{\beta}_1 x$$

$$\hat{y} = 80.74 - 1.95x$$

iii. $$r = \frac{SS_{xy}}{\sqrt{SS_{xx}SS_{yy}}} = \frac{-60}{\sqrt{(30.8)(158)}} = -0.86$$

This suggest that x gets large and y gets small (evident from the negative sign)

iv. $r^2 = -0.86^2 = 0.74$

This means that 74% of the variation in y can be explained by x

v. $$\hat{y} = \hat{\beta}_0 + \hat{\beta}_1 x$$
$$\hat{y} = 80.74 - 1.95(34)$$
$$\hat{y} = 80.74 - 66.3 = 14.44$$

(b)

i. Let X be the random variable 'the length of life of type A bulb'. Then $\mathrm{X} \sim \mathrm{N}\left(1150, 30^2\right)$.

$$\mathrm{P}(\mathrm{X} > 1200) = \mathrm{P}\left(\frac{\mathrm{X} - 1150}{30} > \frac{1200 - 1150}{30}\right)$$
$$= \mathrm{P}(Z > 1.667) = Q(1.667) = 0.0478$$

Therefore, 4.78% of type A bulbs could be expected to have a life of more than 1200 hours.

ii. Let Y be the random variable 'the length of life of type B bulb'. Then $Y \sim \mathrm{N}\left(1900, 50^2\right)$.

$$\mathrm{P}(Y > 1800) = \mathrm{P}\left(\frac{Y-1900}{50} > \frac{1800-1900}{50}\right)$$

$$= \mathrm{P}(Z > -2) = 1 - Q(2) = 1 - 0.0228 = 0.9772$$

Therefore, 97.72% of type B bulbs could be expected to have a life of more than 1800 hours.

SOLUTION FIVE

(a)

i. Secular trend is the basic tendency of steady movements in a set of observations to move in an upward or downward or constant direction over a fairly long period of time.

ii. Seasonal variations are the regular periodic changes which take place within a period of less than a year and may take place daily, weekly, monthly or quarterly.

iii. Cyclical variations, which are also generally termed as business cycles, are the periodic movements in the time series around the trend line.

There are upswings and downswings in the time series that are observable over extended periods of time.

iv. Irregular variations which occur on account of random external events. These variations either go very deep downwards or too high upward to attain peaks abruptly.

(b)

i.

Year	Deviations from 2002	X	Sales X^2	Y	Trend values XY	$Y_C = a+bx$	Short-term fluctuations $Y-Y_C$
2000	-2.5	-5	25	10	-50	12	-2
2001	-1.5	-3	9	20	-60	21.6	-1.6
2002	-0.5	-1	1	30	-30	31.2	-1.2
2003	0.5	1	1	56	56	40.8	15.2
2004	1.5	3	9	40	120	50.4	-10.4
2005	2.5	5	25	60	300	60	
$N=6$		$\sum X=0$	$\sum X^2=70$	$\sum Y=216$	$\sum XY=336$		$\sum(Y-Y_C)=0$

$$a=\frac{\sum Y}{N}=\frac{216}{6}=36, b=\frac{\sum XY}{\sum X^2}=\frac{336}{70}=4.8$$

Hence the annual trend equation is given by:

$$Y=36+4.8X$$

[Origin $=2002.5$, X unit $=$ Half year, Y unit $=$ Annual sales in kwacha]

Note: The value of b i.e. 4.8 represents half yearly increment.

ii. After eliminating the trend only **cyclical variations** and **irregular variations** are left since seasonal variations are absent as the annual data is given.

iii. Likely sales for the year 2006: For 2006, $X = 7$

$$Y_{2006} = 36 + 4.8(7) = 69.6$$

iv. Annual Increase in sales $= 4.8 \times 2 = 9.6$

v. Monthly increase in the sales $= \frac{b}{6} = \frac{4.8}{6} = 0.8$ kwacha or

$\frac{Annual \quad Increase}{12} = \frac{9.6}{12} = 0.8$ kwacha

SOLUTION SIX

(a)

i. There are four (4) variables namely Earnings per share, Revenues, Net income and Book value per share

ii. All are quantitative as they can be only expressed in numerical form

iii. They are time series data as they have a time component

(b)

i. Quantitative
ii. Qualitative
iii. Qualitative
iv. Quantitative
v. Qualitative

(c)

Number of sales	Mid-point, χ	f	fx	$(x-\bar{x})$	$(x-\bar{x})^2$	$f(x-\bar{x})^2$
0 – 10	5	10	50	-30	900	9000
10 – 20	15	20	300	-20	400	8000
20 – 30	25	30	750	-10	100	3000
30 – 40	35	50	1750	0	0	0
40 – 50	45	40	1800	10	100	4000
50 – 60	55	30	1650	20	400	12000
		$\sum f = 180$	$\sum fx = 6300$		$\sum (x-\bar{x})^2 = 1900$	$\sum f(x-\bar{x})^2 = 36,000$

i. $\bar{x} = \frac{\sum fx}{\sum f} = \frac{6300}{180} = 35$

ii. Mode $= \ell + \left(\frac{f_1 - f_0}{2f_1 - f_0 - f_2} \right) \times h$

$= 30 + \frac{50-30}{2x50-30-40}$x10

$= 30 + \frac{20}{30}$x10 = 30 + 6.66 = 36.7

iii. $S^2 = \dfrac{\sum f\left(x-\overline{x}\right)^2}{n-1} = \dfrac{36,000}{180-1} = 201.12$

$S = \sqrt{201.12} = 14.2$

$\therefore CV = \dfrac{S}{\overline{x}} \times 100\%$

$= \dfrac{14.2}{35} \times 100\% = 40.52\%$

Alternatively

It is okay if the student use n in the denominator instead of n-1.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

KNOWLEDGE LEVEL

CA 1.3: BUSINESS ECONOMICS

TUESDAY 11 DECEMBER 2018

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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.

SECTION A – (COMPULSORY)

Attempt all ten (10) multiple choice questions.

1.1 What function is money serving when you deposit money in a bank savings account?

A. Store of value

B. Unit of account

C. Measure of value

D. Medium of exchange (2 marks)

1.2 Which of the following is the best example of a merit good?

A. Public smoking

B. Education

C. Defense

D. Water pollution (2 marks)

1.3 The mobile phone industry in Zambia is described as a (an)………………..

A. Monopoly

B. Perfection competition

C. Monopolistic competition

D. Oligopoly (2 marks)

1.4 The income elasticity of demand for an inferior good is:

A. Negative

B. Positive

C. Zero

D. Either positive or negative (2 marks)

1.5 Suppose in 2017 Mwelwa earned K80,000 and in 2018 his income is K85, 000. In an economy with an average inflation rate of 9%, which one of the following statements is correct?

A. Mwelwa's nominal income and real income have both risen

B. Mwelwa's nominal and real income have both fallen

C. Mwelwa's nominal income has fallen, and his real income has risen

D. Mwelwa's nominal income has risen, and his real income has fallen (2 marks)

1.6 If the Marginal propensity to Consume (MPC) is 0.90, a K100 million increase in planned investment expenditure, other things being equal, will cause an equilibrium output of:

A. K90 million

B. K100 million

C. K900 million

D. K1000 million (2 marks)

1.7 The principle concept behind Comparative Advantage is that a nation should:

A. Compare its volume of trade with other nations

B. Use tariffs and quotas to protect the production of vital goods for the nation

C. Concentrate production on those goods for which it has the lowest opportunity cost

D. Concentrate production of those goods for which it has the highest opportunity cost

(2 marks)

1.8 Which of the following is a primary use for national income accounting?

A. To analyze the environmental cost of economic growth

B. To assess the economic efficiency of specific industries in the economy

C. To measure changes in the value of goods and services produced in the economy

D. To determine whether there is a fair and equitable distribution of income in the economy

(2 marks)

1.9 Suppose the equilibrium price set by supply and demand is lower than the price ceiling set by the government. The eventual result will be a (an)……………….

A. Shortage

B. Surplus

C. Black market

D. Equilibrium (2 marks)

1.10 Market failure occurs when……………………………………..

A. Government sets price floors and price ceilings

B. Competitive market system under- or over-allocates resources in the production of goods

C. There are no externalities

D. Goods are rival in consumption (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)

Zamcab is a taxi company engaged in the provision of taxi services to customers throughout Lusaka. In providing its services, the company has to incur a lot of costs. There are those costs which remain the same annually such as office rentals, salaries for drivers, test certificates for vehicles, road tax and motor insurance. Additionally, there are costs which vary with the level of activity or service provided such as fuel, maintenance, cleaning and so on.

(a) Distinguish between the 'short-run' and the 'long-run' with respect to costs of production. (1 mark)

(b) Zamcab has given you cost structure data below:

Number of Units	TC	TFC	TVC	ATC	AFC	AVC	MC
(Output)	(K)	(K)	(K)	(K)	(K)	(K)	(K)
0	1200	300					
1	1800	300					
2	2000	300					
3	2100	300					
4	2250	300					
5	2600	300					
6	3300	300					
7	4500	300					

Required:

(i) Complete the table above by finding values for TVC,ATC, AFC, AVC, and MC (10 marks)

(ii) What is the lowest value for marginal cost (MC)? (1 mark)

(iii) What happens to marginal cost curve after reaching this minimum point and why? (1 mark)

(iv) Explain using the calculated values the shape of average fixed cost (AFC) curve. (1 mark)

(c) Briefly explain any three (3) features of a free market economic system. (6 marks)

[Total: 20 Marks]

QUESTION THREE

There are three basic types of economic systems (market economy, command economy and mixed economy) that have to address three basic questions of what to produce? how to produce? and for whom to produce?. There is great debate over which economic system works the best. Advocates for the market economy (classical economists) believe that, Price and quantity will always move towards equilibrium provided economic markets are left alone. However, Keynesian economists believe that markets often fail and governments have a role to intervene. You are given the following information about the market for motorcycles:

Market demand: P = 400 – 4Q; Market supply: P = 4Q.

Required:

(a) Outline any three (3) features of the market economy. (6 marks)

(b) Calculate equilibrium price and quantity. (2 marks)

(c) Explain what would happen to the equilibrium price and quantity when the price of a substitute good increases. (4 marks)

(d) Suppose the government decides to impose an exercise tax of K80 per motorcycle on producers.

(i) What will be the number of motorcycles sold in the market once the tax is imposed? (2 marks)

(ii) What will be the tax incidence on consumers? (2 marks)

(e) Give any two (2) reasons the government regulates prices. (4 marks)

[Total: 20 Marks]

QUESTION FOUR

Your uncle Mr Sililo who was employed by the government as a secondary school teacher decided to resign from his employment to start his own agri-business. He always wanted to be his own 'boss'. One day he was listening to a 'talk show' program on the local radio station. The topic of discussion was the *'Performance of the Zambian Economy in 2017'*. The guest was a seasoned Economist. In response to one question he said, 'Agriculture industry is a perfectly competitive market while the electricity industry is a monopoly market. This means that the agriculture industry can earn economic profits in the short-run and only normal profits in the long-run'.

Your uncle couldn't understanding anything. He has requested you as a student doing CA 1.3 Business Economics to help him.

Required:

(a) Explain to him any four (4) assumptions or characteristic of the agriculture industry that makes it perfectly competitive. (8 marks)

(b) Distinguish between the concepts of 'short-run' and the 'long-run' (2 marks)

(c) Before venturing into his agri-business, his conditions of service as a civil servant per month were basic salary K5,000, housing allowance K1,250 and transport allowance K750. In his new job as an entrepreneur, his total revenue is K15, 000 per month after incurring the following costs: Salaries and wages for farm workers K5,500, materials K2,500 and other cash payments K1,000.

Required:

(i) Calculate his accounting profits and his economic profit. (8 marks)

(ii) Economically, was the change of job beneficial as far as the first month of operation is concerned (holding other factors constant)? (2 marks)

[Total: 20 Marks]

QUESTION FIVE

In many market economies, Zambia inclusive, the private sector is the key engine or driver of economic growth. The aim of the private businesses is to maximize profits. The private sector do business while the governments' main role is to create an enabling environment for the private sector to flourish. Government does this by spending, taxation and regulation.

Required:

(a) Explain how the government influences the fundamental economic questions of *what to produce*, *how to produce* and *for whom to produce* in the economy through:

(i) Spending (5 marks)

(ii) Taxation (5 marks)

(iii) Regulation (5 marks)

(b) (i) Define government spending multiplier (2 marks)

(ii) Explain how the spending multiplier can be used to encourage the private sector to flourish. (3 marks)

[Total: 20 Marks]

QUESTION SIX

In the 2018 National Budget Address, whose theme is, *'accelerating fiscal fitness without leaving anyone behind'*, the macroeconomic objectives set, among others, is to achieve real GDP growth of at least 5.0%. This outcome is in conformity with the Seventh National Development Plan (7NDP).

Zambia's trade balance recorded a surplus of US$388.3 million during the first six months of 2017 compared with a surplus of US$45.6 million during the same period is 2016, said the Minister of Finance. Clearly, it is an undisputed fact that trade can be an engine of growth.

Required:

(a) Explain any three (3) sources of economic growth. (6 marks)

(b) If trade can be an engine of growth, explain any four (4) reasons for protectionism in International trade i.e. use of barriers to restrict trade. (4 marks)

(c) The theory of economic integration refers to the commercial policy of discriminatively reducing or eliminating trade barriers only among the nations joining together. The degree of economic integration ranges from preferential trade arrangements to free trade areas, customs unions, common markets, and economic unions.

Explain any five (5) benefits of international trade to a country like Zambia.

(5 marks)

(d) Briefly explain the difference between a balance of trade deficit and a balance of trade surplus.

(2 marks)

(e) "The Bank of Zambia unexpectedly cut its lending rate for the fifth consecutive time to the lowest in four years as inflation and economic expansion slowed. The bank of Zambia lowered the rate by 50 basis points to 9.75%. The Bank also reduced the statutory reserve ratio for commercial lending to 5% from 8%" (News Diggers Newspaper, Thursday, 22 February 2018).

Explain the benefit of this move to traders. (3 marks)

[Total: 20 Marks]

END OF PAPER

CA 1.3 BUSINESS ECONOMICS - SOLUTIONS

SECTION A:

SOLUTION ONE

1.1	**A**
1.2	**B**
1.3	**D**
1.4	**A**
1.5	**D**
1.6	**D**
1.7	**C**
1.8	**C**
1.9	**B**
1.10	**B**

SECTION B

SOLUTION TWO

a) The short-run run is the time period when one of the factors of production is fixed while the long run is the time period when all factors of production are variable.

b) (i)

Number of Units	TC	TFC	TVC	ATC	AFC	AVC	MC
(Output)	(K)	(K)	(K)	(K)	(K)	(K)	(K)
0	1200	300	900	-	-	-	-
1	1800	300	1500	1800	300	1500	600
2	2000	300	1700	1000	150	850	200
3	2100	300	1800	700	100	600	100
4	2250	300	1950	562.5	75	487.5	150
5	2600	300	2300	520	60	460	350
6	3300	300	3000	550	50	500	700
7	4500	300	4200	642.9	42.9	600	1200

(ii) K100

(iii) It starts rising again in line with the law of diminishing returns

(iv) It continuously slope downwards to the right as more units are divided by same fixed cost.

c) The features of a free market economy include the following:

- Private ownership of productive resources
- Co-ordination by markets and prices
- Production is determined by pursuit of profits
- Output is distributed according to the ability to pay
- High levels of efficiency
- High inequalities in income and wealth distribution

SOLUTION THREE

a) Features of a market economic system

- private rather than public sector control of production, distribution and consumption
- Profit motive: companies exist to make profits and hence, responsive to marketplace demands.
- Minimal government intervention: capitalists believe that markets should be left alone to operate without government intervention. Meaning that prices would be set automatically based on the forces of demand and supply.
- Consumer sovereignty: the consumer plays a vital role, because the entire production pattern is based on the desires, wishes and the demand of the consumer.

b) Equilibrium is when demand = supply

$$400 - 4Q = 4Q$$

$$400 = 8Q$$

Q = 50, P = 4(50) = K200

c) ***When the price of a substitute good increases:*** *Substitutes* are goods that can be consumed in place of one another. If the price of a substitute increases, the demand curve for the original good shifts to the right. For example, if the price of Pepsi rises, the demand curve for Coke shifts to the right.

d) After government imposes tax

i) New supply after tax will be P = 80 + 4Q

$400 - 4Q = 80 + 4Q$

$320 = 8Q$

$Q = 40$

After tax, the new price will be P = K240

ii) Tax incidence = change in price X the number of motorcycles sold

= 40 X 40

= **K160**

e) Reasons for price regulation

- ***Social Unacceptability***: If the price resulting from an unregulated market were considered to be socially unacceptable, as causing hardship or conflict in the community, attempts might be made to control it.
- ***Incomes of Producers***: Attempts might be made to maintain high prices if it were desired to raise the income of producers and their employees.
- ***Stability of Supply*** Some markets are notoriously unstable because of unplanned variations in supply, caused by weather and other circumstances beyond the control of producers. In these cases, attempts may be made to control prices to ensure greater stability in the market.

SOLUTION FOUR

a) Perfect competition and monopoly represent different forms of market structure within which a firm will operate. Assumptions of the transport industry:

- There are **many buyers and sellers**, none of which has a significant share of the market.
- There is **free entry into the market** so that newly established firms are able to compete on equal basis with existing firms.
- Firms are **price takers**.
- **Homogeneous products** and perfectly substitutable in the eyes of consumers are produced or provided.
- There is **perfect flow of information and knowledge** so that consumers are aware of the price quoted by each producer and producers on the other hand have access to the same technology.
- There are **no transport or information gathering costs**.

b) The **short -run** is the time period when one of the factors of production is fixed. The **long -run** is the time period when all the factors of production are variable. There are no fixed costs.

c)

(i) Accounting profits or business profits are what remain of a firm's total revenues after it has paid all its explicit costs. Explicit costs are payments to factors of production employed by the firm, but not to the resources owned by the business itself. They are payments to outsiders not the owners of the business. Thus, **accounting profit = Total revenue – Explicit costs.**

Economists include implicit costs. Implicit costs are what the owners could have received using resources they own in some other way. The economist adds the implicit costs to the accountant's explicit costs to arrive at total costs. Subtracting these total costs from the total revenue results in a smaller profit (economic profit) than the accountant's business profit. Thus, **Economic Profits = Total revenue – (Explicit Costs + Implicit Costs).**

Accountant's profit is calculated as follows:

	K	K
Total sales revenue		15 000
Farm workers' salaries	5 500	
Rent	2 500	
Materials cost	1 000	
Total Explicit Costs		9 000
Accountant's Profit		**6 000**

Economic Profits is calculated as follows:

	K	K
Total sales revenue		15 000
Explicit Costs	9 000	
Housing allowance foregone	1 250	
Salary foregone	5 500	
Transport allowance foregone	1 000	
Total Explicit and Implicit costs		(16 000)
Economic Profits		**(1 000)**

(ii) No. Economically, the job change was not beneficial for the first month of operation as there was a loss of K1000.

SOLUTION FIVE

a)

(i) Government spending: When the government pays salaries to civil servants, it influences *who* gets society's output; the recipient of a salary is able to buy more goods and services. When the government builds roads or buys aircraft, it affects *what* is produced. When the government spends money for agricultural research, it affects *how* food will be produced

(ii) Government taxation: When the government collects taxes, it influences *who* gets society's output. When you pay taxes, you have less left to buy goods and services. Taxes also affects *what* is produced. For example, a tax on mining affects what is produced. Finally, the tax system may also influence *how* goods are produced. For example, by changing tax laws, the government can encourage businesses to use more machinery.

(iii) Government regulation: Government regulations also influence *what*, *how*, and for *whom* goods and services are produced. For example, the government prohibits marijuana smoking. It therefore affects *what* is produced. By requiring producers to steel to limit their emissions of smoke, the government influences *how* goods are produced. It also regulates some prices – for example, the price of maize through floor prices thereby affecting *who* gets the output of society.

b)

i) The multiplier is the ratio of the total increase in national income to an initial injection.

$$\text{Multiplier} = \frac{\text{total increase in national income}}{\text{Increase in national income}}$$

ii) If the government takes any action to increase expenditure (for example by raising government current expenditure or lowering interest rates to raise investment), it will set off a general expansionary process, and the eventual rise in national income will exceed the initial increase in aggregate demand. The private sector will respond by increasing investment expenditure as a results of reduced rates, and take up government contracts.

SOLUTION SIX

a) Economic growth is a steady increase in national income brought about as a result of an increase in the productive capacity of the economy. There are main sources of economic growth. The following are the sources of economic growth:

- Growth in the labor force participation rate; this occurs when there is a natural increase in population. Natural population increase will increase the participation rate will in turn lead to a rise in output.
- Growth in human capital stock; investment in formal education and experience increases human capital stock, which is a source of economic growth.
- Growth in physical capital stock; this includes investments in factories, machines, transportation and communications facilities. Investments in these facilities enables that more consumer and capital goods can be produced in the future.
- Technological progress; this takes the form of improved techniques or machinery. It brings about innovations that introduce new products, or new ways of producing existing products.
- Political stability would lead to strong economic growth by making the country attractive to investors. The increased investment would raise economic growth.

b) The arguments in favour of the use of barriers to trade include:

- To protect infant industries
- To keep the kwacha at home
- To protect home employment
- To ensure national defense
- To engineer comparative advantage
- To reduce vulnerability to a cut off in foreign supplies
- To help diversify the economy

c) The following are the benefits of international trade:

- It enables a country to get what she cannot produce herself
- It provides citizens with a greater variety of goods
- It makes countries to specialize in goods in which they have greatest advantage over others. This specialization allows countries to produce goods in greater volume and probably at cheaper prices (Economies of scale)
- It enables a country to dispose of her surplus goods
- It allows the movement of people between countries thus promoting understanding

- During times of calamities (natural disasters) such as floods, drought, etc, international trade enables countries to obtain relief supplies swiftly from other countries.

d) A balance of trade deficit is an excess of a country's imports over exports, while a balance of trade surplus, is the excess of exports over imports.

e) A reduction in the required reserves ratio reduces the cost of borrowing money. Traders would find borrowing cheaper to finance their businesses. This in turn could bring out increased productivity in the country.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

KNOWLEDGE LEVEL

CA 1.4: COMMERCIAL AND CORPORATE LAW

FRIDAY 14 DECEMBER 2018

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 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.

SECTION A

Attempt all ten (10) multiple questions

<u>QUESTION ONE</u>

1.1 Which one best distinguishes criminal law from civil law?

A. Criminal law is written whilst civil law is unwritten

B. Criminal law governs the relationship between the State and its citizens whilst civil law governs the relationship between citizens only.

C. Criminal law has punishment for the offender whilst civil law has compensation for the injured person.

D. Criminal law regulates the relationship between states whilst civil law regulates the relationship between State and its citizens.

(2 marks)

1.2 Following the ruling case of *Donoghue v. Stevenson (1932).* Which of the following are the requirements for a successful negligence claim?

A. Duty of care, breach of duty, damages

B. Duty of care, breach of duty, damage

C. Duty of care, breach of duty, death

D. Duty of care, breach of duty, compensation

(2 marks)

1.3. In a partnership of three people who do not have a partnership agreement, profits and losses will be shared in the ratio:

A. 2:3:1

B. 1:1:1

C. 3:3:2

D. 2:2:1

(2 marks)

1.4. Which one correctly represents the principle of damage (s) in contract?

A. It is meant to enrich the aggrieved party

B. Aggrieved party is taken to the position they would have been if breach had not occurred.

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

D. It prevents damage from happening

(2 marks)

1.5 Which one correctly represents the principle of damage (s) in tort?

A. The aggrieved must always be better off than before

B. The aggrieved must neither be better nor worse off than before

C. The wrong doer must always be punished

D. All the above (2 marks)

1.6. Which of the following agreements have, as a general rule, the intention to create legal relations?

A. Letters of intent and collective agreements

B. Commercial advertisements or public body agreements

C. Social or domestic agreements

D. Business or commercial agreements

(2 marks)

1.7. Which type of dismissal looks at the merits of dismissal as opposed to the form of dismissal?

A. Unfair dismissal

B. Constructive dismissal

C. Summary dismissal

D. Wrongful dismissal

(2 marks)

1.8. Which of the duties below is not a duty of an agent?

A. Duty to account

B. Duty to delegate

C. Duty to obey lawful instructions

D. Duty to avoid conflict of interest (2 marks)

1.9. Which of the following companies represents a set of private companies?

A. Limited by shares, limited by guarantee, limited by number of shareholders

B. Limited by guarantee, limited by capital, limited by shares

C. Unlimited companies, public limited companies (PLCs), limited by liability

D. Limited by shares, unlimited companies, limited by guarantee

(2 marks)

1.10. Which of the following is a good ground for compulsory winding up of the company?

A. If a company fails to settle its debts within 21 days of receipt of a written demand from the creditor

B. If a company fails to pay its debts within three (3) months of receipt of a written demand from creditor

C. If a company fails to pay its debts within 14 days of receipt of a written demand from the creditor.

D. When liabilities exceed its assets (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.

QUESTION TWO

Sambuleni, Chilufya and Mbimbi are partners running a firm of accountants called KCM Global Accountants. The partners share profits and losses in the ratio 2:3:1 respectively. Sambuleni is the managing partner in charge of the day to day operations of the business, whilst Chilufya is manager finances and Mbimbi is just a limited liability partner without any management role in the partnership.

On 15 May, 2018, Mbimbi without informing her colleagues entered into a contract with Lusaka Stationery Ltd for the supply of box files, reams of paper and pens all valued at the price of K12, 000. Mbimbi got insane two days after entering into a contract with Lusaka Stationery Ltd and is still admitted to Chainama Mental Hospital. On 20 May, 2018, Lusaka Stationery Ltd delivered the ordered goods to the firm and found the two partners who were surprised of the delivery as they had enough of all the goods brought and had not made any orders for the same. This delivery has caused problems to the firm.

In addition to the Lusaka Stationery problems, Road Pavers Ltd, one of KCM Global Accountants' loyal customers is almost being declared bankrupt and is selling most of its noncurrent assets. They requested KCM Global Accountants to prepare the books of accounts and value the assets prior to selling them. Chilufya prepared the books of accounts on behalf of the firm and inflated the value of the noncurrent assets from K1 million to K2.5 million so that Road Pavers Ltd would have more money from the sale of the assets. Three months after buying the assets, the buyer who relied on Chilufya's report, realized that he was duped and wants to sue in tort, claiming compensation for professional negligence by preparing 'false and misleading books of accounts'.

(a) (i) Identify three (3) contents of a partnership deed in the above scenario. (3 marks)

(ii) Explain the contents of the partnership deed you have identified in a(i) above. (3 marks)

(b) What is the effect of Mbimbi's contract with Lusaka Stationery Ltd on the partnership? Explain your answer. (4 marks)

(c) What is the effect of Mbimbi's insanity on the partnership? (4 marks)

(d) (i) Who should the buyer of the assets sue, Chilufya or the partnership? (2 marks)

(ii) Explain the likely court decision on liability in tort in d(i) above? (4 marks)

[Total: 20 Marks]

QUESTION THREE

Chamba is a transporter usually hired to transport different items to different destinations by clients. Chunga is in the business of buying and selling green pepper which he brings from the Chongwe farming area of Lusaka. Chunga contracted Chamba to transport green pepper from Chongwe to Lusaka City Market where his stand is. Chunga did not accompany Chamba on the vehicle but was to meet Chamba at Lusaka City Market. On the way to the market however, Chamba's track overturned and all the green pepper belonging to Chunga was thrown overboard and some were damaged. The place where the track overturned had a market nearby and, since it was early hours of the day, marketeers from the market flocked to the track and, being interested in the green pepper, offered Chamba to purchase the green pepper from him. Chamba considered this to be a good deal since the green pepper would have been completely damaged had they stayed longer by the roadside after the accident. However, some of the marketeers have failed to pay Chamba the agreed price for green pepper. Chunga has taken it upon himself to sue, but the marketeers contend that he cannot sue as he was not privy to the contract.

(a) Explain the nature of the agency relationship between Chamba and Chunga as far as the selling of green pepper was concerned. (10 marks)

(b) Do you think Chunga has the capacity to sue in this matter? Give reasons for your answer. (10 marks)

[Total: 20 Marks]

QUESTION FOUR

Money Matters Financial Services is a small scale micro finance organisation which lends out money in form of loans to marketeers at Chisokone Market in Kitwe. Lupupa Patience, a marketeer got a loan of K10, 000 at 20% simple interest and was required to return a total of K12, 000 at the end of the month. She has not been able to service her loan due to the poor business and the cholera outbreak earlier this year. She defaulted payments for the last five months. Last week, knowing that the financial institution is failing to pay for its running expenses, Lupupa Patience wrote a letter to Money Matters Financial Services saying, '*I enclose a cheque to the sum of K10, 100 in full settlement of my loan with you. Please sign at the bottom of the letter to acknowledge that I have paid my debt in full*'. Money Matters protested at the letter, but being in dire financial need, they signed to acknowledge full payment, got the cheque and cashed it. Two days later, they sued Lupupa Patience for the balance of K1, 900.

(a) What is your legal opinion on Money Matters Financial Services' decision to sue after signing the letter and cashing the cheque? (6 marks)

(b) Would Lupupa Patience rely on the defence of promissory estoppel? Justify your opinion. (6 marks)

(c) At the company's annual general meeting (AGM) yesterday, Money Matters Financial Services' directors declared a dividend out of the company's capital, instead of declaring it from the company's distributable profits.

Explain four actions that shareholders can take against the directors/company to remedy the above situation. (8 marks)

[Total: 20 Marks]

QUESTION FIVE

Shadreck Mwale operates a tipper truck which he bought a year ago. Early this year, he was given a contract by Unimix Concrete Ltd, to transport sand, blocks and other building materials. The contract is to run for two years. Unimix Concrete Ltd labeled the tipper truck all around with the company's address, logos and adverts in big letters. Shadreck Mwale's pay is based on the number of trips made per month and receives an average gross pay of K32, 000 per month. He employs Kelvin Choopa as his assistant driver and pays him a net of K6, 000 per month.

Yesterday, as Kelvin Choopa went to have a drink after a fruitful day, he failed to avoid a cow which came on the road abruptly. He hit it and it died on the spot and left the front part of the tipper truck damaged. The owner of the cow Humphrey Chikomo wants to sue, but is not sure who to sue between Mr. Kelvin Choopa, Mr. Shadreck Mwale, and Unimix Concrete Ltd.

(a) Explain as to whether the contract between Unimix Concrete Ltd and Mr. Shadreck Mwale is a contract for services or a contract of service. (4 marks)

(b) Explain whether the contract between Mr. Shadreck Mwale and Mr. Kelvin Choopa is a contract for services or a contract of service. (6 marks)

(c) From the three, who should Mr. Humphrey Chikomo sue for his cow which was killed?

(4 marks)

(d) Unimix Concrete Ltd has been appointed as an agent of Chilanga Cement PLC to be selling the company's products in Kabwe. Explain the circumstances under which this agency will be:

(i) an agency by estoppel (3 marks)

(ii) an agency by ratification (3 marks)

[Total: 20 Marks]

QUESTION SIX

Bizo, Kawana, Oprenti, and Simposo are the sole shareholders of Rapid Investments Ltd, the country's largest provider of food stuffs to boarding schools and tertiary institutions. The four are also members of the company's board of directors with voting powers divided as follows 1:3:2:1 respectively. Kawana is the managing director and Simposo is the company secretary, whilst Bizo and Oprenti are mere directors. Kawana and Bizo have heard of a new Chinese boarding school in Mansa which will have a population of 5, 000 students, and needs suppliers of food with capacity to supply 5 tonnes of food per day. The duo, to the exclusion of Oprenti and Simposo, have decided to incorporate a new company K & B Food Suppliers Ltd to supply food to the new school and have since been given the contract to supply the required quantities per day.

K & B Food Suppliers Ltd being a new company has failed to meet the daily demands of the school and are now at the verge of losing the contract. Kawana, the managing director of Rapid investments Ltd calls for the company's extra ordinary meeting with a sole agenda of allowing Rapid Investments Ltd to sell 75% of its machinery to K & B Food Suppliers Ltd. The decision to give away the machinery was made using Kawana and Bizo's voting power, without disclosing their interest in the new company. Oprenti and Simposo are unhappy with the decision as it has left Rapid Investments Ltd almost bankrupt. Rapid Investments is now on its knees, broke, and Simposo, the Company Secretary is preparing a notice to the board for a meeting to discuss a possibility of a statutory declaration.

(a) Distinguish between the roles of a managing director (Kawana) and those of a company secretary (Simposo) in Rapids Investments Ltd. (4 marks)

(b) What remedy would be there to Rapid Investments Ltd following the decision of the directors Kawana and Bizo to sell its 75% machinery to the new company?

(6 marks)

(c) What will be the implications of a statutory declaration suggested by Simposo on Rapid Investments Ltd? (4 marks)

(d) Explain the following:

(i) Fraudulent misrepresentation (3 marks)

(ii) Torts of strict liability (3 marks)

[Total 20 Marks]

END OF PAPER

Suggested Solutions CA 1.4 Business and Corporate Law

SOLUTION ONE

1.1. C

1.2. B

1.3. B

1.4 B

1.5. B

1.6. D

1.7. A

1.8. B

1.9. D

1.10. A

SOLUTION TWO

(a)

(i) The answer includes ; Name of partnership; Nature of business; Share of profits and losses; Management of the partnership; Types of partners (one partner with limited liability)

(ii) Explanation of contents

Name Of Partnership – The partnership deed has a name – KCM Global Accountants

Nature of Business – Provides for the activities of the partnership – Provision of accountancy, audit, management and tax advisory services.

Share of Profits and Losses – They are in business therefore profit is the main motive so they have provided for that, though not express in the question.

Management – How the partnership is to be managed. The roles have been shared, managinging partner, manager finances, etc.

Types of partners – It provided for different types of patners. One (Mbimbi) has limited liability whilst the other two (Sambuleni and Chilufya) are ordinary.

(b) Mbimbi is a limited liability partner and thus does not bind the partnership. Therefore, she will be liable on her own unless the partnership decides to ratify the contract she made, then it can be binding on them. If she was not a limited liability Partner, the partnership could have been bound.

(c) Mbimbi's insanity as a limited liability partner does not affect the partnership's existence. The partnership will continue even if a limited liability partner got insane. However , under general partnership, insanity is ground for dissolution of the partnership

(d)

(i) They can sue the partners jointly (all of them) and severally (each one of them individually) for all the debts of the firm.

(ii) A higher standard of care is expected from accountants and auditors when advising companies and individuals on company purchases. The partners will have to pay damages and refund the buyer the difference as the buyer relied on Chilufya's report.

SOLUTION THREE

(a) Agency relationships can be created in a number of ways. One such way is Agency by necessity. In the case at hand, The decision by Chunga to sale the tomatoes was necessitated by the emergency situation which if not taken care of, could have led to damage to the pepper. However, for agency of necessity to be created, there are elements that need to be present: an emergency situation, an impossibility to obtain fresh instructions from the principle, and that the agent should have acted in the best interest of the principal. All these elements need to exist at the same time.

In the case at hand, what is missing is the communication aspect. Chamba did not make an effort to obtain instructions from the Principal. This omission negates Agency of Necessity. This is different from the case of ***Springer v GWR*** (1919). In the case of Springer, the defendant sold the tomatoes belonging to the plaintiff without the plaintiff's authority upon fearing that they would go bad due to delays arising from a detained ship due to bad weather. The plaintiff sued for breach of contract but the defendants justified their actions under agency of necessity. The court however held that for there to be agency of necessity there must have been no way the defendant could have communicated with the principle. Because there were means for communicating with the principle but did not communicate, there was therefore no agency of necessity created. Likewise, in the case of Chamba, there was no effort by him whatsoever to communicate with Chuunga. Even the distance between Lusaka and Choongwe is not that immense that communication could have failed. In view of the foregoing, there was no agency of necessity created.

(b) Chunga being the principal in this matter has no capacity to sue as no agency of necessity was established. **Springer v. GWR (1919).** Even though Chamba acted in the best interest of the actual owner, Chunga was Privy to the contract. Furthermore, Privity of contract will apply as the principal was not disclosed. Where the principal is disclosed, the principal has the power to step in and enforce his rights *Cavmont Merchant Bank v. Amaka Agricultural Holdings (2001)*

SOLUTION FOUR

(a) Yes he was right *Foakes v Beer (1884),* and *D & C Builders v Rees* (1966) and *Pinnel's Case* – payment of a lesser sum on the day it is due does not discharge the whole debt as there is no consideration. They were forced to receive a lesser sum by Patience Lupupa, thus it was not out of their free will and now free to sue even if they had signed the letter from her discharging the case.

(b) Promisory estoppel is a doctrine that stops a person from going against his word. In this case, Patience Lupupa cannot use it as she was trying to take advantage of Money Matters Financial Services' difficulties. Promisory estoppel must be used only as a shield and not as a sword, which is trying to do 'with her unclean hands, as he who comes to equity must come with clean hands'. The case of *D & C Builders v Rees (1966*) does not allow that, therefore, she cannot rely on it.

(c) To remedy the issue of paying dividends out of capital and not profits, shareholders can do the following:
- *Injunction* – a member may get an injunction from the court to restrain directors from paying dividends out of capital
- *Refuse to authorise payment* – shareholders with voting capacity can refuse to pass the payment by voting against it.
- *Recover from members* – the company (members in a general meeting) may vote to be refunded by those who have already been unlawfully paid.
- *Directors may be forced to pay back* – ie pay back to the company all dividend unlawfully paid to the members who knew at the time of receiving it that it was from capital and not profits.
- *Barring members who were aware from bringing an action against directors* – the other shareholders may bar those who knew that the money came from the capital of the company from bringing any action against the directors.

SOLUTION FIVE

(a) The contract between Unimix Concrete Ltd and Mr. shadreck Mwale is one for services because Mr. Shadreck Mwale is self-employed and is only engaged to provide his services, he is independent and pays his own tax from the gross income he receives from Unimix Concrete Ltd. He is not under their control even if his tipper was labeled with the Unimix logo and adverts.

(b) The contract between Mr. Shadreck Mwale and Mr. Kelvin Choopa is a contract of service as Mr. Kelvin Choopa is employed by Mr. Shadreck Mwale and is under his control, telling him how to do his job, right to suspend or dismiss him, as an employee he is paid a fixed payby Mr. Mwale.

(c) Mr. Humphrey Chikomo should sue Mr. Kelvin Choopa as he was outside the course of employment when he hit and killed the cow. He was on a personal mission. In this case, Mr. Shadreck Mwale as his employer will not be vicariously liable as the work leading to the killing of the cow was personal, not part of the business. The cases applicable here are *Britt v Galmoye and Nevill (1928); Rayner v Mitchell (1877)*; *Century Insurance Company v Northern Ireland Road*

Transport Board (1942). The employer would only be vicariously liable if the wrong was is committed in the course of his employment.

(d)

(i) *An agency estoppel* – It will be an agency by estoppel or holding out if Chilanga Cement Plc by words or conduct give to a third party the impression that the agent's authority is greater than it really is and the third party, as a result, acts upon this. Chilanga Cement Plc will be estopped from denying that Unimix is their agent and thus will be bound.

(ii) An agency by ratification – It will be an agency by ratification if Unimix Concrete went beyond their powers and Chilanga Cement Plc (the principal) adopts those actions as their own. The agent must inform the principal of his actions within reasonable time, principal must have been in existence at the time of the contract and must adopt the whole contract.

SOLUTION SIX

(a) A managing director is a one of the directors appointed from the board and has an overall responsibility of overseeing the running of the company. A company Secretary on the other has the duties ranging from calling for meetings, prepares agenda, takes minutes during the meeting, keeps the books of accounts for the company, etc.

(b) One of the duties of directors in a company is that they have fiduciary duty to the company. They must act in good faith and avoid conflict of interest, must not make secret profit, must act honestly and for the benefit of the company. In the case at hand, the shareholders who are also the directors of the company did not act in the best interest of the company. Therefore, following the ruling in *Cook v. Deeks (1916)*, which had similar facts as the one at hand, it was held that, the benefits of the contract the other two entered into must benefit Rapid Investments Ltd and the two directors could not validly use their voting power as shareholders to vest it in themselves by transferring the assets to K & B Food Supplies. Thus the remedy is that Rapid Investments would get its assets back plus any profits gained there from.

(c) The statutory declaration states that the company has made a full inquiry into the affairs of the company and are in their opinion it will be able to pay its debts in full within 12 months, or such shorter period as they choose, and has gone into liquidation merely for other reasons like reconstruction, business ceased etc. Therefore, the implications of a statutory declaration is that the company is trying to assess its ability to pay debts before liquidation and to assure creditors that, even though the company into liquidation is able to pay its debts within a year.

(d)

(i) *Fraudulent misrepresentation* – This is where a person makes a statement which he knows that it is untrue or false and that statement induces the formation of a contract.

(ii) Tort of strict liability – These are torts where the injured party can recover compensation for the loss or damage without having to prove fault or intention on the part of the defendant, manufacturers of food stuffs are under strict liability for injury caused by their defective goods.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

KNOWLEDGE LEVEL

CA 1.5: MANAGEMENT THEORY AND PRACTICE

MONDAY 10 DECEMBER 2018

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 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.

SECTION A

Attempt all ten (10) multiple choice questions.

1.1 Every Limited liability company is governed by the Board of Directors. Who appoints the members of the Board?

A. Financiers of the company
B. Board members
C. Chief Executive Officer
D. Shareholders (2 marks)

1.2 You and your friends want to set up a non - profit organization. Which structure would you consider using?

A. Functional
B. Divisional
C. Simple
D. Matrix (2 marks)

1.3 Your brother has just come across some money and would like to use some of it to begin a small business. What form of business organization would you advise him to take?

A. Sole Proprietorship
B. Partnership
C. Private Limited Company
D. A Co-operative (2 marks)

1.4 The performance of Business organizations is affected by external environmental factors. Among these are economic factor. Which of the following would be considered an economic factor?

A. An efficient Road Transport system
B. Strong business competitors in the Industry
C. Improving levels of education in schools
D. Strong demand for a company's products at the existing price (2 marks)

1.5 When your Marketing Manager wants to introduce a new product to your product line, what level of strategy would this be?

A. A corporate strategy decision

B. A business strategy decision

C. An operational strategy decision

D. A functional strategy decision (2 marks)

1.6 Which one of the following conclusions was reached by Elton Mayol in the Hawthorn Studies?

A. Work satisfaction improves motivation but does not improve productivity

B. Subordinates cannot be motivated by their manager, only by the work that they do

C. Motivation is improved when employees have greater self-esteem

D. Workers are motivated mostly by self-interest (2 marks)

1.7 Herzberg made a distinction between motivator factors and hygiene factors. Which of the following factors are work place hygiene factors?

A. Quality of supervision

B. Responsibility

C. Advancement

D. Relationships with colleagues (2 marks)

1.8 Who suggested that a primary managerial role is to develop the workers?

A. Handy

B. Taylor

C. Herzberg

D. Drucker (2 marks)

1.9 Who said, "Management is a multiple purpose organ that manages a business, manages a manager and manages workers and work"?

A. Harold Konntz

B. Peter Drucker

C. Kenneth O 'Donell

D. Abraham Maslow (2 marks)

1.10 According to Lewin's theory of force-field analysis and organizational change, which of the following statement is correct?

A. Anxiety about job security is a force for change

B. To make a change successfully it is more effective to try reducing restraining forces than to try and make stronger the drives for change.

C. If the forces resisting change are exactly equal in strength to the drivers for change, then change will occur

D. A driving force for change is work pressure and having to meet deadlines, leaving little free time for the people affected by the change

(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)

(a) Many employees today are moving from one organization to another in search of better conditions of service and salary. However, most management scholars have argued that the job itself can be used as a motivator for the job holder. In order for an individual to experience job satisfaction, a number of psychological requirements need to be met.

Required:

Identify any six (6) of these psychological requirements that increase levels of motivation. (12 marks)

(b) Change happens continually within organizations and their markets. Change may be incremental or transformational.

Required:

Explain the difference between the two types of change. (2 marks)

(c) Johnson, Scholes and Whittington in their book (*Exploring Corporate Strategy*,2007) defined strategy as the direction and scope of an organization over the long-term which achieves advantage in a changing environment, through its configuration of resources and competences with the aims of fulfilling stakeholder expectations.

Required:

In light of the above definition, explain six (6) areas of decision making that should be considered 'strategic'.

(6 marks)

[Total: 20 Marks]

QUESTION THREE

Peter Drucker, the management writer, once wrote that organization structure is significant for how well the business performs. Another writer on management, John Child also wrote that good structure provides a framework for allocating resources, responsibilities, decision making, co-ordination of activities, control and rewards for performance.

Required:

(a) Design a simple functional structure of any hypothetical organization. (5 marks)

(b) Define a matrix organization structure and state two (2) advantages and two (2) disadvantages of the matrix structure (10 marks)

(c) Define the terms "division of work, Discipline, Equity, Unity of direction, and Initiative" according to Henri Fayol. (5 marks)

[Total: 20 Marks]

QUESTION FOUR

Research has shown that information technology (IT) is the hallmark of business development. The business world now is linked through the internet and communication is fast. This has seen many organizations investing in IT for efficient and effective productivity. Organizations have re-modified their organization structures to include the IT or merge Research and Development (R&D) department with CIT department. This development has also brought motivation in the employees and improvements in the organizational culture.

Required:

(a) Define organizational culture (2 marks)

(b) Draw a basic communication cycle showing how information flows from the sender to the receiver. (6 marks)

(c) Use the needs theory of motivation to explain how employees are motivated starting with the most basic need. (10 marks)

(d) List two advantages of computers (IT) in an organization. (2 marks)

[Total: 20 Marks]

QUESTION FIVE

Human resource management (HRM) is concerned with assessing the organizational Human Resource needs, finding people to meet those needs and getting the best performance from them. Therefore HRM has been recognized as a specialized function which helps organizations to recruit the right staff for the right job (Best Fit). Organizations have realized that one of the reasons why there is high labor turnover is because most people are employed in the wrong jobs.

Required:

(a) Explain the three (3) main stages of job recruitment and selection process.

(12 marks)

(b) State four (4) advantages of internal recruitment. (8 marks)

[Total: 20 Marks]

QUESTION SIX

Corporate governance is of paramount importance to a company and is almost as important as its primary business plan. When executed effectively, it can prevent corporate scandals, frauds and civil and criminal liabilities of the company. It also enhances a company's image in the public eye as a self-policing company that is responsible and worthy of shareholder and debt holder capital. Organizations striving to improve governance need to take a close look at their internal business structures, processes and projects. Upholding of governance ethics ensures the sustainability of a business.

Required:

(a) Explain any six (6) principles that can be applied in an organization to enhance good governance. (12 marks)

(b) Explain the concepts of ***Ethics*** and ***Corruption*** in governance. (8 marks)

[Total: 20 Marks]

END OF PAPER

CA 1.5: MANAGEMENT THEORY AND PRACTICE - SOLUTIONS

SECTION A- Multiple choice

SOLUTION ONE

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

SECTION B –

<u>SOLUTION TWO</u> - compulsory

(a) In order for an individual to experience job satisfaction, a number of psychological requirements will need to be met. These include:

i) The employee should have a strong understanding of **what exactly the job is**, the standards required to succeed in the job, and receive feedback on their performance.

ii) The work should be reasonably **demanding** and provide some **variety.** The job should not be monotonous or insufficiently challenging.

iii) The individual should have some discretion over some area of **decision-making**.

iv) The organization should provide **social support** and **recognition** of its employees.

v) The individual must be able to link his own work to the **overall objectives** of the organization and understand how he contributes to the success of the organization.

vi) The employee must believe that the job leads to some form of desirable future. However this does not necessarily mean that there should be the opportunities for promotion or a specifically defined career path.

(b) The difference between Incremental and Transformational change is that:

i) **Incremental Change** is a fairly small change. This occurs without the need for major organizational restructuring. Incremental change should not be a serious problem for management.

ii) **Transformational Change** is a major change that requires a substantial reorganization or restructuring of the organization and its systems. Transformational change has a big effect on the organization the people working in it

(c) The six (6) areas of decision making that should be considered 'strategic' are:

i) Decisions affecting the **long-term direction** that the business should take. Long-term in practice usually means planning and implementing strategies for up to the next five years or longer.

ii) Decisions about the **scope of an organization's activities**. This includes decisions about the overall and purpose of the organization and the activities it should undertake.

iii) For commercial business organizations, strategy should be about gaining some kind of **advantage in competition**. Business operates in a competitive environment.

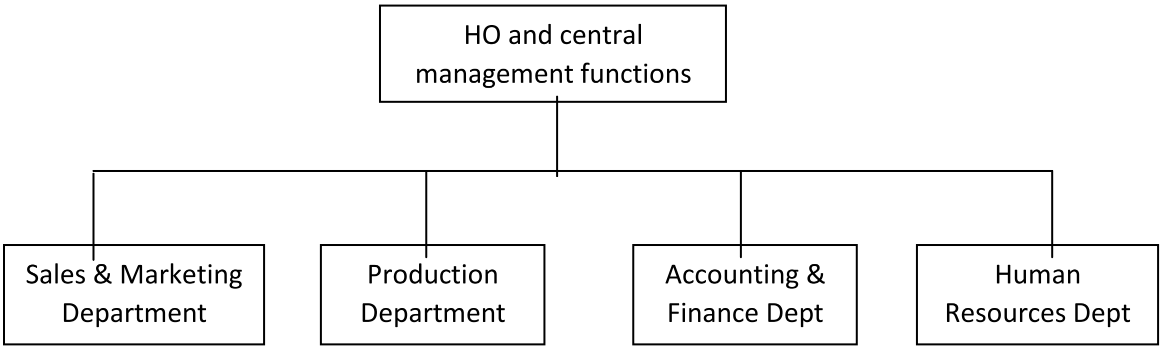
iv) Strategic management in some organizations takes the form of **adapting the activities of business to fit the environment** in which it operates. An example of this is making decisions to change products and services that the business produces to meet the changing requirements its customers.

v) A different approach to strategy is to **exploit unique resources** and the **special competences** of its employees.

vi) Strategic decisions are affected by the **values and expectations** of all the organization's **stakeholders** and should take into consideration the expectations of the major stakeholders.

SOLUTION THREE

(a) **Design a simply functional structure (Bureaucracy) of any hypothetical organization.**



Departments may also be divided into separate specialist functions. Large functional organizations are also referred to as bureaucracy structured.

(b) **Define a matrix organization structure and write down two (2) advantages and two (2) disadvantages of the matrix structure**

Definition: A matrix structure is an organisational design that assigns specialists from functional departments to work on one or more projects that are led by a project manager.

- Decision making is decentralised to a level where information is processed properly and relevant knowledge applied.
- Extensive communications networks help develop process large amounts of information.
- With decisions delegated to appropriate levels (project level) higher management levels are not overloaded with operational decisions.
- Resource utilisation is efficient because key resources are shared across several important programmes or products at the same time.

- Confusion can arise because people do not have a single superior to whom they have primary responsibility.
- The design encourages managers who have subordinates to jockey for power.

- The mistaken belief can arise that matrix management is the same thing as group decisions making – in other words everyone must be consulted for every decision.
- Too much democracy can lead to not enough action.

(c) Define the terms "division of work, Discipline, Equity, Unity of direction, and Initiative" according to Henri Fayol.

i) **Division of work-** work should be divided into jobs with separate areas of activity.

ii) **Discipline-** Exercise of discipline at work place is an outward mark of respect for agreements between management and its members

iii) **Unity of Direction-** One plan to direct the unity of action must be available for everyone to engage in.

iv) **Equity**- there should be fairness and equity of treatment in dealing with employees thought out all levels of the organization.

v) **Initiative**- employees at all levels can perform with enthusiasm and energy if they are allowed to use their initiative in the work they do.

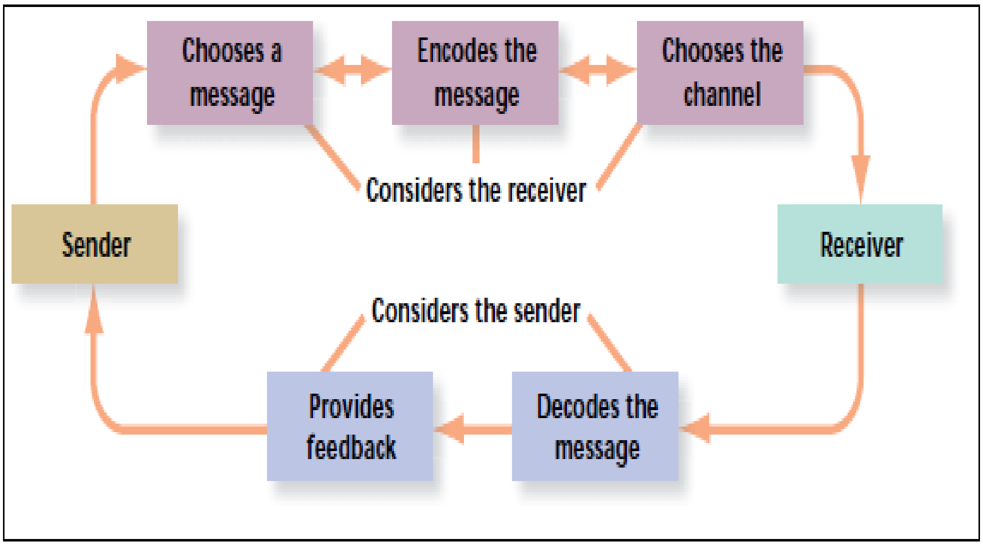
SOLUTION FOUR

(a) **Define organization culture**

Any of the following:

- 'The collection of traditions, values, policies, beliefs and attitudes that constitutes a pervasive context for everything we do and think in an organization.' (Mullins)
- 'a pattern of beliefs and expectations shared by the organization's members, and which produce norms which powerfully shape the behavior of individuals and groups in the organization' (Schwartz and Davies)
- ' the way we do things around us' (Schein)

(b) **Draw a basic communication cycle showing how information flows from the sender to the receiver**.



(c) **Use the needs theory of motivation to show how employees are motivated starting with the most basic need**.

i) **Physiological Needs.** These include needs for satisfaction of hunger and thirst, need for sleep, sensory pleasures, activities, material behaviour and sex desire.

ii) **Safety Needs.** These include safety and security, freedom from pain or threat of physical attack, protection from danger or deprivation and the need for predictability and orderliness.

iii) **Love or Social Needs.** These include needs for affection, sense of belonging, social activities, friendship, and giving and receiving of love.

iv) **Esteem or Ego Needs.** These include self-respect and esteem of others. Self-respect involves the desire for confidence, strength, independence and freedom and achievement. Esteem of others means reputation or prestige, status, recognition, attention and appreciation.

v) **Self-Actualisation Needs.** This is the development and realisation of one's full potential. Maslow regards this as what humans can be, they must be, becoming everything that one is capable of becoming.

(d) **List two advantages of computers (IT) in and organization.**

Advantages of IT-

- Helps to make fast decisions e.g. calculations are fast if automated
- Communication is fast and easy/ cheap
- Its easy to find markets for products
- Makes it easy to buy products

<u>SOLUTION FIVE</u>

(a) ***Explain the three main stages of job recruitment and selection process.***

i) **Defining the requirements ,**such as the preparation of Job descriptions, job specification and personal specifications

ii) **Attracting applicants**, this involves advertising or notifying people about the job vacancy in some way, or enlisting the help of specialist job recruitment agency, and then receiving applications from individual who are interested in the job.

iii) **Selecting**, the appropriate candidates for the job, from among the applicants through interviews or tests.

(b) ***Identify and illustrate four (4) advantages of internal recruitment.***

i) It is usually less costly to recruit internally

ii) A policy of internal promotion may improve the morale and motivation within the organization.

iii) Internal promotion provides a career development opportunity to talented individuals who might otherwise leave the organization.

iv) Internal applicants understands the organization and its culture

v) Full Induction of the internal employee might not be needed

SOLUTION SIX

a) ***Explain any Six (6) principles that can be applied in an organization to enhance good governance***.

Good governance in an organization can be applied by considering the following key principles:

- ***Structure and Composition*** - An executive committee needs to have the right group of people, having particular regard to each individuals background, skill and experience, and how the addition of an individual buils the collective capability and effective functioning of the committee.
- ***Roles and Responsibilities*** – there should be clarity regading individual responsibilities, organizational expectations of executives and the role of executive and steering committees
- ***Culture and ethics*** – The executive committee sets the tone for ethical and responsible decision-making throughout the organization.
- ***Purpose and strategy*** – the executive committee plays an important role in setting the vision, purpose and strategies of the organization, helping the organization to understand them and adapting the plans to implement them.
- ***Risk Management*** - By putting in place a appropriate system of risk oversight and internal controls, executive committees can help to increase the likelihood that their organizations will deliver on their purpose.
- ***Organisational performance*** – the executive committee determines and assesses appropriate performance categories and indicators for the organization.
- ***Committee Effectiveness -*** effectiveness of an organization committee can be enhanced through; careful forward planning of board-related activities, efficient committee meetings, regular assessments of organisational performance, effective executive succession plans.
- ***Accountability –*** ensuring that the executive committee promotes the flow of information to the board that aids decision-making, transparence and accountability to external stakeholders and employee and the integrity of financial statements and other key information safeguards.

b) ***Explain the concept of Ethics and Corruption in governance.***

Ethics – is the study of moral obligations involving the distinction between the right and the wrong. Business Ethics sometimes referred to as management ethics or organisational ethics narrows the frame of reference to productive organizations. Ethics play a major role in the prevention of frauds such as bribery and embezzlement. Therefore ethics creates a cornerstone of corporate governance.

Corruption – is a form of dishonest or unethical conduct by a person entrusted with a position of authority, often to acquire personal benefit. Corruption may include many activities such as bribery and embezzlement. A culture must be built on the corporate framework to instill ethics that will prevent corruption.

END OF SOLUTION

CA ZAMBIA PROGRAMME EXAMINATIONS

KNOWLEDGE LEVEL

CA 1.6: BUSINESS COMMUNICATION

WEDNESDAY 12 DECEMBER 2018

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 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.

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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.

Section A – (COMPULSORY)

Attempt all ten (10) multiple choice questions

QUESTION ONE

1.1 Which one of the following is a major role of an information system?

A. Supporting business processes

B. Controlling purposes

C. Recording transactions

D. Planning purposes (2 marks)

1.2 What is the other name for the computer's memory called?

A. A working area

B. Memory input storage

C. Internal storage

D. Memory output storage (2 marks)

1.3 Which one of the following sets classify the four (4) main types of IT solutions to security concerns (Technical controls).

A. Recovery, backup, validation and documentation

B. Validation, authorisation, Technical controls and documentation

C. Backup, documentation, authorization and validation.

D. Authorisation, documentation, backup and recovery (2 marks)

1.4 Which of the following sets best represents the three (3) fundamental components of a Decision Support System (DSS)?

A. Data Base Management System (DBMS), Dialogue Generation and Management Systems (DGMS) and Office Automation and Management Systems (OMS)

B. Model Based Management System(MBMS),Data Base Management System (DBMS) and Knowledge Work Systems (KWS)

C. Model Based Management System (MBMS), Data Base Management System (DBMS) and Dialogue Generation and Management Systems (DGMS)

D. Dialogue Generation and management System (DGMS), Data Base Management System (DBMS) and Transaction Processing System)

(2 marks)

1.5 Which type of a virus copies itself from one machine to another machine in a network?

A. Trojan
B. Worms
C. Hoaxes
D. Logic bomb (2 marks)

1.6 Give an example of a barrier to communication in the following?

A. Distance
B. Circumstances of the receiver of the message
C. Status
D. Complexity of the matter (2 marks)

1.7 Give two roles of a receiver of the message in the following communication statements:

A. Encode the message and then prepare feedback
B. Send feedback and then encode the message
C. Receive the message and then decide it
D. Receive the message and then encode it (2 marks)

1.8 Which of the following can be used as a checklist to help good communication to be achieved?

A. Keeping information short and simple
B. Completeness of information
C. Communicating what you can in the fewest possible words
D. Emphasizing on one or a few points at a time (2 marks)

1.9 Which one of the following is a factor that influences the choice of medium?

A. Reliability of the channel
B. Oral communication
C. Written communication
D. Language (2 marks)

1.10 Why is a subject line mandatory in emails, letters and memos?

A. To save time by not reading the whole message
B. To help the receiver know whether the message is important or not
C. To quickly orient the receiver in the document
D. To know the seriousness of the message (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)

Mukukwa limited is an accounting firm that offers some accounting services. For the past six months the company has been having difficulties with managing its information systems. This resulted into inefficient work practices and loss of huge income because most clients have opted for similar services elsewhere.

In order to remain competitive in business, the company has decided to purchase off-the- shelf application software. As a supervisor, you wish to share the information about application packages to your junior employees through an in-house seminar that will take place in a couple of weeks

Required:

(a) Write a memorandum to all members of staff in the accounts department inviting them for an in-house seminar on application packages. The information in the memo should also include two advantages of using off-the shelf application packages.

(16 marks)

(b) Supervisors normally use on the job training to train subordinates. State the four (4) steps that are involved when taking on the job training. (4 marks)

[Total: 20 marks]

<u>QUESTION THREE</u>

(a) Most organisations are now using Information Technology and Information System for efficiency and competitive advantage.

Required:

(i) Define and distinguish the differences between Knowledge Workers Systems (KWS) and Executive Information System (EIS) (6 marks)

(ii) Match the following information system to the level of management it's used

(i) Order Processing (2 marks)
(ii) Market research to identify area of competitive advantage (2 marks)
(iii) Investment planning (2 marks)
(iv) CAM and CAD (2 marks)

(b) You have been asked to acquire a computer hardware for your organisation and the following specifications about the computer hardware has been advertised.

(i) 4 GHZ
(ii) 500 GB
(iii) 2 GB RAM

Required:

Briefly explain what the above specifications mean. (6 marks)

[Total: 20 Marks]

QUESTION FOUR

(a) For the computer system to function properly it requires software and hardware

(i) Distinguish between Software and Hardware (4 marks)

(ii) Describe three functions of an operating system (6 marks)

(b) Microsoft Office Package is one of the most common application packages found in offices today. You have seen a job advert for an accounts assistant and knowledge of application package is a must

Required:

Name the parts labeled below in Fig 1.0

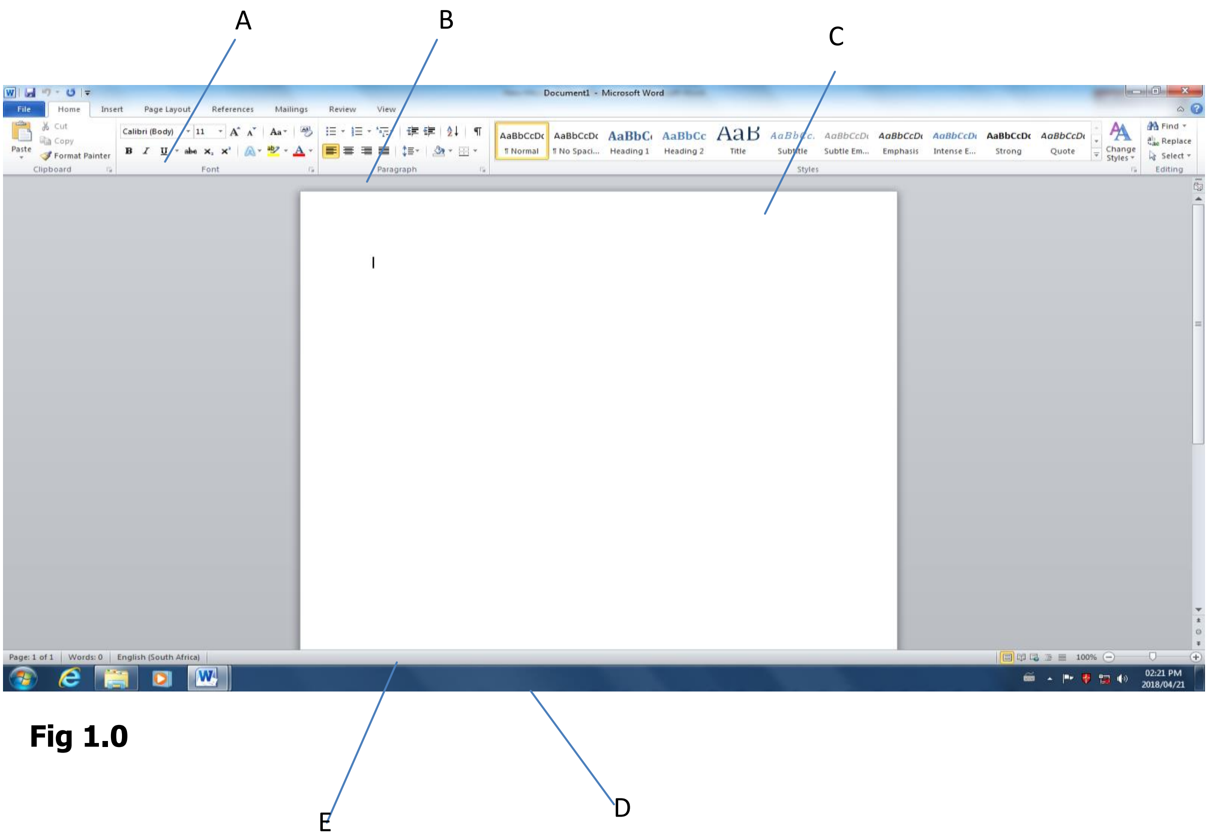


Fig 1.0

(10 Marks)

[Total: 20 Marks]

QUESTION FIVE

You are a supervisor in the accounts department at Maka Communication Technology Company. You offer Information Technology services to corporate companies. You have observed that staff in your department fail to communicate clearly and effectively to your clients and sometimes to even fellow members of staff. As a result, wrong or distorted information is acted upon. In a recent incident, Mr Kabwe, a proprietor of Kabwe & son's company decided to press legal charges against your company because a wrong business transaction which was carried out even after clear instructions were provided by a client. This resulted into loss of revenue from your organisation due to law suits.

Required:

(a) Briefly explain each of the 7 C's of effective communication that can be used as a checklist to help good communication to be achieved among staff in your department.
(14 marks)

(b) How would you overcome the following barriers to effective communication

(i) Wrong medium (2 marks)

(ii) Language (2 marks)

(i) Information overload (2 marks)

[Total: 20 marks]

QUESTION SIX

You work for Chimwemwe limited Company as accounts personnel. You have recently observed that most of your clients owe the organisation huge amounts of money. Some of them have not cleared the outstanding balances in the past three months. This has resulted in inefficiencies and delay in providing quality services to customers.

In order to effectively serve the customers and enhance the company's reputation, your supervisor has requested you to remind customers to pay their remaining balances so that cash inflows are increased for better service delivery.

Required:

(i) Write a letter to one of your major clients with a large amount of outstanding balance reminding the client to settle the debt owed to your organization.

(15 marks)

(ii) Business letters are part of written communication. State any five (5) characteristics of written communication. (5 marks)

[Total: 20 marks]

END OF PAPER

CA 1.6: BUSINESS COMMUNICATION – SOLUTIONS

SECTION A -MULTIPLE CHOICE ANSWERS

SOLUTION ONE

1.1	**A**	Supporting business processes
1.2	**C**	Internal storage
1.3	**D**	Authorisation, Documentation, backup and recovery
1.4	**C**	Model based management system (MBMS),Data Base Management System (DBMS) and Dialogue Generation and Management systems(DGMS)
1.5	**B**	Worms
1.6	**C**	Status
1.7	**C**	Receive the message and then decode it
1.8	**A**	Keeping information short and simple
1.9	**A**	Reliability of the channel
1.10	**C**	To quickly orient the receiver in the document

COMPULSORY QUESTION, SUGGESTED SOLUTIONS

SOLUTION TWO

(a) MUKUKWA LIMITED COMPANY

MEMORANDUM

To : All accounts staff

From : The assistant accountant

Date : Any **date during exams**

Notice to attend a one day in house seminar

For the past six months, it has been observed that the company experienced difficulties in managing work operations .This resulted in low productivity levels and loss of clients. In order to remain competitive in business, the company decided to purchase some software application packages.

The advantages of such software application are that they carry out specific processing applications or services required for our clients and they are cheaper and available in most cases. They are also likely to be reliable as most of the problems (bugs) will have been found and corrected already.

In line with the above information, you are therefore, invited to attend a one day in-house seminar on the software application packages. The seminar will take place on Friday …….. (any date during exam time) starting at 08; 30 hours to 1600 hours.

You are required to ensure that all the critical routine activities required on that day are attended to before that date in order to avoid any disruptions of normal operations.

For any further clarification you may contact the office of the assistant accountant. You are all encouraged to participate.

Sender's signature

Mr. J.M Ngoma

(b)

(i) Preparing the trainee
(ii) Giving the trainee the necessary Knowledge or information and demonstrating how the job is to be done
(iii) Allowing the trainee to do the job
(iv) Checking or evaluating the trainee's performance

SOLUTION THREE

a)

i) Explain the differences between KWS and EIS

KWS – Knowledge Workers System are information systems that facilitate the creation and integration of new knowledge into an organisation.

- They are found at the knowledge level of the organisational hierarchy.
- The knowledge workers have a professional qualification

whilst

EIS – Executive Information System provide generalised computing and communication environment to senior managers to support strategic decisions. It draws data from the MIS/DSS and allow communication with external sources of information.

(3 marks)

ii) Match the following information system to the level of management using it

a. Order Processing → Operational level
b. Market research to identify area of competitive advantage → Tactical level
c. Investment planning → Strategic level
d. CAM and CAD → Knowledge / Tactical level

b) You have been asked to acquire a computer hardware for your organisation and the following specifications about the computer hardware has been advertised

i) 4 GHZ

This is the measure of the processor speed which measured in cycles per second (frequency). 4 GHz means the processor runs at 4 billion cycles per second

ii) 500 GB HDD

This is measure of the capacity of the internal hard disk drive storage. 500 GB means the hard drive has the capacity of 500 billion bytes of storage space

iii) 2 GB RAM

This is measure of the capacity of the internal memory of the computer (RAM). 2 GB the memory has the capacity to hold 2 billion bytes of storage space

`

SOLUTION FOUR

a) The computer system to function properly requires software and hardware

i) **Distinguish between Software and Hardware**

Software is the name given to programs or sets of programs that tell the computer what to do. They prewritten instructions for the computer to use to carry out its operations whilst hardware are physical components of the computer.
Give examples of each

ii) **Describe three functions of an operating system**

The following are the functions of the operating system:

- Initial setup of the computer once it has booted
- Checking that hardware is properly functioning
- Calling up program files and data files into memory
- Opening and closing of files
- Maintenance of directories (folders) and files
- Controlling input and output devices
- Interpreting and executing computer user commands
- Controlling system security
- Handling of interruptions

iii) Name the parts labelled below in Fig 1.0

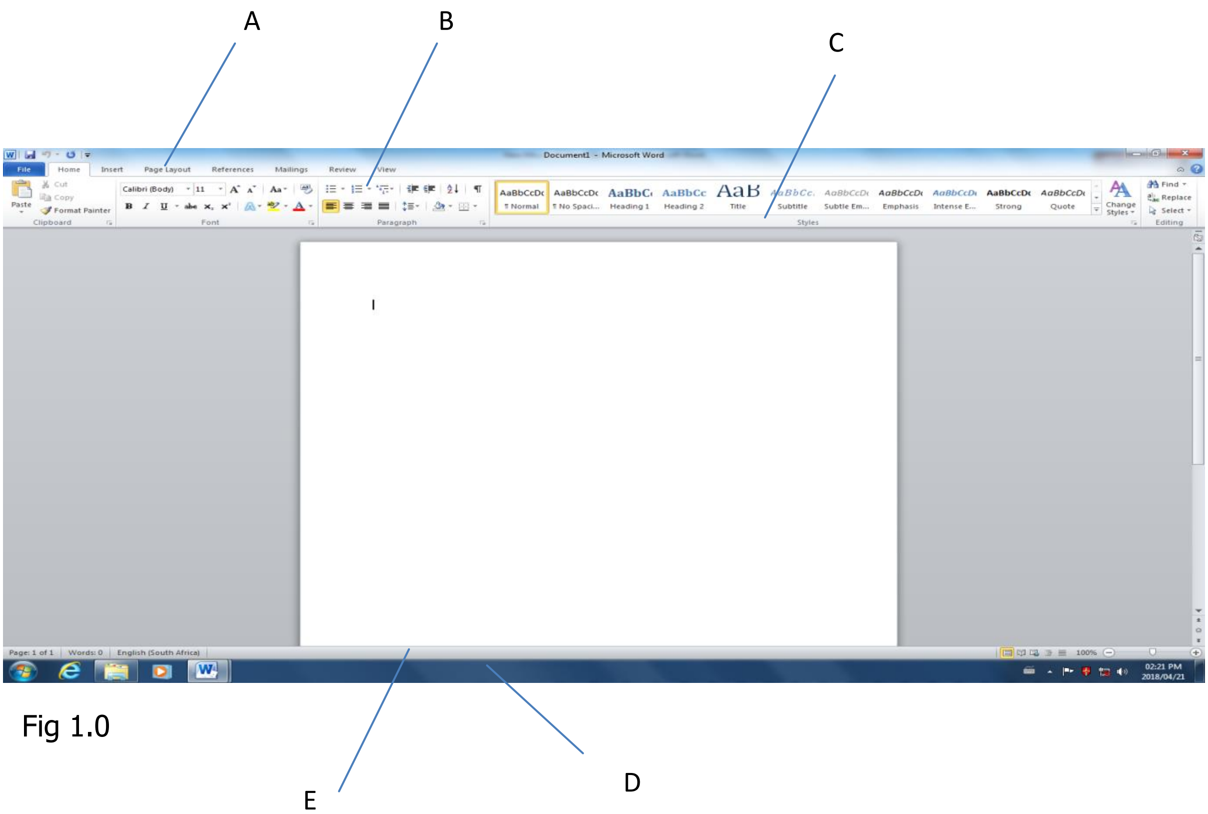


Fig 1.0

A => Formatting Toolbar
B => Formatting Toolbar
C => Document working area
D => task bar
E => status bar

<u>SOLUTION FIVE</u>

(a)

(i) **Completeness** - The information must contain all facts required by the audience. It must have all the relevant information that is needed.

(ii) **Conciseness** – Information must be conveyed in the fewest possible words and save time.it must be brief and to the point

(iii) **Consideration**- in this situation, the audiences' characteristics such as age, education, culture, religion, emotions and so on must be considered.

(iv) **Clear**- Emphasise one or a few points at a time

(v) **Concreteness** – avoid ambiguous words and phrases. Communicate using plain language.

(vi) **Courtesy** – communicate with politeness and friendliness

(vii) **Correctness** – information must be accurate and based on facts

(b)

(i) Wrong medium - by using the correct medium of communication.EG use oral communication to a person who cannot read and write, instead of written communication. (2 marks)

(ii) Language barrier - by using simple or familiar language.

(iii) Information overload - by proving enough information for the recipient to understand. It should not be too much or very little. It should also be tailored to the needs of the receiver.

SOLUTION SIX

(a)

Chimwemwe Limited Company
Po. Box 31375
Lusaka

Our Ref: CHI/14/07
Your Ref:

Date (any date during exam period)

Mukapa Enterprise
P.o Box 31218
Lusaka

Dear Sir,

Invoice 14235 and outstanding balance of K50, 000

Our records show that you have not made any payment towards the services that you received from our organisation in the past three months. It is for this reason that this letter is being sent as a final remainder to clear the outstanding balance of K50,000 that you are owing our organisation.

According to the terms and conditions of the contract / purchase, full payment should have been made within 30 to 90 days of the purchase date.

You are therefore reminded to remit full payment immediately in order to keep your account with us in good standing and to also to avoid any interests, fees or any legal action against you.

We value the professional relationship we are building with you and we hope to continue doing business with you in future.

If payment has already been sent by the time this letter is received, kindly disregard this message.

Your consideration and quick action in this matter will be highly appreciated.

Yours faithfully

Sender's signature
Mr. P.M. Mungote
Assistant Accountant.

(b)

The characteristics of written communication are:

(i) It has a record for references purposes
(ii) Every recipient gets the same message
(iii) There is no immediate exchange of information or interaction
(iv) It can be used as a reference material
(v) It requires time to prepare a piece of writing

(vi) It provides a basis for action
(vii) Every recipient gets exactly the same information.
(viii) It is a confirmation of what was orally discussed

CHARTERED ACCOUNTANTS EXAMINATIONS

CA ZAMBIA - APPLICATION LEVEL

2.1: FINANCIAL REPORTING

MONDAY 10 DECEMBER 2018

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 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.

SECTION A

This question is compulsory and must be attempted.

QUESTION ONE

Paul holds investments in Saul and Abraham. Draft financial statements of Paul Group for the year ended 31 March 2018 are as follows:

	Paul	**Saul**	**Abraham**
	K'000	**K'000**	**K'000**
Assets			
Non-current Assets			
Property, Plant and Equipment (note 2)	427,200	400,000	352,000
Other investments (note 9)	100,000		
Investments (notes 1 and 3)	423,358	Nil	Nil
Total Non-current Assets	950,558	400,000	352,000
Current Assets			
Inventories (note 4)	136,000	80,000	64,000
Trade Receivables (note 5)	120,000	72,000	57,600
Cash and Cash Equivalents	22,000	16,000	12,800
Total Assets	**1, 228,558**	**568,000**	**486,400**
Equity and Liabilities			
Equity Shares of K1 each	312,000	160,000	128,000
Retained Earnings	449,868	248,000	160,000
Total Equity	761,868	408,000	288,000
Non-current Liabilities			
Loan Notes	152,000	72,000	80,000
Deferred Consideration (note 1)	99,172	Nil	Nil
	1,013,040	480,000	368,000
Current Liabilities			
Trade and Other Payables (note 5)	89,918	72,000	86,400
Short-term Borrowings	125,600	16,000	32,000
Total Equity and Liabilities	**1, 228, 558**	**568,000**	**486,400**

Additional information:

1. On 1 April 2016, Paul acquired 120 million shares of Saul's shares when Saul's retained earnings were K128 million, on the following terms:

   (a) Paul issued 2 shares for every 3 shares acquired in Saul. On the date of this acquisition, the market value of Paul's single share was K3.50; while that of Saul was K2.

   (b) Paul incurred K2 million directly attributable (due diligence) costs on acquisition of Saul. This amount was included in the carrying amount of the investment in Saul in Paul's own statement of financial position.

   (c) On 31 March 2019, Paul was to make a deferred cash payment of K1 per Saul share acquired. Saul's required rate of return at the date of acquisition was estimated at 10% per annum.

   (d) Agreed to pay a further amount on 1 April 2025 contingent upon the post-acquisition performance of Saul. At the date of acquisition the fair value of this contingent consideration was assessed at K5 million but by 31 March 2018 it had become clear that the amount due would be K6 million (Ignore discounting).

   Paul has recorded only the share exchange consideration, directly attributable costs and provided for the deferred consideration.

2. The directors of Paul carried out a fair value exercise to measure identifiable assets and liabilities of Saul at 1 April 2016. The following matters emerged:

   (a) Plant and equipment having a carrying value of K160 million had an estimated fair value of K176 million. At the time, the estimated future economic life of the plant was five years and this estimate remains valid. Saul disposed of 20% of this plant and equipment since 1 April 2016.

   (b) An item of inventory's carrying value was K4.8 million less than its estimated market value. At 31 March 2018, this inventory had all been sold.

3. Paul acquired 51.2 million equity shares of Abraham at its date of incorporation and paid a consideration of K51.2 million in cash. This investment is recognised in Paul's draft financial statements at cost and no goodwill was computed.

4. The figure for inventories in draft financial statements of Saul and Abraham at 31 March 2018 includes components purchased from Paul during the year at a cost of K24 million to Saul and K20 million to Abraham. Paul had applied a mark-up of 25% on this sale. Ignore deferred tax implications.

5. Trade receivables of Paul include K12.8 million and K9.6 million due from Saul and Abraham respectively; while Trade payables of Saul and Abraham include equivalent amounts payable to Paul.

6. An impairment test at 31 March 2018 on the consolidated goodwill concluded that it should be written down by K5 million.

7. It is group policy to value non-controlling interests in subsidiaries at the date of acquisition at fair value.

8. Neither Saul nor Abraham issued shares in the post-acquisition period. Further, no dividends were paid during the year by any of the companies.

9. The other investments are included in Paul's statement of financial position above at their fair value on 31 March 2018.

10. Incomes and expenses should be deemed to accrue evenly throughout the year.

Required:

(a) Prepare Paul's Consolidated Statement of Financial Position as at 31 March 2018.

(35 marks)

(b) Explain why it is necessary to eliminate unrealised profits when preparing group financial statements. (3 marks)

(c) Explain why consolidated financial statements are useful to the users of financial statements (as opposed to just the parent company's separate (entity) financial statements).

(2 marks)

[Total: 40 marks]

SECTION B

Attempt any three (3) questions in this section

QUESTION TWO

ZAMRATIO sells spare parts for motor vehicles through retail shops situated throughout the country and intends to open a foreign retail shop in Zimbabwe. Over the last six years, it has experienced declining profitability and is wondering if this is a problem for the entire industry to which it belongs.

The financial statements of ZAMRATIO for the year ended 31 December 2017 are:

Statement of profit or loss

	K'000	**K'000**
Revenue		224,000
Opening inventory	33,200	
Purchases	175,600	
Closing inventory	(40,800)	
Cost of sales		(168,000)
Gross profit		56,000
Operating expenses		(39,200)
Finance costs		(3,200)
Profit before tax		13,600
Income tax		(4,000)
Profit for the year		9,600

Statement of financial position

	K'000	**K'000**
Non-Current assets		
Property, plant and equipment		122,400
Current assets		
Inventory	40,800	
Bank	4,000	
		44,800
Total assets		167,200
Equity and liabilities		
Equity		
Equity shares of K1 each		60,000

Revaluation surplus		12,000
Retained earnings		34,400
Shareholders funds		106,400
Non-current liabilities		
10% loan notes		32,000
Current Liabilities		
Trade payables	21,600	
Current tax payable	7,200	
		28,800
Total equity and Liabilities		167,200

Required:

(a) Calculate for ZAMRATIO, the following eight ratios; (12 marks)

(i) Asset turnover
(ii) Gross profit margin
(iii) Operating profit margin
(iv) Average inventory turnover
(v) Current ratio
(vi) Trade payables payment period
(vii) Gearing
(viii) Return on Capital Employed (ROCE)

(b) When performing an analytical review of financial statements of listed entities, the following key indicators are often used:

- Return on capital employed (ROCE)
- Gross margin
- Profit margin (profit for the year/revenue)
- P/E ratio
- Gearing (long term borrowings/equity)

Required:

Discuss, with specific reference to the five ratios above, the extent to which entities within the same business sector can be validly compared with each other. Include in your discussion the limitations of both same sector and international comparisons.

(8 marks)

[Total: 20 Marks]

QUESTION THREE

The Directors of Twashuka, a private company based in central part of Kawambwa District, are worried about the challenging market conditions which the company is facing. The market is volatile and liquid. The Central Government is injecting liquidity into the economy. The Directors are concerned about significant shift towards the use of Fair values in financial statements. IFRS 9 Financial instruments in conjunction with IFRS 13 Fair value measurement define and require the initial measurement of financial instruments to be at Fair value. The Directors are uncertain of the relevance of fair value measurements in these conditions. Further they would like advice on accounting treatment and presentation of financial instruments and earnings per share as permitted by their respective International Financial Reporting Standards (IFRSs).

(a) IFRS 13 Fair Value Measurement gives guidance on the measurement of fair value where a specific IFRS requires or permits fair value as a measurement basis. It provides a single IFRS framework for measuring fair value and requires disclosures about fair value measurement. The Standard defines fair value on the basis of an 'exit price' notion and uses a 'fair value hierarchy', which results in a market-based, rather than entity-specific, measurement.

Required:

Describe the general requirements of IFRS 13 relating to the determination of fair value and fair value hierarchy. (8 marks)

(b) Financial instrument is any contract that gives a financial asset to one party (an entity) and a financial liability or equity instrument to the other party. It may be helpful to think of a financial instrument as a piece of paper, as contracts are normally written down e.g an invoice that company issues following the sale of goods. On 24 July 2014, the IASB issued the final version of IFRS 9 Financial instruments, incorporating a new expected loss impairment model and introducing limited amendments to the classification and measurement requirements for financial assets. The IFRS is built on a logical, single classification and measurement approach for financial assets that reflects the business model in which they are managed and their cash flow characteristics.

Required:

Explain the Initial recognition, initial measurements and classifications which IFRS 9 identifies for financial assets and the basis of measurement which is appropriate for each classification. You should also identify any exceptions to the normal classifications which may apply in specific circumstances.

(6 marks)

(c) Twashuka issued a K10 million 6% convertible bond on 31 March 2018 at its par value. The bond is redeemable at par on 31 March 2023 or can be converted at that date on the basis of twenty ordinary K1 shares for every K100 of bond held.

Required:

Explain how this bond issue would be initially recorded in Twashuka's statement of financial position as at 31 March 2018, in accordance with IAS 32 *Financial Instruments:*

(2 marks)

(d) Twashuka also issued 4 million K1 cumulative redeemable preference shares on 1 April 2017 at their par value. The shares carry a fixed coupon rate of 6%, which is payable annually in arrears. They are redeemable on 31 March 2021 at a premium of K300,000. Twashuka incurred a transaction cost on 1 April 2017 of 1% of the issue proceeds. The effective interest rate associated with the shares is approximately 7.97%.

Required:

In accordance with IAS 32 Financial Instruments: Presentation and IFRS 9 Financial Instruments:

(i) Prepare the journal entries to record the issue of the shares and the associated transaction costs; and (2 marks)

(ii) Calculate the carrying value of the preference shares to be included in Twashuka's statement of financial position as at 31 March 2018. (2 marks)

[Total: 20 Marks]

QUESTION FOUR

ZAMCASHFLOW is a publicly listed company at Lusaka stock exchange. As trainee financial accountant, you have been presented with the following summarized financial statements of ZAMCASHFLOW.

Statement of profit or loss and other comprehensive income for the year ended 30 September 2018

	K'000
Revenue	417,150
Cost of sales	(354,380)
Gross profit	62,770
Operating expenses	(52,230)
Profit from operations	10,540
Finance costs	(4,045)
Profit from operations	6,495
Income tax expense	(3,360)
Profit for the year	3,135
Other comprehensive income:	
Gains on property revaluation	1,000
Total comprehensive income	4,135

Statement of financial position as at 30 September

	2018		2017	
Assets	**K'000**	**K'000**	**K'000**	**K'000**
Non-current Assets				
Property, plant and equipment	81,520		69,590	
Intangible assets	7,195		8,825	
		88,715		78,415
Current Assets				
Inventories	54,655		47,400	
Receivables	22,145		19,460	
Cash and cash equivalents	18,290		37,590	
		95,090		104,450
Total Assets		**183,805**		**182,865**
Equity and Liabilities				
Equity				
Equity shares of K1 each	2,250		2,000	
Share premium	8,000		7,500	
Revaluation surplus	1,000		Nil	
Retained earnings	44,755		44,120	
		56,005		53,620
Non-current Liabilities				
10% Loan note	Nil		9,280	
12% Loan note	39,715		Nil	
Deferred tax	1,170		540	
		40,885		9,820
Current Liabilities				
Trade payables	72,245		116,035	
Bank overdraft	10,615		Nil	
Taxation	1,500		1,250	
Provision on warranties	2,555		2,140	
		86,915		119,425
		183,805		**182,865**

Additional information:

1. During the year, ZAMCASHFLOW plc sold an item of plant with a carrying amount of K4,825,000 at a loss of K250, 000. Depreciation charge of K11, 975,000 was made to operating expenses for property, plant and equipment in the year ended 30 September 2018.

2. ZAMCASHFLOW plc did not make any bonus issues but an issue of shares for cash on 1 March 2018.

3. There were neither acquisitions nor disposals of intangible assets during the year.

4. Ordinary dividends paid for the year were correctly accounted for as per IAS 32, presentation of financial instruments. Further the company proposed K5,450,000 ordinary dividends.

5. ZAMCASHFLOW plc gives a one year warranty on some of the products it sells. The amounts shown as provision for warranty are an accurate assessment, based on past experience, of the amount of claims likely to be made in respect of warranties outstanding at each year end. Warranty costs are included in cost of sales.

6. The property was revalued by professional valuers for the first time on 30 April 2018.

Required:

Prepare a Statement of Cash flows for ZAMCASHFLOW plc for the year ended 30 September 2018 in accordance with IAS 7: Statement of Cash-flows using the indirect method.

[Total: 20 Marks]

QUESTION FIVE

IAS 37 Provisions, Contingent Liabilities and Contingent Assets was issued in 1998. Prior to its publication, there was no International Accounting Standard that dealt with the general subject of accounting for provisions. The objective of IAS 37 is to ensure appropriate recognition criteria and measurement bases are applied to provisions, contingent liabilities and contingent assets. IAS 37 also ensures that sufficient information is disclosed in the notes to financial statements to enable users understand their nature, timing and amount.

Zampower, a private limited company prepares its financial statements to 30 September each year. On 1 April 2018, Zampower completed the construction of a power generating facility in Muchinga province and immediately obtained a license from Zambia Environmental Management Agency (ZEMA). The total construction cost was K20 million. The facility was capable of being used from 1 April 2018 but Zampower did not bring the facility into use until 30 June 2018. The estimated useful life of the facility at 1 April 2018 was 40 years. There is a legal requirement by ZEMA to restore the land on which power generating facilities stand to its original state at the end of the useful life of the facility. Further, Zampower has a reputation for conducting its business in an environmentally friendly way and has previously chosen to restore similar land even in the absence of legal requirements. The directors of Zampower estimated that the cost of restoring the land in 40 years' time (based on prices prevailing at that time) would be K10 million. A relevant annual discount rate to use in any discounting calculations is 5%. When the annual discount rate is 5%, the present value of K1 receivable in 40 years' time is approximately 14.2 ngwee.

Required:

With reference to IAS 37: Provisions, Contingent Liabilities and Contingent Assets:

(i) Define; Provision, Contingent Liability and Contingent Asset (3 marks)

(ii) State the criteria for recognising provisions in a firm's financial statements. (3 marks)

(iii) Describe guidelines under IAS 37 for measuring provisions to recognise in an entity's financial statements. (3 marks)

(iv) Explain and show how the event would be reported in the financial statements of Zampower for the year ended 30 September 2018. (8 marks)

(v) Briefly discuss complex assets. (3 marks)

[Total: 20 Marks]

END OF PAPER

SECTION A

SOLUTION ONE

(a) Paul Group

Consolidated Statement of Financial Position as at 31st March 2018

Assets	**K'000**
Non-current Assets	
PPE [427,200 + 400,000 + 7,680 FVA (w1)]	834,880
Goodwill (w2)	141,358
Other investments	100,000
Investment in Associate [51,200 + 64,000 (w4) – 1, 600, urp (w4)]	113,600
	1, 189,838
Current Assets	
Inventories [136,000 + 80,000 - 4,800 URP, (w4)]	211,200
Trade Receivables [120,000 + 72,000 - 12,800 intra-group]	179,200
Cash and Cash Equivalents [22,000 + 16,000]	38,000
Total Assets	**1, 618,238**
Equity and Liabilities	
Equity	
Equity shares of K1 each	312,000
Group retained earnings (w4)	570,960
Total Equity	882,960
NCI (w3)	105,470
Non-current Liabilities	
Deferred Consideration (w5)	109,090
Contingent consideration	6,000
Loan notes [152,000 + 72,000]	224,000
Current Liabilities	
Trade & Other Payables [89,918 + 72,000 - 12,800 intra-group]	149,118
Short-term Borrowings [125,600 + 16,000]	141,600
Total Equity and Liabilities	**1, 618, 238,**

Workings for Solution 1: all workings are in K'000

Group structure: **Saul** (120/160)= 75%, therefore a subsidaiary; & NCI = 25%. Abraham is an associate (40%)

(1)

Saul's Net Assets Table	**At Acq**	**At Reporting**
	K'000	***K'000***
Equity Shares Capital	160,000	160,000
Retained Earnings	128,000	248,000
Property, Plant and Equipment*	16,000	7,680
Inventory	4,800	Nil
	308,800	415,680

*NBV of PPE at reporting date is **K7.68 million** (i.e. K16m x $^3/_5$ x 80%).
Post acquisition increase in Net Assets=**K106.88 million** (K415.84 – K308.80).

(2) **Goodwill at acquisition of Saul**

Cost of Investment:	
Share Exchange [75% x 160,000 x $^2/_3$ x K3.50]	280,000
Contingent consideration	5,000
Deferred Consideration [(75% x 160,000 x K1) ÷ 1.1^3]	90,158
Fair Value of NCI [25% x 160,000 x K2.00]	80,000
	455,158
Net assets at acquisition (w1)	(308,800)
	146,358
Less impairment loss	(5, 000)
	141,358

(3) **NCI**

Fair Value at Acquisition (w2)	80,000
Impairment loss (K5,000 x 25%)	(1,250)
25% Share of increase in Net Assets of K106.880 million (w1)	26,720
	105,470

(4) **Group Retained Earnings**

Paul's per question	449,868
Unwinding of Discount of Deferred Consideration	(9,918)
Paul's Share in increase in Net assets [(415,680-308,800) x 75%]	80,160
Paul's Share in Abraham's Post Acquisition Profits [40% x 160,000]	64,000
Unrealised Profit on Sales to Saul [24,000 x $^{25}/_{125}$]	(4,800)
Unrealised Profit on Sales to Abraham [(20,000 x $^{25}/_{125}$) x 40%]	(1,600)
	(1,000)
Increase in contingent consideration	(2,000)
Due diligence costs	(3,750)

Impairment loss (5, 000 x75%)

	570,960

(5) **Deferred Consideration**

At 1 April 2017	99,172
Unwinding of Discount	9,918
	109,090

(6) **Contingent Consideration**

Post change in contingent consideration should be K1, 000.00 should be debited to retained earnings.

(7) **Due diligence costs**

K2 million should be expensed as per revised IFRS 3, business combinations.

(b) Unrealised profits arise when group companies trade with each other. In their own individual company accounts, profits and losses will be claimed on these transactions, and goods bought from a fellow group company will be recorded at their invoiced cost by the purchaser. However, consolidated accounts are drawn up on the principle that a group is a single economic entity. From a group point of view, no transaction occurs when goods are traded between group companies, and no profits or losses arise. Revenue and profits will only be claimed when the goods are sold onto a third party outside of the group.

(c) Usefulness of consolidated financial statements.

The main reason for preparing consolidated accounts is that groups operate as a single economic unit and it is possible to understand the affairs of the parent company without taking into account the financial position and performance of all companies it controls. The Directors of the parent company should be held fully accountable for all the money they have invested on the shareholders behalf. The parent company's individual financial statements only show the original cost of the investment and dividends received from any subsidiaries, not a full picture. This hides the true value and nature of the investment in the subsidiary, and could be used to manipulate the reported results of the parent. In addition, goodwill can only be quantified and reported if consolidated accounts are prepared and fair value of assets controlled by the group is only taken into account through consolidation and thereafter non-controlling interest is taken into account

Further, without consolidation, assets and liabilities of the subsidiary are camouflaged. Hence, consolidation reveals the underlying performance and profitability of the group as a whole.

SOLUTION TWO

a) ZAMRATIO's equivalent ratios to those of Industry

(i) **Asset turnover:** Sales/Capital employed = 224,000/(167,200 – 28,800)
= **1.6 times**

(ii) **Gross profit margin:** Gross profit/sales x 100 = 56,000/224,000 x 100
=**25%**

(iii) **Operating profit Margin:** Operating profit/sales x 100 = 16,800/224,000 x 100
=**7.5%**

(iv) **Average inventory turnover:** Cost of sales/Average inventory
= 168,000/ (33,200 + 40,800)/2

=**4.5 times**

(v) **Current ratio:** Current assets/current liabilities = 44,800/28,800
= **1.6:1**

(vi) **Trade payables payment period:** Trade payables/credit purchases x 365 days
= 21,600/175,600 x 365 days
= **45 days**

(vii) **Gearing:** Prior charge capital/prior charge capital + shareholder's funds x 100
=32,000/32,000 + 106,400 x 100
=**23%**

(viii) **ROCE:** Operating profit/capital employed x 100 = (13,600 + 3,200)/ (138, 400) x100
=**12.1 %**

b) Limitations

Limitations of same sector comparison

The accounting policies that an entity selects can impact on ratios. The company could be applying different accounting policies from other companies in the sector rendering co(mparison inappropriate. For example, an entity that revalues PPE will have higher depreciation charges than an entity that doesn't revalue, which will reduce profit margins. The creation of a revaluation reserve also boosts equity and as a result gearing will come down. This could mask significant levels of borrowings. Further, for example, ZAMRATIO revalued its PPE, other companies may have not but could have carried them at historical cost. Revaluation increases capital employed and reduces ROCE and asset turnover.

Entities could be operating at different ends of the sector – low price/high volume versus luxury items with high sales prices. This means that their profit margins are not likely to be comparable. ZAMRATIO's performance could be drawn from different accounting periods to those of industry, thereby distorting performance especially where goods traded could be subject to seasonal variations.

Sometimes, items used to calculate certain ratios may differ from one company to another, especially ROCE, rendering comparison inappropriate.

Many entities are classified as being in the same sector but some might have a range of activities within the business and as a result could have quite different margins (some large supermarkets now offer insurance and other financial services) within these divisions and be exposed to different kinds of risks.

The size of the entity could impact the margins. Larger entities may be benefiting from economies of scale which will improve profit margins.
The classification of costs such as depreciation between cost of sales and administrative costs could impact gross profit margins specifically.

The age of the business could impact on the P/E ratio, which is often an indication of how risky the market feels the entity is. A new entity with a minimum track record may have a lower P/E ratio than entity might also appear to have a higher level of gearing, because retained reserves will be relatively low compared to the level of borrowing. P/E ratios are also often impacted by factors outside of the control of the entity.

Sector averages may not provide a good basis for company performance with a single entity as these are just averages which do not mean any single entity performance

Limitations of international comparisons
Different environments from which companies operate distort comparison

Preparing financial statements using different accounting standards is likely to have an impact on the financial ratios. Different measurement rules for major elements like PPE, inventories and provisions are likely to impact on profit margins and gearing. In addition, differences in the tax regimes that entities are subject to would affect the comparison of the profit margin.

The entities being compared may also be operating in different economic environments with different cultural pressures – minimum wage, quotas or local taxes on goods shipped in or out of the country. This will affect the margins.

Entities being compared may be listed on stock markets with quite different levels of liquidity. A small more illiquid market may have lower share prices as there is less activity in the market. This will in turn affect the P/E ratio reducing comparability between it and an entity listed on another market.

The cost of borrowing is likely to be different and therefore an entity situated in a low interest country might choose to have a higher level of gearing than one situated in a high interest country. This may reduce comparability as some entities will be impacted more than others.

ZAMRATIO could be operating with different risks rendering performance comparison inappropriate.

SOLUTION THREE

(a)
IFRS 13 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 objective of a fair value measurement is to estimate the price at which an orderly transaction to sell the asset or to transfer the liability would take place between market participants at the measurement date under current market conditions. The IFRS applies to IFRSs that require or permit fair value measurements or disclosures about fair value measurements (and measurements, such as fair value less costs to sell, based on fair value or disclosures about those measurements), except in specified circumstances.

A fair value measurement requires an entity to determine all of the following:

1. the particular asset or liability that is the subject of the measurement (consistently with its unit of account)
2. for a non-financial asset, the valuation premise that is appropriate for the measurement (consistently with its highest and best use)
3. the principal (or most advantageous) market for the asset or liability
4. the valuation technique(s) appropriate for the measurement, considering the availability of data with which to develop inputs that represent the assumptions that market participants would use when pricing the asset or liability and the level of the fair value hierarchy within which the inputs are categorised.

IFRS 13 provides the guidance on the measurement of fair value, including the following:

An entity takes into account the characteristics of the asset or liability being measured that a market participant would take into account when pricing the asset or liability at measurement date (e.g. the condition and location of the asset and any restrictions on the sale and use of the asset)

Fair value measurement assumes an orderly transaction between market participants at the measurement date under current market conditions.

Fair value measurement assumes a transaction taking place in the principal market for the asset or liability, or in the absence of a principal market, the most advantageous market for the asset or liability.

A fair value measurement of a non-financial asset takes into account its highest and best use.

A fair value measurement of a financial or non-financial liability or an entity's own equity instruments assumes it is transferred to a market participant at the measurement date, without settlement, extinguishment, or cancellation at the measurement date.

The fair value of a liability reflects non-performance risk (the risk the entity will not fulfil an obligation), including an entity's own credit risk and assuming the same non-performance risk before and after the transfer of the liability.

An optional exception applies for certain financial assets and financial liabilities with offsetting positions in market risks or counterparty credit risk, provided conditions are met (additional disclosure is required).

Fair value hierarchy
To increase consistency and comparability in fair value measurements and related disclosures, the IFRS establishes a fair value hierarchy that categorises into three levels the inputs to valuation techniques used to measure fair value. The fair value hierarchy gives the highest priority to quoted prices (unadjusted) in active markets for identical assets or liabilities (Level 1 inputs) and the lowest priority to unobservable inputs (Level 3 inputs).

Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date. Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly. Level 3 inputs are unobservable inputs for the asset or liability.

(b) Financial assets

Initial recognition: a financial asset or financial liability should be recognised in the statement of financial position when the reporting entity becomes a party to the contractual provisions of the instrument.

Initial measurement of financial instruments

All financial instruments are initially measured at cost (fair value) plus in the case of a financial asset not at fair value through profit or loss, transaction costs. Subsequent measurement of financial assets; IFRS 9 divides all financial assets into three classifications, those measured at amortised cost and those measured at fair value through profit or loss and fair value through other comprehensive income.

The classification and measurement of financial assets is largely based on:

The business model for managing the asset, specifically whether or not the objective is to hold the financial asset in order to collect the contractual cash flows. Whether or not the contractual cash flows are solely payments of principal and interest on the principal amount outstanding. Where the business model for managing the asset is to hold the financial asset in order to collect the contractual cash flows and the contractual cash flows are solely payments of principal and interest on the principal amount outstanding, then the financial asset is normally measured at amortised cost.

Where the business model for managing the asset is to both hold the financial asset in order to collect the contractual cash flows and to sell the financial asset and the contractual cash flows are solely payments of principal and interest on the principal amount outstanding, then the financial asset is normally measured at fair value through other comprehensive income. Interest income on such assets is recognised in the same way as if the asset were measured at amortised cost.

In other circumstances, financial assets are normally measured at fair value through profit or loss. Notwithstanding the above, where equity investments are not held for trading, an entity may make an irrevocable election to measure such investments at fair value through other comprehensive income.

Finally an entity may, at initial recognition, irrevocably designate a financial asset as measured at fair value through profit or loss if to do so eliminates or significantly reduces an accounting mismatch.

(c) Presentation of compound instrument.
IAS 32 requires that the equity and liability elements within convertible instruments be initially recognised separately. The initial carrying amount of the liability is estimated by measuring the fair value of a similar instrument that has no conversion element. This is achieved by calculating the

present value of the future cash flows associated with the instrument assuming that it is not converted on redemption (ie: the interest and principal repayment cash flows) discounted at the prevailing market rate for a similar instrument without conversion rights. The difference between this amount and the proceeds of issue (ie: the residual) is recognised as equity.

(d)

(i) Dr Bank K4,000,000
Cr Liability K4,000,000
Being the issue of the shares

Dr Liability K40,000
Cr Bank K40,000
Being the recording of the transaction costs

(ii) The shares will be subsequently measured at amortised cost using the effective interest rate:

(All workings in K000)

	K000
Opening balance – proceeds	4,000
Less transaction costs	(40)
	3,960
Effective interest (7.97% x 3,960)	316
Less dividend paid (6% x 4,000)	(240)
Closing balance as at 31 March 2018	4,036

SOLUTION FOUR

ZAMCASHFLOW Ltd

Statement of Cash-flows for year ended 30 September 2018

	K'000	K'000
Cash Flows from Operating Activities		
Operating profit		6,495
Finance cost		4,045
Depreciation		11,975
Amortisation of intangible asset (7,195 - 8,825)		1,630
Increase in provision for warranty (2,555 - 2,140)		415
Loss on sale of plant		250
Cash-flow from operating activities before changes in w/capital		24,810
Increase in inventory (54,655 - 47,400)		(7,255)
Increase in receivables (22,145 - 19,460)		(2,685)
Decrease in payables (72,245 - 116,035)		(43,790)
Cash used on Operations		(28,920)
Interest paid		(4,045)
Taxation paid (wi)		(2,480)
Net cash used on Operating Activities		**(35,445)**
Cash Flows from Investing Activities		
Purchase of Plant (wii)	(27,730)	
Sale of plant (4, 825 - 2500)	4,575	
Net Cash used in Investing Activities		**(23,155)**
Cash Flows from Financing Activities		
Proceeds from Share Issue (wiii)	750	
Proceeds from bank loan	39,715	
loan repayment	(9,280)	
Dividends paid	(2,500)	
Net Cash flow from Financing Activities		**28,685**
Net Decrease in Cash and Cash Equivalents		**(29,915)**
Cash and Cash Equivalents at Start		37,590
Cash and Cash Equivalents at End (18,290 - 10,615)		**7,675**

Workings

(i) **Taxation Paid**

	K'000		K'000

Cash paid (Bal. figure)	2,480	Balances b/f -IT	1,250
Balances c/f	1,500	- DT	540
- DT	1,170	Income statement	3,360
	5,150		5,150

(ii) **Non-current assets**

	K'000		**K'000**
Balances b/f	69,590	Disposal	4,825
Cash paid (Bal. figure)	27,730	Depreciation	11,975
Revaluation (OCI)	1, 000		
		Balances b/f	81,520
	98,320		98,320

(iii) **Equity and Share premium**

	K'000		**K'000**
Balances c/f -ES	2,250	Balances b/f –ES	2,000
-SP	8,000	-SP	7,500
		Cash received	750
	10,250		10,250

(iv) **Retained earning**

	K'000		**K'000**
Balances c/f -ES	44,755	Balances b/f	44,120
Dividends (Bf)	2,500		
		Profit for the year	3,135
	47,255		47,255

SOLUTION FIVE

(i)

A Provision is a liability of uncertain timing and amount.

A contingent liability is:

a) a possible obligation 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; or
b) a present obligation that arises from past events but is not recognised because:
   i) it is not probable that an outflow of resources embodying economic benefits will be required to settle the obligation; or
   ii) the amount of the obligation cannot be measured with sufficient reliability.
   iii) An entity should not recognise a contingent liability. An entity should disclose a contingent liability, unless the possibility of an outflow of resources embodying economic benefits is remote.

A Contingent Asset is a possible asset that arises from past events and whose existence will be confirmed only by occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the entity. An entity shall not recognise a contingent asset. However, when the realisation of income is virtually certain, then the related asset is not a contingent asset and its recognition is appropriate.

(ii) A provision should be recognised when, and only when:

a) An entity has a present **obligation** (legal or constructive) as a result of past events.
b) It is **probable** (i.e. more likely than not) that an outflow of resources embodying economic benefits will be required to settle the obligation, and
c) A **reliable estimate** can be made of the amount of the obligation.

If these conditions are not met, no provision shall be recognised

(iii) The amount recognised as provision should be measured as the best estimate of the expenditure required to settled the present obligation at the reporting date or to transfer it to a third party at that time. Where the provision being measured involves a large population of items, the obligation is estimated by weighting all possible outcomes by their associated probabilities. Where a single obligation is being measured, the individual most likely outcome may be the best estimate of the liability. However, even in such a case, the entity considers other possible outcomes. Provisions must be discounted where the effect of discounting is material.

(iv) The facility is depreciated from the date it is ready for use, rather than when it actually starts being used. In this case, then, the facility is depreciated from 1 April 2018.

Zampower has both legal and constructive obligations to restore the piece of land.

The amount of the obligation to initially recognise at 1.4.2018bwill be K1,420, 000, being the present value of the anticipated future restoration expenditure (10,000, 000 x 0·142). This will be recognised as a provision under non-current liabilities in the statement of financial position of Zampower at 30 September 2018.

As time passes the discounted amount unwinds. The unwinding of the discount for the year ended 30 September 2018 will be K35, 500 (1,420, 000 x 5% x 6/12).

The unwinding of the discount will be shown as a finance cost in the statement of profit or loss and the closing provision to be reported under non current liabilities will be K1,455,500 (1,420, 000 + 35, 500).

The initial amount of the provision is included in the carrying amount of the non-current asset, which becomes K21,420, 000 (20,000, 000 + 1,420, 000).

The depreciation charge in profit or loss for the year ended 30 September 2018 is K267, 750, 000 (21,420, 000 x 1/40 x 6/12).

The closing balance included in non-current assets will be K21, 152, 250 (21,420, 000 – 267, 750).

(v) A complex asset has a number of separate components, each with a separate useful life. An obvious example would be a ship or an aircraft. A ship can have internal fittings which require replacement several times during the life of the hull. The landing gear of an aircraft will require replacement after a specified number of landings. IAS 16 requires each separate component to be separately depreciated over its useful life. When a component has to be replaced, the existing component is derecognised and the new component is recognised and depreciated over its useful life. IAS 16 gives the example of a furnace which may require relining after a specified number of hours of use. When relining takes place, the old lining will be derecognised and the new lining depreciated over the number of hours of use before next replacement.

This should not be confused with the replacement of small parts, which would be described as 'repairs and maintenance' and charged to profit or loss.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

APPLICATION LEVEL

CA 2.2: MANAGEMENT ACCOUNTING

TUESDAY 11 DECEMBER 2018

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 sections:

   Section A: One (1) Compulsory scenario question.

   Section B: Four (4) Optional scenario Questions. Attempt any Three (3) questions.

2. 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.

SECTION A

This Question is compulsory and MUST be attempted.

<u>QUESTION ONE</u> – (COMPULSORY)

John Banda has just negotiated a contract to supply 8,160 desks to all the primary schools in Muchinga Province. This is the breakthrough he has been waiting for and he has decided to start the business he has been planning for months now – The Top Desk Company Limited.

The Ministry of General Education, which is responsible of ensuring good, learning conditions in all schools including primary schools, has agreed to pay K255 for each desk and wants them all delivered next year which is 2018. John wishes to supply all the desks within the first six months of 2018 starting January 2018. His projection is to supply and deliver the desks evenly over the six months period. With no inventory at the start of January 2018 and at the end of the six month period as these desks are specifically for the schools in Muchinga, John has opted to maintain closing inventory over the period equal to the following monthly supply:

	January	February	March	April	May	June
Inventory level	100%	50%	50%	30%	5%	0%

The Ministry has advised that payment will be made the month following delivery as the procurement officers' at the schools have to thoroughly inspect the desks.

John has sourced a supplier who will supply the materials required to produce the desks at a price of K15 per kg of material. He is hopeful that the Ministry will ask for more desks in the near future. As he is a new customer the supplier is unwilling to give him longer credit and he will be required to pay for the materials when they are delivered which is the same month production takes place. His buying pattern is to buy as much materials as is needed for production in that month. He will keep inventory of materials at 30% of the following month's production requirement, although in June 2018, he intends to keep it at 20% of that month's production requirement. This is to allow for production of any desks that might be damaged during transportation. On average, he uses 10 kg of material to make a desk, and this is unlikely to change over the period.

John will need machinery to allow him to make the desks. He has seen a new machine at a recent trade show at a cost of K80,000 that he has opted to buy. He will need to pay for this machine when it is delivered in January 2018.

The business plan shows that the monthly overheads of the new business will be K20,000 payable in the same month they are incurred. In addition, delivery costs have been estimated at 9% of revenue payable in the same month revenue is earned.

To make sure he and his family have enough to live on, John will pay himself a monthly salary of K9,000 in January 2018, increasing by 10% in February, March and April. He will then maintain the April level for the rest of the period.

He has K50,000 saved up that he will pay into the business bank account in January 2018 to get the business started.

John has heard that you are studying for your CA and has asked for some help in budgeting for the business.

Required:

(a) Prepare the following functional budgets for the six months to 30th June 2018

(i) Sales budget in units and value (2 marks)

(ii) Production budget in units (4 marks)
(iii) Materials purchases budget in kg and value (6 marks)
(iv) Cash budget (10 marks)

(b) Management accounting is normally said to help in planning and decision making. With the help of the budgets prepared above, explain three (3) decisions that John Banda could consider for his business to do well. (6 marks)

(c) A detailed analysis of the first month of operations of the company showed the following standard variable costs and actual:

Standard costs

	K per unit
Direct material	150
Direct labour at K11 per hour	55
Variable production overhead	20
Total standard variable cost	225

The variable production overhead is incurred in direct proportion to the direct labour hours worked. The actual sales and production volumes for January 2018 was as planned. The company uses a standard costing system to value inventory.

The following were the actual results recorded during January 2018:

	K	**K**
Sales revenue		346,800
Direct materials: 29,240 kg	277,780	
Direct labour: 13,950 hours	104,625	
Variable production overhead	33,480	
		(415,885)
Contribution		(69,085)

Required:

Calculate all the operating variances in as much details as possible and present them in a statement which reconciles the budget and actual contribution for January 2018.

(12 marks)

[Total 40 marks]

SECTION B

Attempt any Three (3) out of Four (4) Questions

<u>QUESTION TWO</u>

Zambezi Ltd is a manufacturing company based in North Western Province. It processes food stuff among them pineapples and honey. The pineapples are first washed, cut into pieces and then placed into a juice extractor. A special preservative is added to the pineapples and then poured into plastic bottles costing K2 each. Each bottle of pineapple contains one third of a litre of pineapple juice and sells for K30.

The whole process normally experiences losses of 10% of the input. However, all losses are sold out for K10 per litre. The monthly budgeted maximum output of the process is 10,800 litres. The overhead is charged to the process at 100% on labour cost

The data given below refers to the month of November:

Inputs into the process:

	K
Pineapple juice 11,400 litres	303,960
Special preservative	152,460
Labour cost	52,590

The output from the process was 10,800 litres.

Required:

(a) Prepare the process account for the month of November. (7 marks)

(b) Calculate the normal profit per bottle of pineapple juice. (4 marks)

(c) Explain what is meant by the term Equivalent Units in relation to process costing. (3 marks)

(d) Explain the three (3) Es used in performance management for not-for-profit organisations. (6 marks)

[Total: 20 Marks]

QUESTION THREE

Luangwa electronics manufactures two remote controllers. The basic controller sells for K50, has a direct material cost of K12.5 and requires 2.5 hours of labour time to produce. The other type, the Wireless controller, sells for K75, has a direct material cost of K16.3 and takes 3.75 hours to produce. Labour, which is paid at the rate of K6 per hour, is currently very scarce, while demand for the company's controllers is heavy. The company is currently producing 8,000 of the basic controller and 4,000 of the Wireless controller per month, while fixed costs are K240,000 per month.

An overseas customer has offered the company a contract, worth K350,000, for a number of controllers made to its requirements. The estimating department has ascertained the following facts in respect of the work:

1. The labour time for the contract would be 12,000 hours.
2. The material cost would be K90,000 plus the cost of a particular component not normally used in the company's controllers.
3. These components could be purchased from a supplier for K25,000 or alternatively, they could be made internally for a material cost of K10,000 and an additional labour time of 1,500 hours.

Luangwa Electronics uses one Accountant – the Financial Accountant to perform both roles of cost analysis and financial accounting and reporting. Luangwa Electronics is considering splitting the role of cost analysis to be performed by a Management Accountant.

Required:

(a) Calculate the contribution per hour for each controller (4 marks)

(b) Determine whether to make or buy the component (5 marks)

(c) Advise whether the contract with the overseas customer should be accepted. (5 marks)

(d) Compare and contrast management accounting to financial accounting. (6 marks)

[Total 20 marks]

QUESTION FOUR

(a) Luapula Ltd is deciding whether or not to proceed with a special order contract. This order contract will require the following;

(i) Materials P and Q will be used for the contract. A total of 100 tonnes of material P will be needed and sufficient material is in inventory because the material is in common use in the company. The original cost of the material in inventory is K10 per tonne but it would cost K12 per tonne to replace if it is used for this contract. The material Q required is in inventory as a result of previous over purchasing. This material originally cost K5,000 but it has no other use. The material is toxic and if it is not used on this contract, then Luapula Ltd must pay K2,800 to have it disposed of.

(ii) The contract requires 200 hours of labour at K50 per hour. Employees possessing the necessary skills are currently employed by the company but they are idle at present due to a lull in the company's normal business.

(iii) Overhead will be absorbed by the contract at a rate of K100 per labour hour, which consists of K70 for fixed overhead and K30 for variable.

(iv) The contract will require the use of a storage unit for three months. Luapula Ltd is committed to rent the unit for one year at a rental of K500 per month. The unit is not in use at present. A neighbouring business has recently approached Luapula Ltd offering to rent the unit from them for K700 per month.

(v) Total fixed overheads are not expected to increase as a result of the contract.

Required:

Use the details above to determine the relevant cost of the order contract, including an explanation of the reason for including or excluding a cost in the relevant cost schedule.
(11 marks)

(b) Minimum pricing based on relevant costing is normally seen as a 'tool' used by private businesses to increase their market share and enhance profits. Nowadays, we are seeing public sector organisations employing cost effective techniques and optimising their resources.

Required:

Explain and compare the public sector objective of 'value for money' and the private sector objective of 'maximisation of shareholder wealth'. (9 marks)

[Total: 20 marks]

QUESTION FIVE

Mongu Limited manufactures various components. One of the components is AA1 which passes through two production cost centres (Filtering and Mixing) and several service cost centres.

The prime cost of product AA1 is as follows:

	K per unit
Direct material	15.00
Direct labour:	
Filtering Department	7.00
Mixing Department	10.50

One unit of component AA1 takes 38.2 minutes in the Filtering Department and 52.5 minutes in the Mixing Department. The direct labour is paid at K11 per hour and K12 per hour in the filtering and mixing departments respectively.

Cost centre	Budgeted overheads (K)	Budgeted Activity	Actual Overheads (K)	Actual activity
Filtering	45,500	32,500 Machine hours	34,213	29,750 Machine hours
Mixing	36,125	28,900 Direct labour hours	55,125	31,500 Direct labour hours

Mongu Ltd also manufactures components X1, Y2 and Z3. During its recent management meeting, Diana Daka, the procurement manager reported the impending shortage of the only raw material used in the production of the three components. This has caused panic in the whole industry as reported in the media with one of the major supplier having run out of the raw material. The major supplier has a contract with Mongu Ltd to supply 15 tonnes. The production manager bemoaned the current back log in the production department and attributed this problem to the 15,500 labours hours available. The Managing Director is worried on how the shareholders value would be maximised.

Mongu Ltd has a market demand for the three components X1, Y2 and Z3 of 2,000, 1,000 and 750 units respectively; this does not include 250 units X1, 50 units Y2 and 75 units Z3 for a special order. In the event that the special order is not delivered, Mongu Ltd will have to pay K10,000 in penalties.

Mongu Ltd's selling prices for the three products are as follows:

Component X1	K20
Component Y2	K50
Component Z3	K40

The Costing Department has prepared the following data:

(i) Raw materials are purchased at K4 per kilo;

(ii) The labour rate is set at K2 per hour;

(iii) Fixed overheads are apportioned on the basis of labour hours;

(iv) Cost structure per unit:

Component	**X1**	**Y2**	**Z3**
	K	**K**	**K**
Raw materials	10.00	30.00	20.00
Direct labour	2.00	5.00	4.00
Variable overhead cost	1.50	3.75	5.00
Fixed overhead cost	2.25	5.50	4.50
Total cost per unit	15.75	44.25	33.50

Required:

(a) Calculate the overhead absorption rates for Filtering and Mixing departments. (1 mark)

(b) Calculate the over/under absorption of overheads in the two departments. (2 marks)

(c) Calculate the total production cost per unit of component AA1. (3 marks)

(d) Calculate the optimum production plan and profit for products X1, Y2 and Z3. (10 marks)

(e) Explain the following term normally used in limiting factor analysis:
(i) Shadow price
(ii) Slack (4 marks)

[Total: 20 marks]

END OF PAPER

CA 2.2: MANAGEMENT ACCOUNTING – SOLUTIONS

SOLUTION ONE

Question 1						
Part (a) (i) Sales Budget						
	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**
Sales units	1,360	1,360	1,360	1,360	1,360	1,360
Price (K)	255	255	255	255	255	255
Total	346,800	346,800	346,800	346,800	346,800	346,800
(ii) Production Budget						
	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**
Sales (units)	1,360	1,360	1,360	1,360	1,360	1,360
Opening	-	1,360	680	680	408	68
Closing	1,360	680	680	408	68	-
Production units	**2,720**	**680**	**1,360**	**1,088**	**1,020**	**1,292**
(iii) Material Purchases budget and Value						
	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**
Production units	2,720	680	1,360	1,088	1,020	1,292
Usage kg	10	10	10	10	10	10
Total Material kg	**27,200**	**6,800**	**13,600**	**10,880**	**10,200**	**12,920**
Opening raw materia	**-**	**2,040**	**4,080**	**3,264**	**3,060**	**3,876**
Closing raw materials	**2,040**	**4,080**	**3,264**	**3,060**	**3,876**	**2,584**
Purchases kg	**29,240**	**8,840**	**12,784**	**10,676**	**11,016**	**11,628**
Price (K) per kg	15	15	15	15	15	15
Total Value	**438,600**	**132,600**	**191,760**	**160,140**	**165,240**	**174,420**
(iv) Cash Budget						
	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**
Sales/Receipts		346,800	346,800	346,800	346,800	346,800
Payments						
Material	438,600	132,600	191,760	160,140	165,240	174,420
Machine	80,000					
Salary	9,000	9,900	10,890	11,979	11,979	11,979
Overheads	20,000	20,000	20,000	20,000	20,000	20,000
Delivery Costs	31,212	31,212	31,212	31,212	31,212	31,212
Total payments	578,812	193,712	253,862	223,331	228,431	237,611
Balance	- 578,812	153,088	92,938	123,469	118,369	109,189
Opening balance	50,000	- 528,812	- 375,724	- 282,786	- 159,317	- 40,948
Closing balance	**- 528,812**	**-375,724**	**-282,786**	**-159,317**	**- 40,948**	**68,241**

(b)

Management accounting is seen to provide information that is useful for planning, controlling and supporting decision making in the organisation. Considering the information revealed by John Banda's plans (Budgets), the following could be considered;

1. Obtain an overdraft to help with the operation of the business, especially the first five months when the cashflows are negative. In that case, the interest cost of the overdraft would have to be factored in the budget.
2. The sustainability of the business as the cash flow generated over the period is only K68,241 and the fact that the future orders have not guaranteed.
3. The procurement of the machine could be done under a lease as there may be no use of the machinery if future orders are not given
4. The profitability of the business and the impact of the negative cash flows on his operations

(c)

Material price variance

29,240 kgs should have cost	K438,600
But did cost	K277,780
Variance	**K160,820(F)**

Material usage

2,720 units should have used (2,720 x 10 kg)	27,200 kg
But did use	29,240 kg
Variance in units	2,040 A kg
X standard price	x K15 per kg of material
Variance in value	**K30,600 (A)**

Labour rate

13,950 hours should have cost	K153,450
But did cost	K104,625
Variance	**K48,825(F)**

Labour efficiency

2,720 units should have taken (2,720 x 5 hours)	13,600
But did take	13,950
Variance in hours	350 A hours
X standard rate per hour	x K11 per hour

Variance in value **K3,850(A)**

Variable overheads expenditure

13,950 hours should have cost (13,950 hrs x K4/h) K55,800

But did cost K33,480

Variance **K22,320 (F)**

Variable overhead efficiency; 350 hrs x K4/h = K1,400 (A)

Operating statement

	K	**K**	**K**
Budgeted contribution (K255 – K225) x 1360			**40,800**
	(F)	**(A)**	
Material Price variance	160,820		
Material usage variance		30,600	
Labour rate variance	48,825		
Labour efficiency		3,850	
Variable overheads expenditure	22,320		
Variable overheads efficiency		1,400	
Net variance			196,115(F)
Inventory adjustments (2,040 units x K150)			(306,000)
Actual contribution			**(69,085)**

SOLUTION TWO

(a) Process account

DR		Process A/C				CR
	Units	K		Units	K
Pineapple Juice	11,400	152,400	Normal loss	1,140	11,400
Special preservative		303,960	Good output	10,800	579,158
Labour		52,590			
Overheads		52,590			
Abnormal gain	540	28,958			
	11,940	590,558		11,940	590,558

Workings

(i) Cost per unit = $\frac{\text{Process costs less Scrap value}}{\text{Expected output units}}$

Cost per unit = $\frac{K561,600 - 11,400}{10,260 \text{ units}}$ = K53.63 per unit

(ii) Valuation

Normal loss = 1140 units @ K10 per unit = K11,400

Good output = 10,800 units @ K53.63 per unit = K579, 158

Abnormal gain = 540 units @ K53.63 per unit = K28, 958

(b) Normal profit per bottle

	K	K
Selling price		30.00
Less costs:		
Process cost ($\frac{1}{3}$ x 53.63) =	17.88	
Packaging	2.00	
		(19.88)
Profit		**10.12**

(c) Equivalent units

Equivalent units are notional whole units representing incomplete work. They are used to apportion costs between work in progress and completed output. A part processed unit can be expressed as a proportion of a fully completed unit.

For example, if 100 units are exactly halfway through the production process, they are effectively equal to 50 fully completed units. Therefore the 100 part processed units can be regarded as being equivalent to 50 fully completed units or 50 equivalent units.

(d) Most not for profit (NFP) making organization have no financial motive such as revenue maximization. This is because NFP rely on grants, aid, based on strict budget conditions. With this, performance is usually measured by the 3Es which are as follows:

Economy – this measure looks at whether the NFP used the resources with caution, so as to avoid unnecessary spending

Effectiveness – this measure looks at whether the NFP used the resources for the right things in line with the objectives and budgets agreed.

Efficiency – this measure looks at whether the NFP used the resources in such a way as to generate the optimal output.

SOLUTION THREE

(a) In view of its scarcity labour is taken as the limiting factor.

The decision on whether to make or buy the component has to be made before it canbe decided whether or not to accept the contract. In order to do this the contribution perlabour hour for normal production must first be calculated, as the contract will replace some normal production.

	Basic Model		Wireless Model	
	K	K	K	K
Selling Price		50		75
Materials	12.5		16.3	
Labour	15.0		22.5	
Total variable costs		27.5		38.8
Contribution		22.5		36.2
Direct labour hour	÷	2.5		3.75
Contribution per direct labour hour		9.00		9.65

Therefore, if the company is to make the component it would be better to reduce production of the basic model, in order to accommodate the special order.

The company should now compare the costs of making or buying the component.

(b) An opportunity cost arises due to the lost contribution on the basic model.

Special contract to manufacture of component

	K
Materials	10,000
Labour (K6 x 1,500 hours)	9,000
Opportunity cost (1,500 hours x K9)	13,500
	32,500

Since this is higher than the bought-in price of K 25,000 the company would be advised to buy the component from the supplier if they accept the contract.

(c) The contract can now be evaluated:

	K	K
Sales Revenue		350,000

Material	90,000	
Component	25,000	
Labour	72,000	
Total variable costs		187,000
Contribution		163,000

Contribution per direct labour hour K13.58 (K163,000/12,000hrs)

Since the contribution is higher than either of the existing products, the company should accept the contract assuming this would not prejudice the market for existing products.

As the customer is overseas this seems a reasonable assumption.

Because the contribution is higher for the Wireless model it would be wise to reduce production of the basic model. However, the hours spen t on producing the basic model per month are 8,000 units x 2.5 hours = 20,000, and so the contract would displace more than a two week's production of the basic model. The recommendation assumes that this can be done without harming long-term sales of the basic model.

(d) Financial accounting versus Management accounting

In general terms, financial accounting is for external reporting whereas cost accounting is for internal reporting.

The financial accounting and cost and management accounting systems in a business both record the same basic data for income and expenditure, but each set of records may analyse the data in a different way. This is because each system has a different purpose.

1. Financial accounts are prepared for individuals external to an organisation eg shareholders, customers, suppliers, ZRA and Customs and employees.
2. Management accounts are prepared for internal managers of an organisation.

Both management accounting and financial accounting could aid decision making in the provision of information, hence many organisations use integrated transaction processing systems which provide both management and financial accounting information.

The differences in management accounting and financial accounting include;

Financial accounts detail the performance of an organisation over a defined period and the state of affairs at the end of that period, while Management accounts are used to aid management record, plan and control the organisation's activities and to help the decision-making process.

The format of published financial accounts is determined by law (mainly the Companies Acts), by Financial Reporting Standards. In principle the accounts of different organisations can therefore be easily compared. The format of management accounts is entirely at management discretion: no strict rules govern the way they are prepared or presented. Each organisation can devise its own management accounting system and format of reports.

Financial accounts concentrate on the business as a whole, aggregating revenues and costs from different operations, and are an end in themselves. Management accounts can focus on specific areas of an organisation's activities. Information may be produced to aid a decision rather than to be an end product of a decision.

Most financial accounting information is of a monetary nature. Management accounts incorporate non-monetary measures. Management may need to know, for example, units of remote controllers produced, monthly hours, or miles travelled by sales representatives.

Financial accounts present an essentially historical picture of past operations. Management accounts are both a historical record and a future planning tool.

SOLUTION FOUR

(a) Cost schedule

Element	Note	Cost (K)
Material P	1	1,200
Material Q	1	(2,800)
Labour	2	-
Variable overhead	3	6,000
Rent forgone	4	2,100
Total relevant cost		**6,500**

Notes

1) The relevant cost of a material that is used regularly is its replacement cost. Additional inventory of the material will need to be purchased for use in this contract. The relevant cost of material P is therefore K12 per tonne. Material Q has a 'negative' cost if used for the contract. That is, there is a relevant saving made from not having to pay the disposal cost of K2,800.
2) The relevant cost of labour is zero. The labour cost is being paid anyway and no extra cost will be incurred as a result of this contract.

3) The fixed overhead is not relevant because we are told that fixed overheads are not expected to increase. The relevant variable overhead cost is: K 30 per hour x 200 hours =K 6,000.

   Even if you are not specifically told that fixed overheads will remain unaltered, it is usual to assume that they will not increase, stating the assumption clearly.

4) The rental cost of K 500 per month is not relevant because it will not be affected by the contract. The relevant cost of using the storage unit is the forgone rental income of K 700 per month.

(b) Public sector versus Private sector

Public sector organisations are generally set up with a prime objective which is not related to making profits. These organisations exist to pursue non-financial aims, such as providing a service to the community. However, there will be financial constraints which limit what any such organisation can do. A not-for-profit organisation needs finance to pay for its operations, and the major financial constraint is the amount of funds that it can obtain. Having obtained funds, a not for-profit organisation should seek to get value for money from use of the funds:

(i) Economy: not spending K2 when the same thing can be bought for K1

(ii) Efficiency: getting the best use out of what money is spent on

(iii) Effectiveness: spending funds so as to achieve the organisation's objectives

Since managing in the public sector (for example) is different from managing a company, a different framework is needed for planning and control. This is achieved by:

- Careful planning of public expenditure proposals
- Emphasis on getting value for money

A private sector organisation has as its primary objective the making of sufficient profits toprovide a satisfactory return for its owners and to keep the business operating.

So, it is the job of senior management to maximise the market value of the company.

Specifically, the main financial objective of a company should be to maximise the wealth of its ordinary shareholders. Within this context, the financial manager seeks to ensure that investments earn a return, for the benefit of shareholders. Part of this job will involve attracting funds from the market, such as new investors, but as with public sector organisations it is also important that the operations of the company are run economically and efficiently

SOLUTION FIVE

(a) Overhead absorption rates

Filtering department : $\frac{K45{,}500}{32{,}500hrs}$ = K1.4 per machine hour

Mixing department: $\frac{K36{,}125}{28{,}900hrs}$ = K1.25 per labour hour

(b) Over/under absorption

(i) Filtering Department:

Overheads absorbed	K1.4/machine hr X 29,750 machine hrs	K41,650
Actual overheads		K34,213
Over absorbed		K7,437

(ii) Mixing Department:

Overheads absorbed	K1.25/machine hr X 31,500 labour hrs	K39,375
Actual overheads		K55,125
Under absorbed		K15,750

(c) Total production cost per unit

	K per unit
Direct material	15.00
Direct labour:	
Filtering department	7.00
Mixing department	10.50
Prime cost	32.50
Overheads:	
Filtering department (0.64 x 1.4)	0.89
Mixing department (0.88 x 1.25)	1.09
	34.48

(d) Production plan and profit statement

	X1	**Y2**	**Z3**
Selling price	20.00	50.00	40.00
Materials	10.00	30.00	20.00
Labour	2.00	5.00	4.00
Variable overheads	1.50	3.75	5.00
Contribution per unit	6.50	11.25	11.00
Raw materials (Kgs/unit)	2.5	7.5	5.00
Contribution per Kg (K/kg)	2.6	1.50	2.20
Ranking	1	3	2

Optimum production plan

Product	**Kg per unit**	**Demand Units**	**Kilo grams required**	**Kilo grams Available**
Special order:				15,000
X1	2.5	250	625	
Y2	7.5	50	375	
Z3	5.0	75	375	(1,375)
				13,625
Market:				
X1	2.5	2,000	5,000	8,625
Z3	5.0	750	3,750	4,875
Y2	7.5	650	4,875	

Therefore, Mongu Ltd should produce 2,250 of X1, 700 of Y2 and 825 of Z3 in order to maximise profit**.**

Profit statement

Product	Contribution per unit (K)	Demand (units)	Total contribution (K)
X1	6.50	2,500	14,625
Y2	11.25	700	7,875
Z3	11.00	825	9,075
			31,575
Less fixed costs (w)			(13,375)
Profit			18,200

Working:

Fixed costs (2.25 x 2,000) + (5.5 x 1,000) + (4.5 x 750) = K13,375

(e)

(i) The shadow price is the amount of change in the value of the objective function (for example, the increase in contribution) created by the availability of one extra unit of the limited resource at its original cost.

(ii) Slack occurs when maximum availability of a resource is not used: slack is the amount of the unused resource or other constraint, where the constraint is a 'less than or equal to' constraint.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

APPLICATION LEVEL

CA 2.3: AUDITING PRINCIPLES AND PRACTICE

THURSDAY 13 DECEMBER 2018

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 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.

SECTION A

This question is compulsory and must be attempted.

QUESTION ONE

You are the Audit Manager in your firm of Chartered Accountants and you are in charge of the audit of Electricity Supply Company (ESCO). You have vast experience in the audit of ESCO and you have been audit manager for ten years.

The annual general meeting of ESCO to consider the financial statements for the year ended 31 December 2016 was held in March 2017 and it was resolved that the company floats its shares on the Lusaka Stock Exchange (LuSE) and obtain a listing. It was proposed and resolved in that meeting that Mbewe who is Chief Executive Officer of ESCO becomes the first Board Chairman of the company once the status changes to that of a listed company.

ESCO obtained a listing on the LuSE during the year under review. The engagement partner on the ESCO audit has encouraged you to buy shares in ESCO. The Engagement Partner has 5% shares in ESCO which he acquired as an inheritance from his late father.

The following additional information is provided:

Operations:

ESCO has enjoyed a monopoly in supplying electricity in the country. Its revenue is from supplying electricity to households and consumer customers who make 80% of its revenue base. In line with the trend in this industry in the world, the company has introduced a prepaid system in the current year. This means that a majority of both households and consumer customers are required to pay in advance for services provided.

For large consumer customers and the government entities, the company extends one month credit to those who go through the credit vetting. Two mining houses have five year running contracts with ESCO for the supply of power on credit at fixed rates in dollars. Before the expiry of the contract period, ESCO increased tariffs above the agreed rates and the mining houses are disputing this and have refused to pay the revised tariffs because they are in breach of the contract.

Due to liquidity problems, the company requires a deposit from its customers of 45% of the total cost for new installations. The agreement between the company and new installations customers states that ESCO will perform and install supply within three months of receipt of the deposit.

In 2016 ESCO won a contract to supply power to a new mine. This is a three year project worth $250 million.

In order to improve the performance of the company, the board of ESCO resolved that executive management should be paid based on performance. Annual financial targets are set by the board and agreed with management. This has proved to be good for the company.

The government has liberalized this industry and this has resulted in new entrants in the industry. In the year under review, a successful Chinese company has set up a power generation plant. Its operations are more efficient than those of ESCO and it is clear that it will charge lower tariffs and offer better terms to large consumer customers.

ESCO holds large stocks of consumables and materials at its facilities around the country. Security for such stores and materials is poor. Except for inventory held at head office no inventory count is planned for at the rest of the locations at the year end.

Liquidity:

The company has experienced liquidity problems in the past year because of delays by the major consumer customers to settle their debts.

In order to fulfill its commitment to supply power to the new mine, the ESCO has borrowed $250 million from the Development Bank. This loan is repayable in dollars over a period of ten years. There has been a high depreciation of the Kwacha against the dollar in the last six months. Economic indicators show that the depreciation of the local currency will continue in the near foreseeable future.

Due to liquidity problems the company has decided to introduce a self-insurance scheme whereby it sets aside fixed amounts of money monthly into a fund whose purpose is to provide funding in the event of losses arising from catastrophes.

Credit control:

There is a credit control section in the finance department. The department is headed by John who has no formal training in credit control. The system to vet and determine customers who should be extended credit was introduced this year and is not clearly documented.

Information Systems:

ESCO acquired a new computer and has introduced integrated systems which will be used for various applications including financial systems. Staff are undergoing training and staff from the suppliers are around to carry on with the training although they will leave a month before the year end.

The audit team that has been assigned to conduct the audit of ESCO comprises an experienced audit senior who has been on this audit before and three audit assistants. None of the audit assistants has audited a company in this industry before. James the son to the audit senior won a scholarship to study Electrical engineering in the UK offered by Electricity Supply Company as part of its social responsibility. He is one of five students who won similar scholarships.

The audit team on the audit of ESCO is considering seeking third party confirmation where relevant as part of obtaining sufficient appropriate evidence. The audit senior will be responsible for performing relevant audit procedures on subsequent events because events around the period end are considered risky.

Required:

(a) Identify and explain eight (8) business and audit risks that you will consider at the planning stage of the audit of ESCO. (12 marks)

(b) Explain the meaning of reasonable assurance in the audit of financial statements and state why auditors do not give absolute assurance. (6 marks)

(c) Comment on the proposal that Mbewe should take on the role of Board Chairman in addition to his current role as Chief Executive Officer. (4 marks)

(d) Identify and evaluate the ethical issues in ESCO.

(6 marks)

(e) With regards the audit of bank and receivables balances:

(i) Describe three (3) assertions that third party confirmations confirm.

(3 marks)

(ii) Explain the procedures the auditors will use for circularization of receivables and bank balances. (5 marks)

(f) Explain the meaning of subsequent events in an audit of financial statements and illustrate the relevance of the audit of subsequent events to the current audit.

(4 marks)

[Total: 40 Marks]

SECTION B

Attempt any THREE (3) questions in this section.

<u>QUESTION TWO</u>

(a) You are reviewing the working papers and draft financial statements for three of your firm's audit clients and you have established the following:

Client 1
There is a material uncertainty regarding the going concern assumption but the going concern basis of preparing financial statements is appropriate. Management has made full disclosure in note (6) of the draft financial statements of the matter of concern.

Client 2
There is a material uncertainty with the going concern assumption of this client. You conclude, however, that the use of the going concern basis in preparing the financial statements is appropriate.

A review of the financial statements has revealed that there is inadequate disclosure relating to the material uncertainty regarding the going concern of the company.

Client 3
The working papers on errors that were noted during the audit show that there are still some uncorrected misstatements. Materiality levels for the financial statements as a whole and performance materiality were set at the planning stage of the audit.

Management has refused to correct the material misstatements.

Required:

(i) State the impact on the audit report of each of the situations in client 1 and 2 above. (4 marks)

(ii) Explain the audit work that will be performed regarding the uncorrected misstatements in client 3. (4 marks)

(b) Malasha Coal Mining Ltd is a coal mining company situated in Zambia.

The mine is situated in a densely populated area and is surrounded by several villages and a secondary school. The fumes coming out of the mining activities are hazardous to human beings if inhaled over a long period of time. Further, the effluents from processing of coal have an effect on the environment in that no vegetation can grow where these effluents are disposed of.

As part of it social responsibility, the company sponsors the local football team and makes annual contributions to the secondary school. During the current year, the Malasha Coal Mining Ltd has requested for a social and environment audit to be conducted on its operations. The company in its annual plans sets key indicators that it intends to meet with regards to pollution and safety of employees.

You are concluding the audit of Malasha Coal Mining Ltd and you have been provided the draft financial statements together with other information including the environmental and safety data, the director's report, the chairman's report and key accounting ratios for the last three years.

You are in charge of the audit of balances in the Statement of Financial Statement. You are in the process of assessing the audit evidence with regards to the following matters:

(1) An amount of K350,000 described as provisions in the statement of financial position. Malasha Coal Mining Ltd has provided you with a schedule giving a breakdown of the K350,000.

Included in this figure is an amount of K120,000 being an estimate for damages for a legal case against Malasha Coal Mining Ltd a case that has not been concluded at the period end.

(2) A review of the minutes of management meetings held show that the company has a dispute with the Zambia Environmental Management Board (ZEMA) regarding the levels of emissions in the current year. ZEMA has penalized the company for emitting more than the allowed levels of carbon dioxide. The company has disputed this and has appealed the Agency's decision.

On the basis of legal advice obtained, no provision has been made in the financial statements for this.

Required:

(i) Explain the meaning of social and environmental audits. (2 marks)

(ii) Explain the responsibility of the auditor with regards to the other information contained in the financial statements of Malasha Coal Mining Ltd. (4 marks)

(iii) Describe the audit procedures that should be carried out in the audit of the two (2) items above. (6 marks)

[Total: 20 Marks]

QUESTION THREE

(a) All accountants in Zambia , in practice or not, are subject to the provision of the fundamental principles of professional ethics issued by the International Ethics Standards Board for Accountants (IEBA) which is part of the International Federation of Accountants(IFAC).

The principles of professional ethics are a set of principles rather than rules. For accountants in practice, they are required to use professional judgment and professional skepticism in the performance of their audit.

Required:

(i) Compare principle and rule based ethical guidelines and explain three (3) advantages of principles based guidance. (5 marks)

(ii) Explain the meaning of professional judgment in an audit of financial statements and explain four (4) situations when this is applied in the performance of an audit of financial statements. (6 marks)

(b) The following information is provided to you concerning three of your audit clients.

The Audit Manager on these three (3) audits has requested you to recommend suitable audit opinions on each of these.

Client one
This is a listed company whose year-end is 31 March 2017. Sufficient appropriate audit evidence has been obtained and the financial statements have, in all material respects, been prepared in accordance with the Company's Act 1994 and relevant accounting standards.

There are two matters that the Audit Senior on this audit concluded as being Key Audit Matters from among matters communicated to those charged with governance.

Client two
This is a private company which has appropriately prepared financial statements on a going concern basis. In the final review of the draft financial statements it is established that there is an inconsistency between the financial statements and the other information contained in the financial statements.

The financial statements are materially misstated and management has refused to amend the financial statements.

Client three
The audit of this client is about to be concluded. You have obtained sufficient appropriate audit evidence. There is an active case in court arising from an action by a group of employees who were retrenched and are claiming underpayments of terminal benefits.

Adequate disclosure has been made in the financial statements with regards to this case. The disclosure is in note 4 of the financial statements. You feel that this matter is important and you need to make mention of it in the audit report.

Required:

Discuss the impact on the audit report of each of the three (3) matters above suggesting an appropriate opinion under the circumstances. (9 marks)

[Total: 20 Marks]

QUESTION FOUR

You are a partner in your firm of Chartered Accountants and you are responsible for client acceptance.

You have been provided with the following information relating to Uranium Plc. a prospective client of your firm and you are required to make the final decision on whether your firm should go ahead and accept the appointment.

Uranium Plc. is a company involved in mining of Uranium and has been in existence for five years. The company has changed auditors three times in this period. The last auditors were removed following a disagreement with management over the treatment of decommissioning provisions in the financial statements. The Finance Director of Uranium Plc. did not agree with the rest of management over the reason why the previous auditors were removed and he is considering leaving the company. Your request to communicate with the outgoing auditors has been turned down.

The industry in which Uranium Plc. is in is highly specialized and regulated. There are significant accounting estimates that are included in the financial statements of Uranium Plc. This will be the first time that your firm will be auditing a company in this industry. In order to reduce detection risk to acceptable levels there is need to have audit staff with the technical expertise and skills to undertake the audit. This might necessitate recruiting staff from abroad because there are no people with such skills locally.

You are also aware of the fact that Uranium Plc. has no audit committee in place. During the presentation that you made to the board of Uranium Plc., the Managing Director of Uranium Plc. requested you to write to him and justify the need for an audit committee for Uranium Plc.

The quality control systems in your firm require that the final stage in client acceptance is to complete the client acceptance check list whose main purpose is to ensure that the preconditions for an audit exist in line with the ISA 210 *Agreeing the terms of audit engagements*

Required:

(a) Explain six (6) benefits to Uranium Plc. of introducing an audit committee of the board of directors. (6 marks)

(b) Discuss the matters you will consider as part of your client acceptance of Uranium Plc. and state your recommendation. (4 marks)

(c) Explain the meaning of preconditions to an audit. (2 marks)

(d) Explain the action your firm will take in order to determine whether the preconditions exist in evaluating the acceptance of Uranium Plc. (4 marks)

(e) Explain the audit risk related to accounting estimates and list six (6) examples of accounting estimates in the audit of financial statements. (4 marks)

[Total: 20 Marks]

QUESTION FIVE

You are the audit manager in your firm of Chartered Accountants. Your firm has been appointed auditor of Kudu Ltd and your firm has just signed the engagement letter. You are about to commence the audit of the financial statements for the year ended 31 December 2017.

You have called a pre audit meeting with the members of the audit team on this assignment. Among the things that you discussed in the meeting is the need to obtain sufficient appropriate audit evidence during the audit.
You are concerned that being the first time that you will be auditing Kudu Ltd you may need to perform more substantive tests than would be necessary. Mwaka an audit assistant has stated that if you perform tests of control then you may wish to rely on the controls and not perform more substantive tests.

The following information relating to Kudu Ltd was provided to you.

Kudu Ltd is in the retaining of hardware and cement. The company has two sales outlets and a warehouse. Each of the shops is run by a shop supervisor who is responsible for ordering supplies from the main warehouse when they run out. The shop supervisors are assisted by a cashier who receives the cash from sales who is also responsible for banking the cash. A copy of the bank deposit slip is sent to the company accountant who is based at head office. The company maintains one bank account into which all proceeds are banked.
A high proportion of the sales are on cash basis. In an effort to boost sales the company has with effect from this year introduced credit sales to selected trusted customers. The company has experienced cases where credit customers default in making payment and efforts to locate them fail.

The main warehouse is responsible for ordering supplies. The company has a procurement officer who is responsible for ordering. All items have unique stock numbers for easy of identification. The shop supervisors return slow moving supplies to the main warehouse.

Required:

(a) Explain the meaning and purpose of tests of control and substantive tests that will be carried out in the audit of the financial statements of Kudu Ltd. (4 marks)

(b) Suggest suitable controls that you would expect to find in the operating system of Kudu Ltd. (10 marks)

(c) Explain the purpose of the engagement letter between your firm and Kudu Ltd. (2 marks)

(d) State four (4) reasons that may necessitate a revision of the contents of the engagement. (4 marks)

[Total: 20 Marks]

END OF PAPER

SOLUTION ONE

a) Risks of material misstatements in the audit of Electricity Supply Company:

Non-compliance with listing requirements:
The changed status of ESCO means that the company should comply with stringent listing rules. There is a risk that the company may not be fully compliant and so it could suffer the penalties that go with non-compliance.

5% shares owned by the Engagement Partner:
The fact that the engagement partner has a stake in ESCO gives rise to detection risk being high. It can be argued that the partner's judgment will be impaired when reviewing the working papers knowing that he has an interest in the company.

Highly regulated industry:
The nature of the industry that ESCO is in is such that there are regulations to be adhered to. For example the generation of hydro power is regulated by environmental legislation and also there are likely to be safety regulations in place.
There is a risky of non-compliance with rules and regulations which could result in the company paying for non-compliance. There is a risk of misstating provisions arising from non-compliance in the financial statements.

Prepayments for services:
There is a risk of cut off at the period end relating to prepayments made by customers. The prepayments at the period end may be treated as part of the revenue for the year under review instead of being treated as advance payments and liabilities.

Dispute by mining house of amount due:
The dispute by the mining house to settle the disputed amount could mean that the receivables may not be realizable to that extent. The amount of receivables may be misstated by ESCO not making the necessary allowances for receivables arising from the dispute.

Deposits on new installations:
45% deposit required for new installations is a payment in advance before ESCO fulfills its part of the contract with the customer. There is a risk that revenue will be misstated in view of early recognition before work is done. The fact that ESCO has a three month period from date of payment of deposit to install means that the amounts involved could be material at the period end.

Performance based pay for executive management:
The introduction of a performance based pay method poses a risk of financial statements being manipulated by management in order to meet the agreed benchmarks. This will be motivated by the wish to meet the targets so that management are paid accordingly.

Successful competitor:
The coming in of a successful competitor and the general liberalization of the industry might have a serious impact on the operations of ESCO.

If the main consumer customers switch suppliers this could have going concern issues for ESCO particularly that the company has liquidity problems and has obtained a loan for further expansion.

No inventory count at other locations:
The fact that no inventory count of supplies and materials will be conducted at other locations other than head office poses a risk that inventory of supplies may be misstated in the financial statements.

This could arise because of theft of inventory in view of there being no count and falsifying the records to hide the theft.

Underinsurance of infrastructure:
The risks of fire and damage to equipment in this industry is high due to the hazardous nature of the business. The move by ESCO to have a self-insurance system may result in the company suffering the consequences of disaster when and if it occurs. The funds set aside may not be adequate to restore operations in the event of a disaster.

New IT system:
The introduction of a new computer system brings about a risk in terms of its reliability of information system that will be used in the preparation of the financial statements.

Accounting staff are not yet fully conversant with the system and the staff from the supplier will be leaving within a short period before the year end. It is likely that staff will face difficulties to resolve any problems they may encounter when supplier staff leave.

Scholarship to the son of James:

The award of a scholarship to Jame's son will impact on the independence and objectivity of James in the performance of his audit work. This could have a bearing in detection risk as James has a self interest in this client.

Lack of experinece of the audit team save for audit senior:

All the three audit assistants on this audit have no audit experience in the industry that ESCO is in.

Even if the audit senior is experinecd in the audit of this industry, there is an increased detection risk that can arise due to lack of experinec of the audit assistants who perfrom a substantial part of the audit work.

Borrowing from Development bank:

The loan is repayable in dollars and with the ever depreciation of the local currency, there is a risk that the company will suffer liquidity problems as it will require more units of the local currency to repay the loan. Failure to repay the loan will have going concern implications.

Audit manager for 10years:

The fact that the audit manager has been on this audit for ten years means that his long association may impair his objectivity. This could lead to increased detection risk in this audit because he is too familiar with the client staff. This is also an ethical matter as explained below in (d).

b) **Reasonable assurance:**
The audit of historical financial statements give rise to a reasonable assurance on the truth and fairness of the financial statements.

This is a high level of assurance which arises from high level of gathering audit evidence. It should be noted that the auditors do not give an **absolute assurance** to the users of financial statements.

Why auditors cannot give absolute assurance:
The main reason for not giving absolute assurance is that the financial statements themselves contain figures that are estimates and so cannot be said to be accurate.
Secondly it is observed that audits conducted by statutory auditors have inherent limitations and so cannot be used as a basis for giving an absolute assurance.
For example auditors usually test samples of a population rather than test all items in the population.

c) **Roles of CEO and Board Chairman:**
Good corporate governance guidelines suggest that there should be clear separation of duties between the head of the company (the Chief Exceptive Officer) and that of the board chairman should be held by different people.

Advise on proposal:
The proposal that Mbewe should take up both positions is not appropriate. The two jobs are demanding and require that two people perform these tasks.

d) **Ethical issues in ESCO:**
Long association of Audit Manager – the Audit Manager has been on this assignment for ten years. This period is too long and gives rise to a familiarity threat which may result in the Audit Manager losing his objectivity in the performance of his work.

Safeguard **–** The Audit Manager should be rotated and someone else should be assigned this audit. Alternatively, the audit working papers should be reviewed by a different partner who is not part of this audit.

5% shares inherited by the Engagement Partner – These shares inherited and owned by the engagement partner give rise to a self-interest threat. The fact that the partner did not buy the shares does not matter.

Safeguard **–** the engagement partner should dispose of the shares that he holds. Alternatively there should be quality control system in place such as having the audit work reviewed by a different partner who was not part of this audit.

Proposal that Manager should purchase shares in ESCO- the proposal that the Audit Manager should purchase shares in ESCO once the company obtains a listing will create a self-interest threat to the audit manager. Senior staff in the audit team should have no interest in the client company.

Safeguard **–** The Audit Manager should not buy shares once the shares are listed on the stock exchange.

***Scholarship to James* –** the audit senior is actively involved in the performance of the audit. The award of a scholarship to James, the audit senior's son will create an ethical issue. The audit senior may be sympathetic to the client company knowing that his son is being sponsored by it.

Safeguard – it would be recommended that the audit senior be removed from the audit team and someone else with no interest be appointed to conduct the audit.

e) Audit of receivables balances:

i. Assertions confirmed by third party confirmations:

- Accuracy – the fact that the figures confirmed have been accurately computed.
- Valuation – the figures have been stated at the correct amount.
- Existence – the related asset such as receivables or cash at bank existed at the period end.
- Rights and obligations – the underlying assets belong to the entity being audited or it rightly has the obligation to pay in case of a liability.

ii. Procedure for circularization of receivables:

- The auditor seeks permission from the client to circularize the receivables.
- Once permission granted, the auditor normally selects the specific receivables that will be circularized. Sample obtained from the age analysis of the receivables.
- The auditor requests the client to write letters on the client's letterhead confirming the balances indicated. The letters are signed by a client official.
- The auditor collects the signed letters and posts them.
- Responses are sent by the receivables directly to the auditor.

iii. Procedure for circularization of bank balances:

- The permission of the client is sought before sending out confirmation letters to banks.
- The auditor chooses the account balances that will be confirmed.
- The client writes a letter copied to the auditor, to the bank authorizing the bank to respond to the request for information from the auditors.
- The auditor writes to the bank on the auditor's letterhead referring to the letter of authority from the client.
- Response is sent by the bank directly to the auditor.

f) Meaning of subsequent events:

These are events that occur between the date of the financial statements and the date on which the audit report is signed by the auditor, and any other facts that become known to the auditor after the date of the auditor's report.
The two categories of subsequent events are the adjusting and non-adjusting events.

Audit evidence given by subsequent events:
Facts that become known after the period end may give evidence of conditions that existed at the period end.

For example, if there was uncertainty about the net realizable value of items of inventory at the period end. If this inventory is sold soon after the period end this will give evidence that that should have been used at the period end and will require that the inventory calculation be redone to take account of the net realizable value that has been known.

<u>SOLUTION TWO</u>:

a) Going concern and the audit report:

i. Client one

In this situation the audit opinion on the financial statements will be unmodified. There will be a need to include in the audit report an explanatory paragraph below the Basis for Opinion paragraph headed 'Material Uncertainty Related to Going Concern' detailing the uncertainty.

The note will in addition to giving an explanation refer to note (6) of the financial statements where management has disclosed this.

Client two

In this situation, there is inadequate disclosure with regards to the material uncertainty.

The auditors opinion will be modified either as a qualified or adverse opinion depending on the materiality and pervasiveness of the matter.

There will be no 'Material Uncertainty Related to Going Concern' paragraph introduced in this case.

ii. Audit work on uncorrected misstatements:

- Evaluate and consider whether the aggregate of uncorrected misstatements in the financial statements are material considering the materiality levels set.
- Find out from management why they do not wish to correct the misstatements.
- Communicate the material misstatements to those charged with governance.
- Obtain written representations from management whether they believe the effects of uncorrected misstatements are immaterial.
- Where uncorrected misstatements are material and pervasive to the financial statements, consider the impact on the financial statements.

b) Malasha Cola Ltd:

i. Meaning of social and environmental audits:

Social audits – Are audits carried out to establish how an entity such as Malasha Coal Mining Ltd has performed in its social responsibilities compared to targets that the company has set for itself.

Social audits may be conducted in areas such as the use of resources, health and safety compliance and labor conditions.

Environmental audits – are audits that are conducted with the objective of evaluating how well an organization such as Malasha Coal Mining Ltd carries out its activities having regard to safeguarding the environment.

ii. Auditor responsibility with regards to other information contained in the financial statements:

ISA 720 (Revised) *The auditor's responsibilities relating to other information in documents containing audited financial statements* provides guidance to auditors in this area.

The responsibilities of the auditor are as follows:

- To read the other information to identify any material inconsistences with the audited financial statements.
- If material inconsistences exist, determine whether the audited financial statements or the other information is misstated.
- Require management to correct either the other information or the audited financial statements.

iii. Audit procedures:

1. Provisions – K350 000.00

- Obtain the schedule giving the breakdown of the provision balance and cast it to check for accuracy.
- Agree the balance on the schedule to the relevant balances in the general ledger.
- Obtain analysis of balances included showing opening balances, movements and closing balances.
- Recalculate the provisions made.
- For the provision arising from the legal case subject it to the provisions of IAS 37 as follows:
  - Determine whether the company has a present obligation as a result of the matter.
  - Determine whether it is probable that a transfer of economic benefits will be required to settle the obligation.
  - Determine whether a reliable estimate of the amount can be made.
- Compare the amount provided with any post year-end payments.
- Considering the nature of business of the client consider any provisions you would expect to find for possible exclusion.
- Consider the adequacy of the disclosure for provisions in the financial statements.
- Obtain written representations from management on the judgment used in arriving at the amount of provision.

2. Contingent provision:

- Make enquiries of management and internal legal experts on the matter.
- Obtain written representations from management on their view regarding the matter.
- Seek external legal advice on the likely outcome of the case.
- Review disclosures made with regards this matter and ensure adequate.

SOLUTION THREE

a) Professional ethics:

i. Comparison of principles and rule based framework:

Rule based principles would require to be enacted into law by respective jurisdiction they will be expected to be followed. Noncompliance with rule based guidelines would be considered an offence and the offender risks suffering the consequences of non-compliance as stipulated in the law.

Principle base guidelines are based on the principle of comply or explain and so allow for more flexibility. These are more likely to address many different situations that may face the accountants.

Advantages of principles based guidance:

- The onus of evaluation any non-compliance with ethical principles is left to the professional rather than it being prescribed by law.
- Principles allow for many different situations to be considered because each situation face will most likely be different from other situations.
- It avoids cases where professional may interpret provisions to suit their situations in an effort to escape. Rule encourage deception whereas principles encourage compliance.
- Principles can accommodate changes in the environment that may not have been foreseen.
- Guidance can include examples to illustrate how they are supposed to be applied.
- Can be applied across many different jurisdictions unlike rules which will only apply in the jurisdiction of the country adopting the rules.

ii. Meaning of professional judgment:

This is the application of relevant training, knowledge and experience by the professional in making informed decisions about the courses of action that they take which are appropriate in the circumstances of the audit.

Situations when professional judgment is used in an audit:

Materiality – determining the materiality level that will be used in the conduct of the audit is a matter of professional judgment. Only guidance is provided and the professional are expected to use their knowledge and experience to do this.

Drawing conclusions- Concluding in the various areas covered by the audit and making conclusions is a matter of professional judgment. At the end of the audit concluding and deciding on the opinion to be issued is a matter of professional judgment.

Sufficiency and appropriateness of audit evidence – deciding on the volume of evidence necessary and also the quality and reliability of the evidence gathered.

Nature, timing and extent of audit procedures – deciding what work will be carried out to test the financial statement assertions and the nature of the procedures as well as the timing.

Evaluating management's judgments – there are several situations when management make judgments in determining figures contained in the financial statements. The auditor uses professional judgment in evaluating the judgments made by management.

b) Impact on the audit reports:

Client one
In this case the auditors have obtained sufficient appropriate audit evidence and they have concluded that the financial statements have been prepared in accordance to the applicable regulatory framework.

The matters that have been classified as key audit matters will be included in the audit report in the Key Audit Matters Paragraph in line with ISA 701 *Communicating key audit matters in the independent auditor's report.*

Recommended opinion:
The audit opinion here should be an unmodified opinion in line with ISA 700(*Revised*) *Forming an opinion and reporting on financial statements.*

The two matters decided to be key audit matters do not result in the modification of the audit opinion. The key audit matters paragraph is part of a standard audit report.

Client two
ISA 720 (Revised) *The auditor's responsibilities relating to other information in documents containing audited financial statements* provides guidance in the area in this client.

The auditor's objective is to establish whether or not there are material inconsistencies between the other information and the financial statements.
In this case material inconsistencies have been observed but management has refused to amend the financial statements.

Recommended opinion:
The refusal by management to amend the financial statements is reason enough for the auditors to modify the audit opinion.
The form of modification will depend on the materiality and pervasiveness of the matter to the users.

Client three

In this case there is a legal case at the period end whose liability has been provided for. There is no mention of a dispute with the auditors on the provision made.
The client has adequately disclosed this matter in the financial statements in note 4.

The auditor may include the matter in the Emphasis of Matter Paragraph since he is of the view that he should make mention of it in the audit report. The auditor shall make mention of note 4 in the EoM paragraph and state also that the inclusion of this paragraph is not meant to modify the opinion.

Recommended opinion:
As stated above, the inclusion of the Emphasis of Matter Paragraph does not modify the audit opinion although it modified the audit report.
The suggested opinion in this case is an unmodified opinion with an emphasis of matter paragraph.

SOLUTION FOUR

a) **Benefits of introducing an audit committee in Uranium Plc.:**
   - Existence of an audit committee improves the quality of financial statements by having then reviewed on behalf of the rest of the board.
   - The very existence of the committee creates a climate of displine and control which reduces the opportunity for fraud.
   - The committee which comprises largely non-executive directors, enable them to contribute an independent judgment in running the affairs of the organization.
   - The audit committee is a forum the finance director can raise matters of concern and which he can use to get things done which otherwise would have been difficult.
   - The existence of the committee strengthens the position of the external auditor by providing a channel of communication and forum for issues of concern.
   - Provides a framework in which the external auditor can assert his independence in case of a dispute with management.
   - Strengthens the position of the internal audit function by having it to report to the committee and so giving internal audit a greater degree of independence.
   - The existence of the audit committee increases public confidence in the credibility and objectivity of the financial statements.

b) **Client acceptance matters to consider in Uranium Plc.:**
   - The integrity of management – The fact that the company has changed auditors three times within a period of five years raises great concern. This is compounded by the fact that the Finance Director is not happy with some issues concerning the running of the company.
   - Being the first audit in this industry, it is necessary to consider whether the firm will be able to get the staff with the requisite skills and competences to carry out the audit.
   - The fact that the Finance Director intends to leave due to disagreements, this gives the impression that there could be one or few dominant individuals at the helm of this company.
   - The fact that the request to communicate to the outgoing auditors has been turned down raises a lot of concern. It is an ethical requirement that incoming auditors communicate with the outgoing auditors.

   Recommendation:
   Based on the seriousness of the matters observed a recommendation not to take on the audit of Uranium Plc. will be made. The risk of carrying out the audit of Uranium Plc. is considered too great and should not be taken on.

c) **Meaning of preconditions to an audit:**
   This is the use by an entity's management:
   - Of an acceptable financial reporting framework in the preparation of the financial statements and
   - The agreement of management to the premise on which the audit is conducted.

d) **Action to take to determine existence of preconditions for an audit of Uranium Plc.**

- Determine and confirm that the financial reporting framework in use by Uranium Plc. is acceptable considering:
  - The purpose of the financial statements.
  - The nature of the financial statements and
  - Whether laws and regulations prescribe the applicable financial reporting framework.

- Obtain Uranium Plc. s management agreement that it acknowledges and understands its responsibilities for the following:
  - Preparation of the financial statements in accordance with the applicable framework.
  - Putting in place internal controls necessary to enable the preparation of financial statements which are free from material misstatements and
  - That management will provide unrestricted access to the auditors to all information which management is aware of that is relevant to the preparation of the financial statements.

e) Audit risk relating to accounting estimates:

Accounting estimates involve some degree of judgment on the part of management. This is because most items that under this heading cannot be measured precisely and can only be estimated.

Whenever judgment is used in determining figures in the financial statements, there is a risk that the amounts may be misstated.

The objective of the auditor is to obtain sufficient appropriate audit evidence about whether accounting estimates are reasonable and adequate disclosures are adequate.

Examples of accounting estimates in an organization:

- Allowances for accounts receivables
- Provisions against the carrying value of investments where there is uncertainty regarding recoverability.
- Warranty obligations arising from a constructive obligation to make good defects on supply of goods.
- The depreciation rate or the asset's useful life.
- Providing for inventory obsolesces.
- Determination of the outcome of long term contracts.
- Likely costs arising from outstanding legal cases.

SOLUTION FIVE

a) **Meaning of tests of control:**
Tests of control are the procedures that the auditor undertakes to test the effectiveness of the internal controls in a client company.

Purpose of tests of control:
The purpose of performing tests of control is for the auditor to obtain evidence on the effectiveness or lack thereof of the internal controls.

In the event that the auditor concludes that the internal controls are operating effectively throughout the period under review he may place reliance on the effectiveness of the controls and perform less substantive tests.

Meaning of substantive tests:
Subs native tests are the tests that the auditor performs in the conduct of an audit and include substantive analytical procedures and tests of detail. This is the work that he performs on the figures contained in the financial statements.

Purpose of substantive tests:
The purpose of performing substantive tests by the auditor is test for misstatement of the figures being tested. In other words substantive tests are performed in order to test for material misstatements of the figures in the financial statements.

b) **Suggested controls in Kudu Ltd:**

i. There should be segregation of duties between the handling of cash and its banking. A different person from the cashier should do the banking of funds.
ii. Extending of credit to customers should be done after assessing the credit worthiness of the customer. This should be evidenced in writing and approved by a senior person.
iii. The movement of slow moving items from the shops to the main warehouse should be evidenced in writing and supplies should be signed for by a responsible official at the main warehouse.
iv. Periodic inventory counts should be undertaken at the stores and main warehouse and the counts should be agreed to the stock records.
v. A Goods Received Note should be raised for all supplies purchased and received and this should be signed by a responsible official.
vi. All purchases made by the purchasing officer should be in writing using a pre-numbered order form and should be approved by an appropriate official.

c) **Purpose of the engagement letter:**
The engagement letter is a form of contract between the auditor and Kudu Ltd. it contains the conditions of the audit agreement and reduces the chance of disagreements between the auditor and the client at a later date.

d) Reasons that may necessitate revision of the engagement letter:

i. When there arises a misunderstanding between the auditors and management.
ii. A review of the terms of the engagement arises.
iii. Where there has been a change in senior management.
iv. Where there is a significant change in the ownership of the company.
v. Where there is a significant change in the nature and size of the client business.
vi. There is a change in the financial reporting framework of the client.
vii. A change in legal or regulatory requirements of the entity.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

APPLICATION LEVEL

CA 2.4: TAXATION

THURSDAY 13 DECEMBER 2018

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 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.

10. A Taxation table is provided from page 2 to page 6 of the question paper.

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 from mineral processing	30%
On income from mining operations	30%

Mineral Royalty

Mineral Royalty on Copper

Range of Norm Price	**Mineral Royalty Rate**
Less than US$4,500	4% of norm value
From US$4,500 to less than US$6,000	5% of norm value
From US$6,000 and above	6% of norm value

Mineral Royalty on other minerals

Type of mineral	**Mineral Royalty Rate**
Base Metals (Other than Copper)	5% 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%
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

Monthly turnover	Turnover Tax per month
K1to K4,200	3% of monthly turnover above K3,000
K4,200.01to K8,300	K225 per month+3% of monthly turnover above K4,200
K8,300.01 to K12,500	K400 per month+3% of monthly turnover above K8,300
K12,500.01 to K16,500	K575 per month+3% of monthly turnover above K12,500
K16,500.01 to K20,800	K800 per month+3% of monthly turnover above K16,500
Above K20,800	K1,025 per month+3% monthly of turnover above K20,800

Annual turnover	Turnover Tax per annum
K1to K50,400	3% of annual turnover above K36,000
K50,400.01to K99,600	K2,700 per annum+3% of annual turnover above K50,400
K99,600.01 to K150,000	K4,800 per annum +3% of annual turnover above K99,600
K150,000.01 to K198,000	K6,900 per annum+3% of annual turnover above K150,000
K198,000.01 to K249,600	K9,600 per annum+3% of annual turnover above K198,000
Above K249,600	K12,300 per annum +3% of annual of turnover above K249,600

Presumptive Taxes for Transporters

Seating capacity	Tax per annum	Tax per day
	K	K
Less than 12 passengers and taxis	900	2.40
From 12 to 17 passengers	1,800	4.95
From 18 to 21 passengers	3,600	9.90
From 22 to 35 passengers	5,400	15.00
From 36 to 49 passengers	7,200	19.50
From 50 to 63 passengers	9,000	24.60
From 64 passengers and over	10,800	29.55

Property Transfer Tax

Rate of Tax on Realised Value of Land, Land and Buildings and shares	5%
Rate of tax on the realized value on the transfer of intellectual property	5%
Rate of Tax on Realised Value on a transfer or sale of a mining right	10%

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

Motor vehicles for the transport of ten or more persons, including the driver	Aged 2 to 5 years Customs duty K	Excise duty K	Aged over 5 years 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

Motor cars and other motor vehicles principally designed for the transport of persons including station wagons and racing cars	Aged 2 to 5 years Customs duty K	Excise duty K	Aged over 5 years Customs duty K	Excise duty 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

Motor vehicles for the transport of goods -with compression-ignition internal combustion piston engine (diesel or semi-diesel):	**Aged 2 to 5 years**		**Aged over 5 years**	
	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

Think Twice Ltd is a Zambian resident Information Communications Technology company that has some taxation issues involving a former employee, Christine Kafwanka, and a subsidiary company, Kashiba Ltd.

Christine Kafwanka

Christine Kafwanka had been employed as an Information Technology Manager at Think Twice Ltd. Christine decided to go on early retirement and retired on 31 May 2018. Whilst in employment, Christine was entitled to an annual salary of K226,800, transport allowance of 10% of basic salary, annual education allowance of K6,000 and annual uniform allowance of K9,600. Throughout her employment with Think Twice Ltd, Christine had been accommodated in a company owned house for which she paid no rent. The company incurred all maintenance costs in respect of the house, and the total maintenance costs amounted to K1,650 per month. On retirement, she received a pension refund amounting to K472,000, repatriation pay of K37,660 and accrued leave pay of K3,105.

Christine had always made NAPSA contributions of 5% of her basic salary. Tax deducted under the Pay As You Earn system amounted to K102,272. Other payments she made during the tax year 2018, included the purchase of uniforms at a cost of K6,700, a donation to a local approved public benefit organisation amounting to K3,700 and school fees for her children amounting to K3,100.

Using her retirement package, Christine set up her own Information Technology firm on 1 June 2018, preparing her first accounts to 31 December 2018 and annually thereafter. She bought an office building on 10 June 2018 at a cost of K140,000 which is exclusively used for business purposes. Christine also bought computers costing K40,000, equipment costing K60,000 and a motor car costing K130,000. The motor car is used for both business and private purposes, and the business use has been estimated to be 60%. She employed four information technology specialists at a monthly salary of K16,700 each. Each of these employees makes NAPSA contributions of 5% of their basic salary. Christine is also required to make employer's NAPSA contributions of 5% of her employees' basic salaries. Other operating expenses averaged K18,360 per month. Monthly turnover for the period from 1 June 2018 to 31 December 2018 was K120,000.

Think Twice Ltd engaged Christine Kafwanka to provide IT consultancy services from 1 June 2018 as a self-employed contractor. The contract period is for twelve (12) months ending on 31 May 2019. Due to the nature of the services needed by Think Twice Ltd, Christine is required to report at Think Twice Ltd's premises every day at 08:30 hours and work for three (3) hours up to 11:30 hours. Thereafter, she is free to attend to other clients at her firm. Think Twice Ltd has not employed another Information Technology manager to replace Christine, and as a result, the office that she previously occupied has been left for her and she uses it whenever she is at Think Twice Ltd's premises.

Christine uses her own laptop and other equipment necessary for her to execute the duties at Think Twice Ltd. She is assisted by her employees in performing the duties at Think Twice Ltd whenever necessary. The agreed contract price is K264,000 . It has been agreed that the contract price will be paid in monthly installments of K22,000.

Think Twice Ltd was visited by the Zambia Revenue Authority tax auditors on 25 December 2018. The main purpose of the visit was to conduct a Pay As You Earn audit. The tax auditors queried

Christine's self-employed status in respect of the new contract she signed with Think Twice Ltd on 1 June 2018.

Kashiba Ltd.

Think Twice Ltd has a 100% owned subsidiary company known as Kashiba Ltd. Kashiba Ltd is a Zambian resident company engaged in farming. Kashiba Ltd estimated the tax adjusted farming profit to be K620,000 for the tax year 2018, on which the provisional income tax was paid on the appropriate due dates. The actual taxable farming profit for the tax year 2018 amounted to K560,000. This profit is the final taxable profit after all the necessary adjustments and capital allowances. The only other income received by Kashiba Ltd in the tax year 2018 were Royalties amounting to K102,000. This is the actual amount received. Withholding Tax had been deducted at source.

Required:

(a) In respect of the contract Christine signed with Think Twice Ltd on 1 June 2018, explain:

(i) Four (4) reasons why the Zambia Revenue Authority tax auditors queried Christine's self-employed status. (4 marks)

(ii) Four (4) reasons Christine and Think Twice Ltd will use to defend her self-employed status. (4 marks)

(b) Explain the reasons why Christine will **NOT** be required to pay turnover tax, for the tax year 2018. (4 marks)

(c) Calculate Christine's tax adjusted business profit for the tax year 2018. (8 marks)

(d) Calculate the income tax payable by Christine for the tax year 2018. (12 marks)

(e) In relation to Kashiba Ltd:

(i) Calculate the provisional income tax paid by the company for the tax year 2018, clearly showing the amount paid on each due date. (3 marks)

(ii) Calculate the income tax payable by the company for the tax year 2018. (5 marks)

[Total: 40 marks]

SECTION B

Attempt any THREE (3) questions in this section.

QUESTION TWO

For the purposes of this question assume that today's date is 31 December 2018

Cornwall was born in country known as Pascovia in 1972. He had always lived in Pascovia, where he is also domiciled and has been employed by Aquatic International, a company which was incorporated in Pascovia. Key management and commercial decisions that are necessary for the conduct of Aquatic International's business are in substance made in Pascovia. On 1 November 2018, Aquatic International acquired a 90% stake in Aqua Zambia Ltd, a company incorporated and resident Zambia. Cornwall was immediately appointed the Chief Operating Officer for Aqua Zambia Limited, on an eighteen month contract commencing on that date, to oversee the smooth transition and integration of the company into the group, after which he will relocate back to Pascovia permanently.

Cornwall arrived in Zambia to take the position on 1 November 2018. His monthly salary was K90,000 and he was paid a relocation allowance of K60,000. He was provided with a personal to holder motor car with a cylinder capacity of 3000cc, which the company acquired at a cost of K200,000 in October 2018. The company also paid for all the motor car running expenses which amounted to K3,500 per month.

Cornwall has investments in shares he holds in companies which are resident in Pascovia. The currency of Pascovia is known as the Pascovian dollar (P$). In December 2018, dividends of P$3,250 were credited to his Zambian bank account in respect of these investments. He also holds a fixed deposit account with a commercial bank that is resident in Pascovia. Interest amounting to P$2,400 was credited to this account in December 2018. The amount of the dividends was net of withholding tax at the rate of 35% deducted in Pascovia and the amount of the fixed deposit interest was net of withholding tax at the rate of 25% deducted in Pascovia.

There is no double taxation agreement between Zambia and Pascovia. When computing Zambian income tax payable, credit is available for any foreign tax paid in Pascovia. An exchange rate of K9.00 per P$1 should be used where relevant.

Required:

(a) Explain the criteria used to determine whether a company is resident in Zambia and discuss whether Aquatic International will be regarded as being resident in Zambia and hence liable to Zambian income the tax year 2018. (5 marks)

(b) Explain giving reasons, whether Cornwall will be regarded as being resident and ordinarily resident in Zambia in the tax year 2018. (4 marks)

(c) Explain whether any of the income earned by Cornwall in the tax year 2018, will be chargeable to tax in Zambia, calculating the amount of income tax payable, if any.

(11 marks)

[Total: 20 Marks]

QUESTION THREE

JHK Ltd is a Zambian resident manufacturing company. The company is registered for Value Added Tax (VAT) and sells its products to both VAT registered and non-VAT registered customers in Zambia. The company is owned by a group of investors from a country known as Dambia. The company's Managing Director wants to know how VAT is administered in Zambia. In particular, he wants advice on:

(i) Whether VAT can be accounted for on receipts basis instead of the normal invoice basis.
(ii) Whether it is compulsory or optional to register for VAT.

The following is an extract from the management accounts of the company for the month of September 2018:

	K
Sales revenue	190,500
Cost of sales	(102,300)
Gross profit	88,200
Expenses	
Salaries and wages	(20,000)
General overheads	(16,124)
Other operating expenses	(47,705)
Net profit for the year	4,371

Additional information

(1) JHK Ltd manufactures both taxable and exempt supplies. Exempt supplies represent 20% of the total sales revenue, while the remainder represents standard-rated supplies. The sales made to non- VAT registered customers amounted to 30% of the standard-rated supplies.

(2) Included in the cost of sales are purchases amounting to K86,955, of which K16,955 are exempt purchases, while the balance are all standard-rated supplies. The purchases made from non-VAT registered suppliers amounted to 25% of the standard-rated.

(3) General overheads are all standard rated and are VAT inclusive.

(4) Other operating expenses (VAT inclusive) comprise:

	K
Internet services	4,640
Telephone expenses	3,509
Entertainment expenses	17,632
Diesel for company utility vehicles	7,540
Petrol for company pool cars	4,408
Motor vehicle maintenance expenses	6,612
Utility bills in connection with Managing Director's accommodation	3,364
	47,705

(5) The company acquired the fixtures & fittings at a cost of K16,240 (VAT inclusive) and manufacturing equipment at a cost of K46,400 (VAT inclusive) during September 2018.

Unless stated otherwise, all of the above figures are exclusive of VAT where appropriate.

Required:

(a) Describe the cash accounting scheme and explain its advantages and disadvantages.
(6 marks)

(b) Explain the circumstances under which a trader may voluntarily register for VAT.
(2 marks)

(c) Calculate the VAT payable by JHK Ltd for the month of September 2018. You must clearly indicate using a zero (0) each expense where input VAT is irrecoverable.
(12 marks)

[Total: 20 Marks]

QUESTION FOUR

You are employed in CK & Co., a rapidly expanding firm of Chartered Accountants.

Your firm has been approached by Lembani, a sole trader who is not happy with a tax assessment recently made by the Zambia Revenue Authority on his business. Lembani is aware that a tax payer can make an appeal in respect of a tax assessment, but does not know exactly where such an appeal can be made.

The Managing Partner has asked you to provide Lembani with the relevant information.

The Managing Partner has additionally asked you to help him develop a training programme for newly recruited part-qualified accountants detailing the importance of ethical guidance for accounting professionals providing taxation services.

Required:

(a) Explain the main responsibilities of the Tax Appeals Tribunal. (3 marks)

(b) Describe the appeals process for Lembani, explaining the possible grounds of appeal.
(7 marks)

(c) Prepare brief notes to be used in the training programme explaining how the five fundamental principles of the IESBA's code of Ethics for Professional Accountants apply to the provision of taxation services. (10 marks)

[Total: 20 marks]

QUESTION FIVE

Munwa Logistics Ltd is a Zambian resident company involved in public transportation of passengers. The company was incorporated on 1 January 2018, and it is owned by Zambian entrepreneurs. The company imported two (2) second hand Scania buses at a cost of $25,000 each. Each bus has a seating capacity of sixty-five (65) passengers and were both manufactured in December 2014. Insurance and freight costs up to the port of entry into Zambia amounted to $5,600 and $4,200 respectively for each bus. The company also imported two (2) second hand Higer buses on the same date at a cost of $15,700 each. Each bus has a seating capacity of Forty-five (45) passengers and were both manufactured in December 2011, Insurance and freight charges up to the port of entry into Zambia amounted to $3,800 and $2,500 respectively for each bus.

At the date of importation, the exchange rates as quoted by the bureau de change averaged K9.80 per US$1. The Bank of Zambia exchange rate which the Commissioner General approved averaged K9.50 per US$1.

On 1 April 2018, the company commenced its operations with buses going to different parts of the country. All of the buses were operational for six (6) days a week for four (4) weeks in a month. The ticket sales are K205 per passenger and K100 per passenger for the Scania and Higer buses respectively. The company employed four (4) drivers at a monthly salary of K16,500 each, four (4) co-drivers at a monthly salary of K14,600 each, and six (6) ticket sales assistants at a monthly salary of K13,500 each. Each employee was required to make NAPSA contributions of 5% of their basic salary. Munwa Logistics Ltd was also required to contribute 5% of its employee's basic salary as employer's NAPSA contributions. Other operating expenses averaged K245,700 per month. Capital allowances on the buses have been calculated as K359,913.

Required:

(a) Calculate the import taxes paid on the importation of the buses:

(i) Scania busses (6 marks)

(ii) Higer busses (6 marks)

(b) Calculate the income tax payable by the company for the tax year 2018. (8 marks)

[Total: 20 Marks]

END OF PAPER

CA 2.4: TAXATION – SOLUTIONS

SOLUTION ONE

(a) (i) The tax auditors queried Christine's self-employed status because:

(1) Christine is required to report at Think Twice's premises everyday at 08:30 hours. This means that she is controlled by the company.
(2) Think Twice Ltd has not employed another IT manager to replace Christine. This may mean that she is still employed by the company whilst she is allowed to do other things.
(3) Christine is paid on a monthly basis just like other employees are remunerated.
(4) The office that Christine previously occupied has been kept for her and she uses it whenever she is performing the duties at Think Twice Ltd.

(ii) Think Twice Ltd and Christine can use the following factors to defend the self-employed status:

(1) Christine uses her own tools and other equipment in executing her duties at Think Twice Ltd. This suggests that she is self-employed.
(2) Christine is assisted by her employees in performing the duties at Think Twice Ltd. This means that she has the power to delegate some duties to her employees.
(3) Christine does not exclusively work for Think Twice Ltd because she has a wide range of clients.
(4) Christine and Think Twice Ltd have agreed upon a fixed contract price which is paid according to the stage of completion (work done).

(b) Christine will be required to pay income tax on profits and not turnover tax because her turnover is more than K800,000.

Additionally, business will produce trading income and not earnings that is subjected to withholding tax where withholding tax is the not the final tax.

Turnover tax is paid on gross turnover by all persons whose annual turnover is K800,000 or less. It is only paid by:

(1) Any person whose annual turnover is less than K800,000, and
(2) Any person whose earnings are subjected to withholding tax where withholding tax is the not the final tax.

(c) CHRISTINE KAMFWAKA
ADJUSTED BUSINESS PROFIT FOR THE TAX YEAR 2018

	K	K
Sales (K120,000 X 7)		840,000
Less:		
Employees' salaries (K16,700 x 7 x 4)	467,600	
Employer's NAPSA (K467,600 x 5%)	23,380	
Other operating expenses (K18,360 x 7)	128,520	
Capital allowances:		
Building: (K140,000 x 2%)	2,800	
Computers: (K40,000 x 25%)	10,000	
Motor car: (K130,000 x 20% x 60%)	15,600	
Equipments: (K60,000 x 25%)	15,000	
		(662,900)
Adjusted business profit		177,100

(d) CHRISTINE KAFWAKA
INCOME TAX PAYABLE FOR THE TAX YEAR 2018

	K
Adjusted business profit	177,100
Income from Think Twice Ltd (K22,000 x 7)	154,000
Employment income	
Salary: (K226,800 x 5/12)	94,500
Transport allowance: (K94,500 x 10%)	9,450
Educational allowance: (K6,000 x 5/12)	2,500
Uniform allowance: (K9,600 x 5/12)- 6,700)	(2,700)
Maintenance expenses: (K1,650 x 5)	8,250
Leave pay	3,105
	446,205
Less:	
Donation to local approved public benefit organisation	(3,700)
Taxable income	442,505
Computation	
On first K39,600 @ 0%	0
Next K9,600 @ 25%	2,400
Next K25,200 @ 30%	9,960
Balance: K368,105 @37.5%	138,039
Income tax liability	147,999
Less:	
PAYE	(102,272)
Income tax payable	45,727

(e) (i) **KASHIBA LTD**

PROVISIONAL INCOME TAX PAID FOR THE TAX YEAR 2018

	K
Estimated farming profit	620,000
Provision tax @10%	62,000

Quarterly installments= K62,000/4 = K15,500

31 March 2018	K15,500
30 June 2018	K15,500
30 September 2018	K15,500
31 December 2018	K15,500

(ii) **KASHIBA LTD**

INCOME TAX PAYABLE FOR THE TAX YEAR 2018

	K
Farming profits	560,000
Other income	
Royalties (K102,000 x 100/85)	120,000
Total taxable income	680,000
Income Tax	
Non-farming income: K120,000 @35%	42,000
Farming profit: K560,000 @10%	56,000
Income tax liability	98,000
Less	
Provisional income tax	(62,000)
WHT- Royalties: K120,000 @15%	(18,000)
Income tax payable	18,000

SOLUTION TWO

(a) A company is resident in Zambia if either:

- It was incorporated or formed in Zambia or

- The place of effective management of the company's business or affairs is in Zambia.

The place of effective management is generally taken to the place where key management and commercial decisions that are necessary for the conduct of the business are in substance made.

Aquatic International will not be regarded as being resident in Zambia as it was incorporated in Pascovia and not Zambia. As such it will not be liable to Zambian income tax on any income generated in Pascovia. However Aquatic International will be liable to Zambian income tax on any income generated from Zambian sources through its 90% owned subsidiary.

(b) Primarily, an individual is regarded as resident in Zambia if that person is physically present in Zambia for a period of not less than 183 days, in a charge year.

Additionally, individuals who normally live in Zambia are resident and ordinarily resident in Zambia.

Similarly, individuals who come to Zambia with the intention of staying for more than 12 months are deemed to be resident and ordinarily resident in Zambia, from the date of arrival.

Therefore, even though Cornwall was not physically present in Zambia for a period of at least 183 days, in the tax year 2018, having only stayed in Zambia for 61 days in the charge year, he will still be regarded to be resident and ordinarily resident in Zambia from the time of arrival. This is because he has intention of staying in Zambia for a period that will exceed a period of 12 months having taking up the position as Chief Operation officer on a contract that will last for eighteen months.

(c) Cornwall will be assessed to Zambian income tax on the income he generated both from foreign and Zambian sources in the tax year 2018. This is in light of the fact that he will be regarded as being resident and ordinarily resident in Zambia in that tax year.

All the income from all sources he generated during the year will be aggregated when computing the amount of Zambian income tax payable in the tax year 2018.

The total income tax payable will be computed as shown below:
CORNWALL
PERSONAL INCOME TAX COMPUTATION FOR THE TAX YEAR 2018

	K	K

Income from Zambian Sources		
Salary (K90,000 x 2)		180,000
Relocation allowance		60,000
Total emoluments		240,000
Income from foreign Sources		
Dividend income		
($3,250 x 100/65) x K9	45,000	
Interest		
($2,400 x 100/75) x K9	28,800	
		73,800
		313,800

Income Tax		
K39,600 x 0%		nil
K9,600 x 25%		2,400
K25,200 x 30%		7,560
K239,400 x 37.5%		89,775
		99,735
Less: DTR on income from foreign sources		
- Dividends (W2)	14,302	
- Debenture interest (W3)	7,200	
		(21,502)
Income Tax payable		78,233

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:

   K45,000 x 35% = K15,750; and

   (ii) The Zambian Tax Charge computed as:

   $$\left(\frac{K45{,}000}{K313{,}800}\right) x\ K99{,}735$$

   = K14,302

   DTR will therefore be K14,302 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:

K28,800 x 25% = K7,200; and

(iv) The Zambian Tax Charge computed as:

$$\left(\frac{K28{,}800}{K313{,}800}\right) x\ K99{,}735$$

= K9,153

DTR will therefore be K7,200 being the lower amount.

SOLUTION THREE

(a) Cash accounting scheme is a scheme under which valued added tax is accounted for on a receipt basis i.e. VAT is only paid when cash is received from the customers. The scheme is only available to members of the Association of Building and Civil Engineering Contractors.

Advantages

(i) Value added tax is only paid if cash has been received from the customers.
(ii) It is easy to prepare the value added tax return as the cash book can used to do so.
(iii) Bad debts relief occurs automatically as the invoices not paid for will not be included in the VAT computations.

Disadvantages

(i) Input VAT is only claimed if payments to suppliers and for other expenses have been made.
(ii) The scheme is not open to all kinds of traders as it is restricted to businesses operating in the construction industry.

(b) A trader may register for VAT voluntarily only if that trader deals in taxable supplies and an annual turnover from taxable supplies is less than the registration threshold of K800,000.

(c) JHK LTD

VAT PAYABLE FOR THE MONTH OF SEPTEMBER 2018

Output VAT	K	K
Standard-rated sales: K190,500 x 80% x 16%		24,384
Input VAT		
Standard-rated purchases:		
K86,955 – 16,955 x 75% x 16%	8,400	
General overheads: K16,124 x 4/29 x 80%	1,779	
Internet services	0	
Telephone expenses	0	
Entertainment expenses	0	
Diesel: K7,540 x 4/29 x 90%	936	
Petrol	0	
Motor vehicle maintenance expenses:		
K6,612 x 4/29	912	
Utility bills in connection with Director's accommodation	0	
Fixtures & fittings: K16,240 x 4/29	2,240	
Manufacturing equipment: K46,400 x 4/29	6,400	
		(20,667)
VAT payable		3,717

SOLUTION FOUR

(a) Functions of the Tax Appeals Tribunal (TAT)

The functions of the Tax Appeals Tribunal (TAT) as outlined in the Tax Appeals Tribunal Act (2015) are to hear and determine:

(1) Appeals from decisions of the Commissioner-General under the Customs and Excise Act, the Income Tax Act, the Property Transfer Tax Act, the Value Added Tax Act and other tax legislation; and

(2) Any matter prescribed by the Minister, by statutory instrument, to be a matter against which an appeal may be made under the Acts referred to above.

(b) The Appeals Process

(1) The appeal to the Tribunal shall be made in writing and shall be lodged with the Tribunal within 30 days from the date of decision or determination and shall state:

- Details of the decision appealed against
- The date of the decision
- The office giving the decision
- The grounds for appeal
- Any other information as the Tribunal shall require.

(2) For VAT, a taxable supplier may make an appeal on decisions or determinations made by the Commissioner General in relation to:

- Registration or cancellation of registration or refusal to register a supplier
- The tax assessed to be payable on any supply of goods or the importation of any goods
- The amount of any input tax that may be credited to any taxable supplier
- The application of any rule providing for the apportionment or disallowance of input tax: or
- Any notice requiring early payment of tax or security

(3) Similarly, appeals may be made against Income Tax assessments made by the Commissioner General in circumstances where a tax payer has submitted a return which the Commissioner General considers to be inaccurate.

(4) The appellant may appear in person at a hearing or be represented by such person as they may appoint. The Commissioner General may be represented by any person the Commissioner General may appoint for the purpose.

(5) At the hearing of an appeal, the rules of natural justice apply but the Tribunal is not bound by the rules or practice as to evidence and may inform itself in relation to any matter in such manner as it thinks fit.

(6) The Tribunal delivers its decision at the end of the hearing, but in any case, the decision may be put in writing and sent to all parties to the appeal within 14 days of delivering the decision.

The registrar keeps copies of all decisions endorsed with a date of issue to all parties, and publishes the decision in the government Gazette within 14 days of the date of the decision being delivered.

(7) Where either party to the dispute is not satisfied with the decision of the Tax Appeals Tribunal, they may appeal to the Supreme Court which is the highest court in Zambia.

The appeal to the Supreme Court shall not be on a point of fact, but only on a point of law.

(c) Fundamental Principles of the IESBA's code of Ethics for Professional Accountants

Integrity

Members shall be straightforward and honest in all professional and business relationships. The principles of honesty and integrity impose an obligation on the practitioner to ensure straightforwardness, fair dealing, a commitment not to mislead or deceive and truthfulness.

This means that a member providing taxation services must not knowingly be associated with reports, returns, communications or other information where the member believes that the information contains a materially false or misleading statement or calculation or statements or information furnished recklessly.

Objectivity

Members shall not allow bias, conflict of interest or undue influence of others to override professional or business judgements. 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 tax 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 to safeguard their professional objectivity.

Professional competence and due care

Members shall maintain professional knowledge and skill at a level required to ensure that a client or employer receives competent professional services based on current developments in practice, legislation and techniques and shall act diligently and in accordance with applicable technical and professional standards when providing professional services.

This means that members engaged in providing tax services shall maintain professional competence and take due care in the performance of their work. To achieve this, members shall remain continuously aware of developments in the tax profession and tax legislation to ensure that they have the requisite knowledge related to such developments, including an awareness of relevant national pronouncements and other relevant statutory requirements and regulations.

Confidentiality

Members shall respect the confidentiality of information acquired as a result of professional and business relationships. They should therefore, not disclose any such information to third parties without proper and specific authority, unless there is a legal or professional right or duty to disclose, nor use the information for the personal advantage of the professional accountant or third parties.

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.

Professional behavior

Members shall comply with relevant laws and regulations to avoid any action that discredits the profession. Members shall act in a manner consistent with the good reputation of the Institute and the tax profession, refraining from any conducts that might bring the Institute and/or tax profession into disrepute.

Members should conduct themselves professionally with due consideration towards clients, third parties, other members of the tax profession, staff, employers and the general public. All professionals who provide tax services shall do so in accordance with appropriate standards of professional and ethical conduct.

SOLUTION FIVE

(a) (i) COMPUTATIN OF IMPORT TAXES ON THE SCANIA BUSES

	K
Customs duty (for Buses aged 3 yrs)	
(K108,121 x 2)	K216,242
Excise duty @0%	0
Import VAT	
(K661,200 (W) +K216,242) x 16%	140,391
Total import taxes	356,633

WORKING

VALUE FOR DUTY PURPOSES

Cost (25,000 + 25,000)	$50,000
Insurance (5,600 + 5,600)	$11,200
Transport costs (4,200 + 4,200)	$8,400
VDP in $	$69,600
Exchange rate /$1	K9.50
VDP in ZMW	661,200

(ii) COMPUTATIN OF IMPORT TAXES ON THE HIGER BUSES

	K
Customs duty (for Buses aged 6 yrs)	
(K43,248 x 2)	86,496
Excise duty @0%	0
Import VAT	
(K418,000 (W) +K86,496) x 16%	80,719
	167,215
Surtax charge	2,000
Total import taxes	169,215

WORKING

HIGER BUSSES

VALUE FOR DUTY PURPOSES

Cost (15,700 + 15,700)	$31,400
Insurance (3,800 + 3,800)	$7,600
Transport costs (2,500 + 2,500)	$ 5,000

VDP in	$44,000
Exchange rate/ $1	K9.50
VDP in ZMW	K418,000

(b) MUNWA LOGISTICS LTD
INCOME TAX PAYABLE FOR THE TAX YEAR 2018

	K	K
Revenue		
(K205 x 2 x 65 x 6 x 4 x 9) + (K100 x 2 x 45 x 6 x 4 x 9)		7,700,400
Less:		
Employees' salaries		
(K16,500 x 4 x 9) + (K14,600 x 4 x 9) + (K13,500 x 6 x 9)		(1,848,600)
Employers NAPSA: K1,848,600 x 5%)		(92,430)
Operating expenses (K245,700 x 9)		(2,211,300)
Capital allowances		(359,913)
Taxable profit		3,188,157
Company Income tax @35%		1,115,855

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

APPLICATION LEVEL

CA 2.5: FINANCIAL MANAGEMENT

FRIDAY 14 DECEMBER 2018

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 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.

SECTION A

This question is compulsory and must be attempted.

QUESTION ONE

KAL United is a professional football club that has enjoyed considerable success in both national and regional competitions in recent years. As a result, the club has accumulated K15 million for further investment. Just like many other professional clubs, KAL has been pursuing a successful future sporting compared to maximising shareholders wealth. In a recent board meeting, members resolved to start maximising the shareholders wealth as well. The boards of directors are currently considering using the available funds to improve the stadium and acquire an additional player. The northern stand could be upgraded from ordinary to executive stand. The upgrade would cost K11 million and take one year to complete. Additional wages amounting to K350, 000 per year for the grounds men will be required following the upgrade. During this period of improvements, the northern stand would be closed, resulting in a reduction of gate receipts of K1.5 million. However, after the upgrade gate receipts for each of the following four years would be K5 million higher than current receipts. In five years' time, the club has plans to sell the existing grounds and to move to a new stadium nearby. Improving the ground facilities is not expected to affect the ground's value when it will be sold. Payment for the improvements will be made when the work has been completed at the end of the first year. The equipment amounting to K4million that will be used in the upgrading of the northern stand attracts capital allowances at an annual rate of 25% on a reducing balance basis. After four years the equipment will have a net realisable value of K1.1milion.

The team manager has expressed a keen interest in acquiring Kaca Jumbo a central striker, who currently plays for a rival club. The rival club has agreed to release the player immediately for K5 million if required. A decision to acquire Kaca would mean that the existing central striker, William Kalinda, could be sold to another club. KAL United FC has recently received an offer of K1 million after tax for this player. This offer is still open but will only be accepted if Kaca joins the Club. Assuming Kaca is acquired, the team manager estimates that gate receipts will increase by K4.5 million in the first year and K1.3 million in each of the four following years. There will also be an increase in advertising and sponsorship revenues in the first of K3.6 million and of K1.1 million for each of the next four years if the player is acquired. At the end of five years, the player can be sold to a club in a lower division and KAL United will expect to receive K1.02 million after tax as a transfer fee. During his period at the club, Kaca will receive an annual salary of K1.5million and a loyalty bonus of K500, 000 after five years.

The club is financed by 85% equity and 15% debt. Debt consists of a 10% irredeemable bond issued at par value of K1,000 and current market value is K1, 021. The Club pays tax at an annual rate of 30% in arrears. The two year government bonds are 7% and equity premium is 8%. The clubs equity beta is estimated at 1.01.

Required:

(a) Calculate the current weighted average cost of capital for KAL United FC. (7 marks)

(b) Evaluate the proposed upgrade of northern stand and acquisition of a player by KAL United FC using the net present value technique and internal rate of return. (27 marks)

(c) Discuss the validity of using the net present value method in making investment decisions for a professional football club such as KAL united FC. (6 marks)

[Total: 40 Marks]

SECTION B

Attempt any THREE (3) questions in this section.

QUESTION TWO

JJ Plc has in issue 50 million ordinary shares with a market price of K3.5 each (ex-div). For the year ended 31 December 2018, the company earning per share and dividend payout ratio is expected to be K1.00 and 40% respectively. The company's dividend per share for the year ended 31 December 2014 was K0.2. The company equity beta is 1.5.

To raise K250 million JJ Plc has issued a bond that will be redeemed at its par value of K1,000 in ten year's time and pays annual interest of 15%. The current ex-interest market price of the bond is K950. Ignore taxation.

Additional market indicators are as follows:

Average sector price earnings ratio	8
Risk free rate of return	15%
Market risk premium	10%

Required:

(a) Calculate the market value of JJ Plc using the following methods:

(i) Price/earnings ratio
(ii) Dividend growth (12 marks)

(b) Estimate the cost of the bond. (4 marks)

(c) Explain four (4) reasons why different bonds issued by JJ Plc might have different costs of debt.

(4 marks)
[Total: 20 Marks]

QUESTION THREE

MRK Ltd is a large manufacturing company. Recently the Financial Manager indicated that the company is having problems in meeting its short term obligations as they fall due. The problem is attributed to customers taking long to settle their accounts. The annual turnover is K50 million and a contribution sales ratio of 10%. The current average receivables period is 60 days. The sales ledger administration costs are 3.5% of the turnover, and bad debts are 2.5% of debtors.

The Financial Manager is undecided on how to finance the working capital. The first option is to use either bank overdraft and short term loans or long term loans. Secondly, to use the services of NJK Financial Solutions, a factoring company. NJK is prepared to advance 80% of MRK's sales invoices and charge an additional 0.35% of the turnover for the service. On receipt by NJK Financial Solutions of the amounts due from MRK Ltd.'s customers, a further 15% of the sales invoices are to be remitted to MRK Ltd. NJK Financial Solutions would take up the administration of the sales ledger and it is estimated that 4.5% of the turnover would be lost due to the hostile collection procedures. The cost of finance available to MRK Ltd is 25% per year.

Ignore taxation and assume 365 days in a year.

Required:

(a) Evaluate whether the factoring of MRK Ltd.'s accounts receivable ledger would be valuable. (12 marks)

(b) Discuss the relative merits of financing working capital using short-term and long-term debt by MRK Ltd. (8 marks)

[Total: 20 Marks]

QUESTION FOUR

MS Zambia Ltd is a medium sized company in the manufacturing industry.

The company is considering an investment of K10 m. It has two options of financing this investment. One would be to borrow from the bank for two years at 10% per annum.The other would be by means of a 1 for 4 rights issue.

The finance director who is responsible for both financial control and treasury functions is concerned with the company's level of financial gearing. Industry average gearing (prior charge capital/total capital employed) is currently 50%. He has asked you to review the company's most recent financial statements.

MS Statement of Financial Position as at 31 December 2017

			K,000
	K,000	Non Current Liabilities	
Non Current Assets	33,720	Debentures	15,900
		Bank Loans	1,400
Current Assets			
		Current Liabilities	
Receivables	1,500	Loans	950
Inventory	1,000	Bank Overdraft	800
		Trade Payables	670
Cash at bank	500	Total Liabilities	19,720
		Capital	
		Ordinary shares of K2.00 each	5,500
		Preference shares ofK1.5 each	2500
			8,000
		Share premium	1,800
		Accumulated profits	7,200
Total	36,720	Total	36,720

Required:

Write a report to the finance director that includes the following:

(a) A discussion of the main issues to consider when determining the capital structure of the company. (10 marks)

(b) Calculation of the financial gearing ratio under each of the three scenarios provided below:

(i) The company does not take up the investment.
(ii) The company finances the investment by means of borrowing.
(iii) The company finances the investment by means of the rights issue.

(7 marks)

(c) A recommendation for the company of a proposed course of action based on your calculations. (3 marks)

[Total: 20 marks]

QUESTION FIVE

The fund manager of the Apex Unit Trust Fund is considering investing in a rights issue in Solar Tech Energy Plc (STE) and in a corporate bond.

(a) The ordinary shareholders of Solar Tech Energy Plc require an annual return of 17%. The proposed annual dividend by the STE of K3.00 per share is expected to grow at a constant annual rate of 10% in the foreseeable future. The ordinary shares of the company are currently trading on LuSE at K30 per share.

Required:

Discuss how the shareholders of STE can assess the extent to which they face the following risks, explaining in each case the nature of the risk being assessed:

(i) Business risk;
(ii) Financial risk;
(iii) Systematic risk

(6 marks)

(iv) Explain two (2) possible reasons the share price calculated using the dividend growth model could differ with the current market price. (2 marks)

(b) Data obtained today on 30 November 2018 from LuSE on three corporate bonds with nominal values of K1,000 at the close of trading is as follows:

	Izwe	Focus	CEC
Annual coupon	Zero %	12%	10 %
Maturity date	30/11/2021	Irredeemable	30/11/2026
Yield to redemption	20%	40%	25%
Redemption Value (K)	1,000		1,500
Market Price (K)	450	250	600

Required:

(i) Calculate the valuation of each bond and advise the fund manager which bond it should invest in, given its preference for bonds that are under - priced and of a shorter term to maturity. (10 marks)

(ii) Discuss one (1) possible advantage and one (1) disadvantage of the fund manager subscribing for a rights issue in STE. (2 marks)

[Total: 20 Marks]

END OF PAPER

Formula Sheet

Economic order quantity

$$= \sqrt{\frac{2C_nD}{C_H}}$$

Miller – Orr Model

$$\text{Return point} = \text{Lower limit} + (\frac{1}{3} \text{ x spread})$$

$$\text{Spread} = 3\left[\frac{\frac{3}{4} \text{ x transaction cost x variance of cash flows}}{\text{interest rate}}\right]^{\frac{1}{3}}$$

The Capital Asset Pricing Model

$$E(r_i) = R_f + \beta_i(E(r_m) - R_f)$$

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

$$P_o = \frac{D_0(1+g)}{(r_e - g)}$$

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

$$s_1 = S_0 x \frac{(1+h_c)}{(1+h_b)} \qquad f_0 = s_0 x \frac{(1+i_c)}{(1+i_b)}$$

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

CA 2.5: FINANCIAL MANAGEMENT – SOLUTIONS

SOLUTION ONE

a) Weighted Average Cost of Capital

Cost of irredeemable debt = Interest(1-tax)/Mv

6.86%

Cost of equity = 7% + 1.01(8%)=15.08%

WACC= 15.08%x(0.85) + 6.86%x(0.15) = 14%

b) FINANCIAL EVALUATION OF PROPOSED INVESTMENT

YEAR	0	1	2	3	4	5	6
	K'm	K'm	K'm	K'm	K'm	K'm	K'm
Gate receipts	-	4.5	6.3	6.3	6.3	6.3	-
Advertising & Sponsorship revenue	-	3.6	1.1	1.1	1.1	1.1	-
Wages	-	(0.35)	(0.35)	(0.35)	(0.35)	(0.35)	-
Salary	-	(1.5)	(1.5)	(1.5)	(1.5)	(2.0)	-
Cash flow before tax	-	6.25	5.55	5.55	5.55	5.05	
Tax@30%	-	-	(1.88)	(1.67)	(1.67)	(1.67)	(1.52)
Capital allowances	-	-	0.30	0.23	0.17	0.13	0.05
Reduction gate receipts	-	(1.50)					
Cost of upgrade	-	(11.00)				1.1	
Player acquisition	(5)					1.02	
Sale of Player	1						
Net cash flow	(4)	(6)	4	4	4	6	(1)
Discount@14%	1.000	0.877	0.769	0.675	0.592	0.519	0.456
Present values	(4.00)	(5.48)	3.06	2.77	2.40	2.92	(0.67)
	K'm						
NPV	**1.004**						

INTERNAL RATE OF RETURN

Year	0	1	2	3	4	5	6
Net cash flow	(4)	(6)	4	4	4	6	(1)
Discount@20%	1	0.833	0.694	0.579	0.482	0.402	0.335
Present Value	(4.00)	(5.21)	2.76	2.38	1.95	2.26	(0.49)
NPV	**(0.34)**						

IRR= 14% + 1.004/1.004+0.34 (20%-14%) = 18.48%

W1. Capital Allowance

Period		WDV	CA@25%	Tax@30%	Year available
Year 1		4.00	1.00	0.30	2
Year 2		3.00	0.75	0.23	3
Year 3		2.25	0.56	0.17	4
Year 4		1.69	0.42	0.13	5
Year 5		1.27	0.17	0.05	6

c) A professional football club may not wish to pursue an objective of shareholder wealth maximisation. It may prefer to invest in quality players in an attempt to enjoy future sporting success like the case previously for KAL United. If this is the case, the NPV approach will be less appropriate because the club is not pursuing a strict wealth-maximisation objective. However, considering that KAL United has opted to start maximising the shareholders wealth, NPV maybe an appropriate tool because it is the only method of appraisal where the output of the analysis has a direct bearing on the wealth of the business.

SOLUTION TWO

a)

i) Price earning ratio method valuation
Value of an ordinary share K1 x8=K8
Value of JJ Plc K8 x 50m=K400M (3 marks)

(iii) Dividend growth model
Proposed dividend of JJ plc for y/e ended 31 st December 2014 is K1 X 0 .4 =K0.4 per share.
4 year average dividend growth rate (0.4/0.2)^1/4 -1=1.1892-1=0.1892 or 18.92%= 19%.
Cost of equity using CAPM
=15 + 1.5 X (10) =30%.
Value of each ordinary share of JJ plc using DGM =(0.4 x1.19)/(0.3-0.19) = ZMW 4.33.
Value of JJ Plc as a company = 4.33 x 50m = k216.5 m
The current market capitalization of JJ Plc k175m (k3.5 x 50m)

b)

i)

		Cash flow	DF @ 13%	PV	DF @ 17%	PV
0	Market value	(950)	1	(950)	1	(950)
1-10	Coupon payment	150	5.426	813.9	4.659	698.85
10	Redemption value	1000	0.295	295	0.208	208
	NPV			158.9		(43.15)

Internal rate of return=13% +[158.9/(158.9+43.15)*(17-13)]=13%+3.14%=16.14%.

ii) The differences in the costs of debt could be explained by the following reasons:

The duration of the bond- The longer the time to maturity of a debt , the higher will be the interest rate and the cost of debt. A bond with the greater time to maturity would be expected to have a higher interest rate and a higher cost of debt.

Liquidity preference theory- suggests that investors require compensation for not having access to their cash, and so providers of debt finance require higher compensation for lending for longer periods.

Expectations theory- suggests that the shape of the yield curve depends on expectations as to future interest rates . At the time of issue if the expectation is that future interest rates will be higher than current interest rates , the yield curve will slope upwards and vice versa.

Market segmentation theory- suggests that future interests depend on conditions in different debt markets e.g the short term market , the medium term market and the long term market. The shape of the yield curve therefore depends on supply and demand for funds in the market segments.

The size of the debt- The greater the size of a bond issue the higher the cost of debt.

SOLUTION THREE

a) Cost of factoring:

		K'm
Cost of finance (100% - 80% - 15%=5%) 5%xK50m x 95.5%	=	2.388
Additional service charge (0.35% x K50m)	=	0.175
Loss on contribution (10%x K50m x 5%)	=	0.225
		2.788

Benefits of factoring:

		K'm
Savings on sales ledger administration costs (3.5% x K50m)	=	1.75
Savings on finance costs (60/365 x 50 x 95.5%) x 25%	=	1.96
Savings on bad debts (60/365 x K50m x 95.5%) x 2.5%	=	0.196
		3.906

The benefits exceed the cost of using a factor and therefore it would be worthwhile to use the services of NJK. This would result into a saving of K1.118million (K3.906m – K2.788m).

b) Short term and Long term financing of working capital

Short-term sources of debt finance include overdrafts and short-term loans. An overdraft offers flexibility but since it is technically repayable on demand, it is a relatively risky source of finance and a company could experience liquidity problems if an overdraft were called in, until an alternative source of finance were found. The danger with a short-term loan as a source of finance is that it may be renewed on less favourable terms if economic circumstances have deteriorated at its maturity, leaving the company vulnerable to short-term interest rate changes. Short-term finance will be cheaper than long-term finance, although this is based on the assumption of a normal shape to the yield curve. Economic circumstances could invert the yield curve, for example if short-term interest rates have been increased in order to curb economic growth or to dampen inflationary pressures.

Long-term sources of debt finance include loan inventory, debentures and long-term loans. These are relatively secure forms of finance: for example, if a company meets its contractual obligations on debentures in terms of interest payments and loan covenants it will not have to repay the finance until maturity. The risk for the company is therefore lower if it finances working capital from a long-term source.

However, long-term finance is more expensive than short-term finance. The shape of the normal yield curve, for example, indicates that providers of debt finance will expect compensation for deferred consumption and default risk, as well as protection against expected inflation. The choice between short-term and long-term debt for the financing of working capital is hence a choice between cheaper but riskier short-term finance and more expensive but less risky long-term debt.

SOLUTION FOUR

MS Zambia

To: The Finance director
From: The Finance Manager
Date: 5/01/2018

SUBJECT: REVIEW OF MS ZAMBIA RECENT FINANCIAL STATEMENTS.

I have carried out a review of the Statement of financial position for the year ended 31st December 2017 with regards to the capital structure concerns and the level of gearing given the two financing options available to MS.
I have attached my calculations and recommendations in the appendix to the report.

APPENDIX TO THE REPORT

a) There are a number of factors to consider when determining the capital structure of a company.

1) The impact on gearing and financial risk.
The capital structure of a company is essentially the proportion debt capital equity capital. A company which has excessive debt levels is said to be highly geared. Gearing is a measure of financial risk. Financial risk is the risk that a company will be unable to meet its interest obligations on debt finance.
Therefore financing a company with excessive debt will certainly increase its financial risk and hence the risk of insolvency.
2) Impact on Investors
High levels of financial risk will certainly send a negative signal to ordinary shareholders who may feel insecure because interest on debt is a legal obligation and must be paid before dividends on shares are paid. The increase in interest payments on debt increases the risk that dividends on shares may not be paid. Shareholders may therefore demand an increased return on their shares as a compensation for the extra risk. This therefore increases the cost of capital for the firm. The increase or decrease in cost of capital will then affect the market value of the firm. A decrease in cost of capital will increase the market value of the firm as its market value may be calculated by discounting the future cash flows. A lower cost of capital (discount rate) will lead to a higher value of the firm's cash flows compared to a firm with a higher discount rate.
3) Impact on Taxation and profits
The level of debt will certainly impact on a company's profits and therefore taxation. Interest payments are tax allowable expenses and therefore they reduce the taxable profits of a company. The reduction in taxable profits in turn reduces taxation. Earnings per share and price earnings ratio will also be diluted or strengthened depending on whether there is a decrease or increase in profits after tax. Earnings per share and price earnings ratio reduction may negatively affect investor's perception of MS Zambia performance.
4) Theories of capital structure.
There are theories on capital structure which are worth considering e.g. the Modigliani and Miller (MM) net operating income approach and the traditional view of weighted average cost

of capital (WACC).Some of these theories are based on certain assumptions. In addition they are not without criticism. In general the view of cost of capital suggests that WACC is influenced by gearing. The optimal capital structure will be the point at which WACC is lowest. However MM disagree to this.MM stated that in the absence of tax a company's capital structure would have no impact upon its WACC.As mentioned earlier these theories can only hold were certain assumptions are in place which may not always be the case.

b)

1) PRIOR CHARGE CAPITAL

	K000
Preferred shares	2500
Debentures	15900
Long-term loans	1400
Prior charge capital (ignoring short term debt)	$\boxed{19800}$
Add: short term loans	950
Bank Overdraft	800
Prior charge capital Plus short term debt	$\boxed{21550}$

2) CAPITAL EMPLOYED

Total Assets	36720
Less: Current Liabilities	(2420)
Capital Employed	34300

SCENARIO 1

Financial gearing = (k21550/k34300)*100=62.8%

Or Financial gearing= (k19800/k34300)*100=57.7%

SCENARIO 2

Prior charge capital (ignoring short term debt)	19800
Bank loan	10000
Prior charge capital revised	29800
Prior charge capital PLUS short term debt	21550
Bank loan	10000
Prior charge capital revised	31550

Financial gearing= (K31550/K44300)*100=71.2%

Or Financial Gearing = (K29800/K44300)*100=67.2%

SCENARIO 3

Capital employed = k34300+k10000=k44300

Financial gearing= (K19800/K44300)*100=44.7%

OR Financial Gearing= (K21550/K44300)*100=48.65%

c) Recommendation

Based on my calculations, financing the investment by means of a rights issue is the best course of action to take as the financial gearing will not exceed the industry average of 50%. (Scenario 3)

SOLUTION FIVE

a)

(i) **Nature and assessment of business risk**

Business risk arises due to the nature of a company's business operations, which determines the business sector into which it is classified, and to the way in which a company conducts its business operations. Business risk is the variability in shareholder returns that arises as a result of business operations. It can therefore be related to the way in which profit before interest and tax (PBIT or operating profit) changes as revenue or turnover changes. This can be assessed from a shareholder perspective by calculating operational gearing, which essentially looks at the relative proportions of fixed operating costs to variable operating costs. One measure of operational gearing that can be used is (100 x contribution/PBIT), although other measures are also used.

(ii) **Nature and assessment of financial risk**

Financial risk arises due to the use of debt as a source of finance, and hence is related to the capital structure of a company. Financial risk is the variability in shareholder returns that arises due to the need to pay interest on debt. Financial risk can be assessed from a shareholder perspective in two ways. Firstly, balance sheet gearing can be calculated. There are a number of gearing measures that can be used, such as the debt/equity ratio, the debt ratio and financial gearing, and the calculation can be based on either market values or book values. Secondly, the interest coverage ratio can be calculated.

(iii) **Nature and assessment of systematic risk**

From a shareholder perspective, systematic risk is the sum of business risk and financial risk. Systematic risk is the risk that remains after a shareholder has diversified investments in a portfolio, so that the risk specific to individual companies has been diversified away and the shareholder is faced with risk relating to the market as a whole. Market risk and undiversifiable risk are therefore other names for systematic risk.

From a shareholder perspective, the systematic risk of a company can be assessed by the equity beta of the company. If the company has debt in its capital structure, the systematic risk reflected by the equity beta will include both business risk and financial risk. If a company is financed entirely by equity, the systematic risk reflected by the equity beta will be business risk alone, in which case the equity beta will be the same as the asset beta.

(iv) The share price calculated using the dividend growth model differs with the current market price because it includes a proposed dividend, which may not have been made public.

The stock market might be in semi-strong form and therefore unaware of the proposed dividend. The Market is expecting a dividend of K2.70 (can be derived by working backwards with the DVM with the market price of K30) - which is different from the proposed dividend in the model of K3.00.

In a strong form efficient market, the difference may be on account of the investor public holding different views of the expected dividend growth rate of 7% or the return required by the shareholders of 17%.

The market may also not be very efficient.

The DVM has inherent weaknesses, which undermine its predictive accuracy.

b) (i)

Bond	**Cash flow**	**DF**		**PV**
Izwe	1,000	$[1+0.25]^{-3}$	0.5120	[0.5120*1000] = **512**
Focus	120	$[0.4]^{-1}$	2.5	**300**
CEC	100	$[1- (1+0.25)^{-8}]/0.25$	3.3289	333
	1,500	$[1+0.25]^{-8}$	0.1678	252
				585

The Izwe and Focus bonds are both undervalued by the market. However, since only the Izwe bond has a short – term maturity, this bond is recommended for investment by the fund.

(ii)

Advantages of subscribing for a rights issue

- Would enable the fund to maintain its existing voting rights
- A rights issue is cheaper than a public share issue, as shares are also sold at a discount.
- The rights issue would enable the fund to sell its rights to subscribe for new issued shares

Disadvantages of rights issue

- Pricing of shares may be difficult.
- A rights issue after listing, may cast doubt on its financial stability, as the company would be seen as having listed in order to repay borrowings.
- Shareholders who do not subscribe for issued shares lose their voting rights and control

CA ZAMBIA PROGRAMME EXAMINATIONS

ADVISORY LEVEL

CA 3.1: ADVANCED FINANCIAL REPORTING

MONDAY 10 DECEMBER 2018

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 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.

SECTION A

This question is compulsory and must be attempted

Question One

The following are the draft statements of financial position of Machana Plc, Braza Plc and Nama Plc as at 31 May 2018:

	Machana Plc	Braza Plc	Nama Plc
	K'000	**K'000**	**K'000**
Assets			
Non-current assets			
Property, plant and equipment	941.00	840.00	504.00
Investments in:			
Braza Plc	292.00	-	-
Nama Plc	330.00	-	-
Lala Plc	70.50		
	1 633.50	840.00	504.00
Current assets	609.00	536.00	386.00
Total Assets	**2 242.50**	**1 376.00**	**890.00**
Equity and liabilities			
Equity			
Equity shares of K0.50 each	386.00	319.00	302.00
Other components of equity	176.00	142.00	126.00
Retained earnings	251.50	62.00	100.00
Total Equity	**813.50**	**523.00**	**528.00**
Liabilities			
Non-current liabilities	1 008.00	529.00	286.00
Current liabilities	421.00	324.00	76.00
Total Liabilities	**1 429.00**	**853.00**	**362.00**
Total equity and liabilities	**2 242.50**	**1 376.00**	**890.00**

The following information is relevant in the preparation of group accounts.

1. Machana Plc acquired 80% of Braza Plc's equity shares on 1 June 2016 for a cash consideration of K292,000. The fair value of Braza Plc's identifiable net assets at 1 June 2016 were K348,000. On the same date, other components of equity and retained losses were K35,000 and K11,000 respectively. The excess in fair value over the carrying amount of assets relates to non – depreciable land. The fair value of non – controlling interest on 1 June 2016 was K74,000.

2. Machana Plc acquired 18% of Nama Plc's equity shares on 1 June 2016 for cash consideration of K86,000. On 1 September 2016, Machana Plc purchased an additional 62% of the equity shareholding in Nama Plc for a cash consideration of K244,000 when the fair value of identifiable net assets stood at K433,000. On the same date, other components of equity and retained earnings were K76,000 and K40,000 respectively. Other components of equity and retained earnings had been K71,000 and K33,000 respectively on 1 June 2016. The excess of fair values over carrying amounts of assets relate to an item of plant. The plant had an economic useful life of five (5) years three (3) months on 1 June 2016. The fair values of the non – controlling interest and the 18% equity interests in Nama Plc on 1 September 2016 were K83,000 and K71,000 respectively.

3. On 1 March 2018 Machana Plc disposed of 75% equity interests in Lala Plc for cash consideration of K213,000 when the fair value of net assets were K208,000. This left Machana Plc's equity interests in Lala Plc at 25%.This transaction was correctly recorded in Machana Plc's individual books. Machana Plc had acquired 100% of equity interests in Lala Plc four (4) years' ago for a cash consideration of K282,000 when the fair value of net assets stood at K278,000. The fair value of 25% equity interests in Lala Plc at 1 March 2018 was K69,000. Lala Plc made profit after tax of K20,000 for the year ended 31 May 2018. Machana Plc has significant influence in Lala Plc.

4. Braza Plc and Nama Plc have not issued any additional shares since being acquired by Chana Plc. Further, fair value adjustments referred to in (1) and (2) above have not been incorporated in the above statements of financial position.

5. Investments in Braza Plc and Nama Plc were classified as financial assets through other comprehensive income in accordance with IFRS 9 '*Financial instruments*'. The investments are shown in the statement of financial position of Machana Plc at cost while investment in Lala Plc at its fair value at 1 March 2018. This is because changes in their respective fair values were insignificant.

6. Goodwill in Braza Plc has been impaired by K3,000 as at 31 May 2018. Goodwill in other subsidiaries and investment in associate have not been impaired since their respective acquisitions.

7. It is group policy to value non-controlling interests at fair value of net assets at acquisition.

You are a group accountant of Machana Plc. Your colleague in another department made the following comment: "if I were an accountant I would not waste time trying to find the cause of trial balance's failure to balance, I would simply make it balance by creating fictitious expense items".

Required:

(a) Calculate profit on disposal of 75% equity interests in Lala Plc for inclusion in the consolidated financial statements of Machana Plc group for the year to 31 May 2018.
(3 marks)

(b) Prepare the consolidated statement of financial position of Machana Plc group as at 31 May 2018. (31 marks)

(c) Evaluate the ethical and professional issues arising from your colleague's comments relating to creating fictitious expense items in order to balance the trial balance.
(6 marks)
[Total: 40 Marks]

SECTION B

Attempt any THREE (3) questions in this section.

QUESTION TWO

Bwana plc was incorporated several years ago to undertake mining operations within Zambia. The company is involved in mining, crushing and concentrating the copper ore, and smelting it and finally refining the copper into a 99.99% copper metal product that it sells normally to export customers. Copper mining is a capital intensive business that requires huge amounts of capital expenditure denominated in US Dollars. Copper sales revenues are also normally invoiced in US Dollars. However, Bwana's functional currency is the Zambian Kwacha.

The company is in the process of finalising its financial statements for the year to 31 December 2017. The directors of Bwana are seeking advice in respect of accounting for a number of transactions including the following:

Transaction one
Bwana acquired mining equipment from a supplier in Canada on 1 January 2016 at a cost of US Dollar 2 million. The equipment was initially estimated to have a useful economic life of 20 years with a residual value of US Dollar 200 thousand. The equipment was revalued in accordance with the IAS 16 revaluation model on 31 December 2016 to a fair Value of US Dollar 1.9 million with the US Dollar residual value and the estimated total useful economic life remaining unchanged. However, the equipment is to be revalued at 31 December 2017 to a fair value of US Dollar 1.85 million. During the period to 31 December 2017, the total useful economic life and the residual value of the equipment have been revised to 16 years and US Dollar 250 thousand respectively. (7 marks)

Transaction two
Bwana plc has been concerned about fluctuations in the copper commodity prices in the international markets. Copper is normally priced in US Dollars. As part of the company's risk management strategy, Bwana entered into a forward commodity contract selling 10 thousand tonnes of copper forward at a price of US Dollar 6 thousand per tonne. The contract was entered on 1 January 2017 for settlement on 31 March 2018. The market price of copper on 1 January 2017 and 31 December 2017 was US Dollar 5,950 per tonne and 6,100 per tonne respectively. The production cost of the copper inventory (the 10 thousand tonnes) that was subject to the hedge was K42.5 million. The company would like to designate the hedge as a fair value hedge. The directors are seeking advice on conditions that must be meet in order for hedge accounting to apply and how the fair value hedge accounting would apply in this case. (13 marks)

Spot foreign exchange rates have been as follows:

Date	**Rate (Kwacha per US Dollar)**
1 January 2016	8.0
31 December 2016/1 January 2017	8.5
Average rate for year ended 31 December 2017	9.0
31 December 2017	10.0

Required:
Advise the directors of Bwana plc on the issues above stating the appropriate accounting treatment in respect of each in accordance with IFRS and computing amounts to report in the financial statements for the year to 31 December 2017 where appropriate (marks for each item are indicated within the scenario and will be given for explanation of issues involved in addition to computations).
[Total: 20 Marks]

QUESTION THREE

Employee benefits are all forms of consideration given by an entity in exchange for services rendered by employees or on the termination of employment. The objective of IAS 19 (revised) *Employee Benefits,* is to prescribe the accounting and disclosure for employee benefits. The Standard requires an entity to recognise:

- a liability when an employee has provided service in exchange for employee benefits to be paid in the future; and
- an expense when the entity consumes the economic benefit arising from service provided by an employee in exchange for employee benefits.

ZAMPENSION, a public listed company incorporated in Zambia, prepares its financial statements using International Financial Reporting Standards (IFRS). It operates a defined benefit pension plan for its employees. At 1 April 2017 the fair value of the pension plan assets was K2,700,000 and the present value of the pension plan obligations was K3,000,000.

The service cost for the year ended 31 March 2018 was K650, 000. On 1 April 2017 the pension plan was amended to offer additional benefits to members resulting in past service costs of K200, 000. The relevant discount rate for the year ended 31 March 2018 was estimated at 5% and ZAMPENSION paid K950, 000 in contributions to the plan. The pension plan paid K320, 000 to retired members in the year to 31 March 2018.

At 31 March 2018 the fair value of the pension plan assets was K3, 600,000 and the present value of the pension plan obligations was K3, 800,000.

Required:

(a) Distinguish between a defined contribution plan and a defined benefit plan. (5 marks)

(b) Calculate, in accordance with IAS 19 (revised) *Employee Benefits,* the following in respect of ZAMPENSION's pension plan:

(i) The expense in the income statement for the year ended 31 March 2018. (5 marks)

(ii) The amounts that will be included in other comprehensive income for the year ended 31 March 2018. (7 marks)

(iii) The net pension asset or obligation (stating which) that will be included in the statement of financial position as at 31 March 2018. (3 marks)

[Total: 20 Marks]

QUESTION FOUR

(a) Related party relationships and transactions are a normal feature of business. Enterprises often carry on their business activities through subsidiaries, joint ventures and associates; and it is inevitable that transactions will occur between group companies.

The objective of IAS 24, Related party disclosures is to ensure that an entity's financial statements contain the disclosures necessary to draw attention to the possibility that its financial position and profit or loss may have been affected by the existence of related parties and by transactions and outstanding balances, including commitments, with such parties.

Required:

(i) Briefly explain who is a related party according to IAS 24, Related party disclosures. Your explanation should clearly identify persons and entities that are related parties to a reporting entity. (5 marks)

(ii) Justify why the disclosure of related party relationships and transactions is an Important issue in corporate reporting. (5 marks)

(iii) Discuss the view that small companies should be exempt from the disclosure of related party relationships and transactions on the ground of size. (5 marks)

(b) On 15 December 2010, the Zambia Institute of Chartered Accountants (ZICA) adopted the use of a three tier financial reporting framework for Zambia. Under the three tier financial reporting framework, entities have been classified into three groups:

- Listed companies, Public interest entities and government –owned enterprises must use full IFRS and must be audited.
- Companies that are not in the first tier and have turnover equal to or exceeding K20 Million have a choice of using the IFRS for SMEs or full IFRS, and they must be audited.
- Entities with annual turnover below K20 million will use the Zambian Financial Reporting Standard for Micro and Small Entities (MSEs), and an audit is not required.

The aim of the new reporting structure is to provide a simplified, self-contained set of accounting principles for smaller non-listed companies.

Required:

Discuss the advantages and disadvantages of a separate IFRS for SMEs as opposed to full IFRS. (5 marks)

[Total: 20 Marks]

QUESTION FIVE

The directors of ZAMRATIO Ltd, a chemical manufacturing entity with several factory throughout Zambia, have provided you with the following financial statements for the company for the year ended 31 March 2018 together with the comparatives for the year ended 31 March 2017.

Statements of profit or loss and other comprehensive income for the year ended 31 March

	2018 K'000	2017 K'000
Revenue	1,026,000	867,000
Cost of sales	(720,000)	(607,500)
Gross profit	306,000	259,500
Distribution costs and administrative expenses	(153,600)	(99,000)
Finance costs	(15,600)	(13,500)
Profit before tax	136,800	147,000
Income tax expense	(39,000)	(42,000)
Profit for the year	97,800	105,000
Other Comprehensive income:		
Items that will not be reclassified to profit or loss:		
Gains on property revaluation	93,000	33,000
Actuarial gains on defined benefit pension plans	24,000	30,000
Total comprehensive income for the period	214,800	168,000

Statements of financial position as at 31 March

	2018 K'000	2017 K'000
Assets		
Non-current assets		
Property, plant and equipment	777,900	536,400
Employee benefits	186,000	162,000
	963,900	698,400
Current Assets		
Inventories	135,000	108,000
Trade receivables	129,000	156,000
Cash and cash equivalents	nil	3,600
	264,000	267,600
Total assets	1,227,900	966,000
Equity and liabilities		
Equity		
Share capital (K100 ordinary shares)	300,000	300,000
Revaluation reserve	126,000	33,000
Other reserves	54,000	30,000
Retained earnings	223,800	126,000
	703,800	489,000

Non-current liabilities		
Bank loan	180,000	180,000
6% loan notes (Redeemable on 1 July 2020)	162,000	156,000
	342,000	336,000
Current liabilities		
Trade payables	174,000	141,000
Short term borrowings	8,100	nil
	182,100	141,000
Total equity and liabilities	1,227,900	966,000

The directors of ZAMRATIO Ltd have asked you to help analyse the financial performance and position of the company as they wish to apply for additional finance from the bank to fund the company's ongoing expansion programme. They are not sure whether the company will achieve the following key ratios used by the bank to assess companies in this type of industry before providing further finance:

Ratio	**Target**
Debt/equity	50%
Interest cover	9.5 times
Current ratio	1.5:1
Quick ratio	1.1:1

Required:

(a) Calculate the **above ratios and any other relevant ratios** that you think will assist in assessing the financial performance and position of ZAMRATIO Limited.

(10 marks)

(b) Prepare a **report** that explains the financial performance and position of ZAMRATIO Ltd for presentation to the Board of Directors of ZAMRATIO Ltd, including a reference as to whether the bank is likely to view the financial performance and position of the company as acceptable.

(10 marks)

[Total: 20 Marks]

END OF PAPER

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

CA3.1

SECTION A

SOLUTION ONE

a) **Calculation of profit on disposal of 75% in Lala Plc**

	K'000
Consideration received	213
FV of retained interests	69
Fair value of net assets at disposal	208
Goodwill (282 - 278)	4
Profit	**70**

b) **Machana Plc Group**
Consolidated Statement of Financial Position as at 31 May 2018

	K'000
Assets	
Non-current assets	
Property, plant and equipment (941+840+504+5W1+15W1-5.25W1)	2 299.75
Goodwill **(W1)**	10.60
Investment in associate **(W4)**	70.25
	2 380.60
Current asset (609+536+386)	1 531.00
Total Assets	**3 911.60**
Equity and liabilities	
Equity	
Equity shares of K0.50 each	386.00
Other components of equity (W2)	301.60
Retained earnings (W3)	366.85
	1 054.45
Non - controlling interests (W5)	213.15
Total Equity	**1 267.60**
Liabilities	
Non-current	
Non-current liabilities (1,008+529+286)	1 823.00
Current liabilities (421+324+76)	821.00
Total Liabilities	**2 644.00**
Total equity and liabilities	**3 911.60**

c) Ethical and professional issues arising from colleagues statement

The financial statements of Machana Plc group should represent a true and fair view of all material transactions that took place in the period under review. Creating fictious expenses may lead to misrepresentation of the company's transactions. This may result in users of financial statements make wrong dividends, investment and financing decisions. If discovered it may lead to lawsuits and litigations against the company from various users of financial statements. Further, it may question the integrity and competency of the accountant and bring the accounting profession into disrepute.

Accountants are expected to hold a high level of integrity and professionalism because of the adverse effects of their actions on the company's continued existence if they decided to behave otherwise.

WORKINGS

W1 Goodwill

	K'000	K'000
Braza Plc		
Cost of investment		292.00
FV of Non - controlling interest at acquisition (20%X348)		69.60
Fair value of net assets acquired:		
Equity shares	319.00	
Other components of equity	35.00	
Retained earnings	(11.00)	
Fair value adjustment **(bal. figure)**	5.00	
Fair value of net assets acquired		348.00
Goodwill		**13.60**
Less: Impairment loss		3.00
		10.60
Nama Plc		
Cost of investment: 18% shareholding		71.00
62% shareholding		244.00
FV of Non - controlling interest at acquisition		86.60
Fair value of net assets acquired:		
Equity shares	302.00	
Other components of equity	76.00	
Retained earnings	40.00	
Fair value adjustment **(bal. figure)**	15.00	
Fair value of net assets acquired		433.00
Negative Goodwill		**(31.40)**
Less: Impairment		**-**
		(31.40)

Excess depreciation of fair value adjustment

(15 x 1/5yrs) x 1.75yrs	**5.25**

W2 Other components of equity

	K'000
Machana Plc	176.00
Share of post acquisition in:	
Braza Plc [80% x (142-35)]	85.60
Nama Plc [80% x (126-76)]	40.00
	301.60

W3 Retained earnings

	K'000
Machana Plc	251.50
Share of post acquisition in:	
Braza Plc [80% x (62-(-11))]	58.40
Nama Plc [80% x (100-40-5.25W1)]	43.80
Lala Plc [100% x (208 - 278)]+[25% x (3/12 x 20)]	(68.75)
Reversal of profit 213 - (75% x 282)	(1.50)
Goodwill impairment	(3.00)
Decrease in FV of 18% (86 -71)	(15.00)
Negative goodwill **W1**	31.40
Profit on disposal of Lala Plc **part (a)**	**70.00**
	366.85

W4 Investment in associate - Lala Plc

	K'000
FV of investment	69.00
Share of post acquisition in:	
25% x 5	1.25
	70.25

W5 Non - controlling interests

	K'000	K'000
Braza Plc		
At acquisition	69.60	
Share of post acquisition:		
Other component of equity (20% x 107)	21.40	
Retained earnings (20% x 73)	14.60	
		105.60

Nama Plc		
At acquisition	86.60	
Share of post acquisition:		
Other component of equity (20% x 50)	10.00	
Retained earnings (20% x 54.75)	10.95	
	-	
		107.55
Total		**213.15**

SOLUTION TWO

Mining Equipment

The mining equipment is primarily accounted for under IAS 16 Property Plant and Equipment. Translation of foreign currency amounts will be in accordance with IAS 21 Effects of Changes in Foreign Exchange Rates.

Bwana must report the equipment at its fair value at 31.12.2017 following its revaluation. However, the US Dollar fair value will need translation into Kwacha, the functional currency. In accordance with IAS 21 the fair value of the plant must be translated at its temporal rate, that is the rate on date of revaluation. This will give a fair value at 31.12.2017 in Kwacha of K18.5 million (US Dollar 1.85 millionX10).

The depreciation charge for the year will be based on the carrying amount b/d at 1.1.2017 less the residual value over the remaining life at 1.1.2017. The carrying amount b/d was K16.15 million (ie US Dollar1.9 millionX 8.5). The latest revised total useful economic life of the plant is 16 years. This leaves a remaining useful economic life of 15 years from 1.1.2017. The revised residual value of US Dollar 250,000 must be translated to Kwacha at the temporal rate at 31.12.2017 (date of computing the depreciation) giving K2.5 million (USD250,000X10). The depreciation charge for the year to 31.12.2017 will therefore amount to K910,000 (ie 16.15million less2.5 million/15years). The depreciation charge will be reported in P/L for the year.

A revaluation gain or loss will arise on 31.12 2017 as follows:

	K'000
Fair value at 31.12.2017	18,500 1
Less carrying amount before revaluation (16,150-910)	(15,240) 1
Total gain on revaluation	3,260

Any amount of the gain increasing the carrying in excess of the cost model carrying amount will be reported in OCI with the balance in P/L. The cost model carrying amount is as follows:

	K'000
Original cost US dollar 2million X 8	16,000**1/2**
Less depreciation y/e 31.12.2016 (16000 – 200X8.5)/20	(715)
	15,285
Less depreciation y/e 31.12.2017 (15,285 -250X10)/15	(852)
Cost model carrying amount at 31.12.2017	14,433

The equipment's carrying amount before revaluation of K15.24 million at 31.12.2017 is already in excess of the cost model carrying amount. The whole revaluation gain at 3112.2017 will therefore be reported in OCI. **1/2**

Accounting for the Hedging Transaction

The hedge accounting requirements in IFRS 9 are optional. If certain eligibility and qualification criteria are met, hedge accounting allows an entity to reflect risk management activities in the financial statements by matching gains or losses on financial hedging instruments with losses or gains on the risk exposures they hedge.

A hedging relationship qualifies for hedge accounting only if all of the following criteria are met:

1. The hedging relationship consists only of eligible hedging instruments and eligible hedged items. The hedging instrument is generally a financial derivative instrument and the hedged item is a recognised asset or liability, a firm commitment or a highly probable forecast transaction or a net investment in a foreign operation and must be reliably measurable.
2. At the inception of the hedging relationship there is formal designation and documentation of the hedging relationship and the entity's risk management objective and strategy for undertaking the hedge.
3. the hedging relationship meets all of the hedge effectiveness requirements

Fair value hedgeAccounting:

A fair value hedge is defined as a hedge of the exposure to changes in fair value of a recognised asset or liability or an unrecognised firm commitment, or a component of any such item, that is attributable to a particular risk and could affect profit or loss (or OCI in the case of an equity instrument designated as at FVTOCI).

For a fair value hedge, the gain or loss on the hedging instrument is recognised in profit or loss (or OCI, if hedging an equity instrument at FVTOCI and the gain or loss on the hedged item adjusts the carrying amount of the hedged item and is recognised in profit or loss. However, if the hedged item is an equity instrument at FVTOCI, those amounts remain in OCI.

With regard to the hedging the copper inventory, since the inventory has been hedged in a fair value hedge, it will be treated as a FVTPL asset. Therefore at 31.12.2017, the inventory must be reported at its fair value of K61 million (USD6100X10,000 tonnes)in the SFP. Thisb will give a remeasurement gain at 31.12.2017 of K18.5 million (ie 61 million less 42.5 million) which should be reported in P/L for the year.

The hedging derivative will be reported normally as a FVTPL item. The fair value of the Forward commodity contract at 31.12.2017 will be K1 million liability(ie (6100-6000)X10,000). The contract was initially , at 1.1.2017, reported at a fairvalue of K0.5 million (ie (6000 – 5950)X10000) asset. The overall remeasurement gains and losses on the hedging instrument to report in profit or loss for the y/e 31.12.2017 will therefore be as follows:

	K'000
Gain on initial recognition	500
Loss on remeasurement at 31.12.2017 (-1000-500)	(1,500)
Overall remeasurement loss	(1000)

SOLUTION THREE

a) Distinction between defined benefit plan and defined contribution plan

Under a defined benefit plan the company guarantees post employment benefits to the employees. That is, if the fund's assets are not adequate to cover employees' benefits, then the employer may be required to settle the shortfall. This means that investment risk of the plan rests with the employer.

Under a defined contribution plan, the employer's obligation is limited to what has been agreed as its contribution to the plan. The investment risk, therefore, rests with the employees.

A defined contribution plan is always funded whilst a defined benefit plan can either be funded or unfunded.

(b)

i) **Income statement expense in respect of the pension plan for the year ended 31 March 2018**

	K'000
Service cost	650
Past service costs	200
Net interest cost (5% x (3,000 + 200)) – (5% x 2,700) = 160-135	25
Net expense	**875**

ii) **Amounts to be included in OCI of ZAMPENSION for pension plan**

	FV of assets K000	**PV of obligation K000**
Opening balances	2,700	3,000
Past service cost		200
Service costs		650
Interest cost (5% x (3,000 + 200))		160
Expected return (5% x 2,700)	135	
Contributions	950	
Benefits paid	(320)	(320)
	3,465	3,690
Re-measurement component gain / loss	**135**	**110**
Closing balances	3,600	3,800

Therefore the amount included in OCI will be a re-measurement component gain of K25,000 (K135,000 - K110,000).

iii) **Net pension asset / obligation for the statement of financial position of ZAMPENSION as at 31 March 2018**

0	**K 000**
Present value of pension plan obligation	3,800
Fair value of pension plan assets	3,600
Net pension obligation	200

SOLUTION FOUR

(a)

(i) **Explanation and discussion**

A related party is a person or entity that is related to the entity that is preparing its financial statements (referred to as the 'reporting entity'). A person or a close member of that person's family is related to a reporting entity if that person:

1. has control or joint control over the reporting entity;
2. has significant influence over the reporting entity; or
3. is a member of the key management personnel of the reporting entity or of a parent of the reporting entity.
4. An entity is related to a reporting entity if any of the following conditions applies:
5. The entity and the reporting entity are members of the same group (which means that each parent, subsidiary and fellow subsidiary is related to the others).
6. One entity is an associate or joint venture of the other entity (or an associate or joint venture of a member of a group of which the other entity is a member).
7. Both entities are joint ventures of the same third party.
8. One entity is a joint venture of a third entity and the other entity is an associate of the third entity.
9. The entity is a post-employment defined benefit plan for the benefit of employees of either the reporting entity or an entity related to the reporting entity. If the reporting entity is itself such a plan, the sponsoring employers are also related to the reporting entity.
10. The entity is controlled or jointly controlled by a person identified

(ii) **Importance of related party disclosures**

Related party relationships are part of the normal business process. Entities operate separate parts of their business through subsidiaries and associates and acquire interests in other enterprises for investment or commercial reasons. Thus control or significant influence can be exercised over the investee by the investing company.

These relationships can have a significant effect on the financial position and operating results of the company and lead to transactions which would not normally be undertaken. For example, a company may sell a large proportion of its production to its parent company because it cannot and could not find a market elsewhere. Additionally transactions may be effected at prices which would not be acceptable to unrelated parties.

Even if there are no transactions between the related parties, it is still possible for the operating results and financial position of an enterprise to be affected by the relationship. A recently acquired subsidiary can be forced to finish a relationship with a company in order to benefit group companies. Transactions may be entered into on terms different from those applicable to an unrelated party. For example, a holding company may lease equipment to a subsidiary on terms unrelated to market rates for equivalent leases.

In the absence of contrary information, it is assumed that the financial statements of an entity reflect transactions carried out on an arm's length basis and that the entity has independent discretionary power over its actions and pursues its activities independently. If these assumptions are not justified because of related party transactions, then disclosure of this fact should be made. Even if transactions are at arm's length, the disclosure of related party transactions is useful because it is likely that future transactions may be affected by such relationships. The main issues in determining such disclosures are the identification of related parties, the types of transactions and arrangements and the information to be disclosed.

(iii) Discussion of exemption on grounds of size

The disclosure of related party information is as important to the user of the accounts of small companies as it is to the user of accounts of larger entities. If the transaction involves individuals who have an interest in the small company then it may have greater significance because of the disproportionate influence that this individual may have. The directors may also be the shareholders and this degree of control may affect the nature of certain transactions with the company. It is argued that the confidential nature of such disclosures would affect a small company but these disclosures are likely to be excluded from abbreviated accounts made available to the public. In any event, if these disclosures are so significant then it can be argued that they out to be disclosed.
It is possible that the costs of providing the information to be disclosed could outweigh the benefits of reporting it. However, this point of view is difficult to evaluate but the value of appropriate related party disclosures is particularly important and relevant information in small company accounts since transactions with Directors and other officers' transactions but these requirements only give limited assurance and therefore IAS 24 Related Party disclosures extends these requirements and helps produce a more comprehensive set of regulations in this area. In other countries there is no legislation in this area and the disclosure of related party transactions is a sensitive issue. IAS 24 attempts to ensure that some degree of uniformity exists in the disclosure of such transactions.

(b)
Advantages
Although IASs and IFRSs were originally designed to be suitable for all types of entity, in recent years, they have come increasingly complex. They are now designed primarily to meet the information needs of **institutional investors in large listed entities.**
Shareholders of SMEs are often also directors. Therefore, through managing the company and maintaining the financial records, they are already aware of the company's financial performance and position, and so do not need the level of detail in financial statements required by external institutional investors of larger companies.
The main external **users of SMEs tend to be lenders, trade suppliers and the tax authorities.** They have **different needs** from institutional investors and are more likely to focus on shorter term cash flows, liquidity and solvency.
The full IFRSs cover a wide range of issues, contain a sizeable amount of implementation guidance and include disclosure requirements appropriate for public companies. This can make them **too complex for users of SMEs to understand**.
Many SMEs now feel that following full IFRSs places an unacceptable burden on preparers of SME accounts – a burden that has been growing as IFRSs become more detailed and more countries adopt them. The **cost of following full IFRSs often appears to outweigh the benefits.**
The **disclosure** requirements of full IFRSs are very **extensive** and as such, can result in **information overload** for the users of SME accounts, reducing the understandability of financial statements.
Some IFRS still offer **choice of accounting treatments**, leading to lack of comparability between different companies adopting different accounting standards.
Disadvantages
If SMEs follow their own simplified IFRS, their accounts will **no longer be comparable** with larger companies following full IFRSs or SMEs choosing to follow full IFRSs. This may make it harder to attract investors.
The changeover from full IFRSs to the simplified IFRS for SMEs, will require training and possible changes in systems. This will place both a **time and cost** burden on the company.
Full IFRSs are now well established and respected and act as a form of **quality control** on financial statements which comply with them. It could be argued therefore that financial

statements which no longer comply with full IFRSs will **lose their credibility.** This is often called the 'Big GAAP, Little GAAP divide'.

The new IFRS for SMEs proposes to **reduce disclosures** required by full IFRSs. Omission of certain key information might actually make the financial statements **harder to understand.**

Conclusion

The advantages for SMEs of having a separate simplified IFRS outweigh the disadvantages. The three tier framework is therefore going to benefit both preparers and users of SME accounts.

SOLUTION FIVE

(a) Ratio	**2018 K'000**	**2017 K'000**
Debt/Equity		
$\frac{Debt}{Equity}$	$\frac{342,000}{703,800}$	$\frac{336,000}{489,000}$
	= 48.6%	= 68.7%
Interest cover		
$\frac{PBIT}{Interest}$	$\frac{152,400}{15,600}$	$\frac{160,500}{13,500}$
	= 9.8 times	= 11.9 times
Current ratio		
$\frac{Current\ assets}{Current\ liabilities}$	$\frac{264,000}{182,100}$	$\frac{267,600}{141,000}$
	= 1.45:1	= 1.9:1
Quick ratio		
$\frac{Current\ assets - Inventory}{Current\ liabilities}$	$\frac{129,000}{182,100}$	$\frac{159,600}{141,000}$
	= 0.71:1	= 1.13:1
Gross profit margin		
$\frac{Gross\ Profit}{Revenue} x100$	$\frac{306,000}{1,026,000}$	$\frac{259,500}{867,000}$
	= 29.8%	= 29.9%
Net profit margin		
PBITX100/Revenue	152,400X100/1,026,000	160,500X100/867,000
	=14.85 %	= 18.51%
Receivables days		
$\frac{Receivables}{Revenue} x365days$	$\frac{129,000}{1,026,000} x365$	$\frac{156,000}{867,000} x365$
	= 46 days	= 66 days
Inventory days		
InventoryX365/Cost of sales	$\frac{135,000}{720,000} x365$	$\frac{108,000}{607,500} x365$
	= 68 days	= 65 days
Trade payables		
$\frac{TRade\ payables}{Cost\ of\ sales} x365days$	$\frac{174,000}{720,000} x365$	$\frac{141,000}{607,500} x365$
	= 88 days	= 85 days
Return on Capital Employed		

$\frac{PBIT}{CapitalEmployed} x100\%$	$\frac{152{,}400}{1{,}045{,}800} x365$	$\frac{160{,}500}{825{,}000} x365$
(Equity + long term debt)	= 14.6%	= 19.5%

(b) **REPORT**

To : The Board of Directors

From : Financial Analyst

Date : 12th June 2018

SUBJECT: Financial and Operating performance of ZAMRATIO Ltd

This report analyses the financial performance and position of ZAMRATIO Ltd based on the financial statements for the year ended 31 March 2018.

An appendix is attached to this report which shows the ratios calculated as part of the performance review.

FINANCIAL PERFORMANCE

Revenue has increased by 18.3% from 2017 and the gross profit margin has essentially remained constant at 29.8% (29.9% in 2017). This increase in turnover reflects the aggressive policy of expansion and the fact that the gross profit margin has been maintained means that costs of sales have been closely controlled.

Distribution and administrative expenses have increased by 55% from 2017 and finance costs have increased by 15.6%. This has had an adverse effect on net profit, with the profit falling from 12.1% in 2017 to 9.5% in 2018. It seems that distribution and administrative expenses have increased as part of the expansion policy, with increased need for marketing and new distribution channels to cover increased demand.

Return on capital employed has decreased from 19.5% in 2017 to 15.6% in 2018, due to the decrease in net profit and increased capital employed. The ratio has been affected by the revaluation of property, plant and equipment during the year which accounts for K93m of the increase in capital employed.

Interest cover has declined from 11.9 times in 2017 to 9.8 times in 2018. The target used by the bank is 9.5 times cover and, although this is still above the target, the sharp decline should be worrying. The bank is likely to be concerned by this together with the falling profitability. Distribution and administrative expenses will need to be kept under strict control in the coming year.

FINANCIAL POSITION

The debt/equity ratio has fallen from 68.7% in 2017 to 48.6% in 2018 which is below the 50% target used by the bank. However this ratio is misleading as the long-term liabilities have not decreased. The fall in the ratio is due to an increase in equity, which includes the revaluation of non-current assets and increase in the fair value of available for sale investments. If this increase is removed, the ratio for 2018 will clearly exceed the target debt/equity ratio used by the bank.

The current ratio has fallen from 1.90 in 2017 to 1.45 this year and the quick ratio from 1.13 to 0.71. This reflects a decrease in cash of K11.7 million over the year with the bank balance going from K3.6 million to an overdraft of K8.1 million. In view of the fact that the receivables period has decreased from 66 days to 46 days, this implies that customers are being asked to pay earlier. In contrast, suppliers are being asked to wait longer to be paid. All this reflects a serious shortage of cash and implies that ZAMRATIO may be overtrading. As the current and quick ratios are below the targets used by the bank, the bank may be reluctant to advance finance to the company unless appropriate measure are immediately taken to address the areas of concern highlighted in this report.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

ADVISORY LEVEL

CA 3.2: ADVANCED AUDIT AND ASSURANCE

THURSDAY 13 DECEMBER 2018

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 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.

SECTION A

This question is compulsory and must be attempted

QUESTION ONE

Mwinilunga Metals Ltd is one of the three big mines in Zambia. Since mining deregulation in the 1990s, Mwinilunga Metals Ltd, like other mining companies, has been facing increasing theft of unprocessed copper and copper cathodes. This is mainly due to a number of small smelting plants which have been opened in one of the Provinces in Zambia. The owners of these smelting plants offer advance cash payments of up to 50% to their regular suppliers. The balance is paid on delivery. Management suspects that employees are colluding with outsiders to massively defraud the company. Ninety five percent (95%) of the company's employees comprise young people. Most of the young employees now patronise expensive lodges.

In seeking to respond to these thefts, the company management has started to implement a number of changes. These include a significant restructuring of the company with the replacement of some young people occupying key strategic positions, with old people (aged over 65 years) who are considered to be more trustworthy. The Chairman and Chief Executive Officer has stated that the hiring of older people will continue given the expected positive impact on the bottom line.

The morale of senior management is currently low. Other companies in the industry are already experiencing clear business benefits of employing a workforce that is age diverse and reflects the customer profile. This view is backed by the board, although it wants the company to urgently find innovative ways of addressing the resulting youth unemployment. Management is also developing a program aimed at ensuring young people learn the much needed 'soft skills' from old people. The targeted soft skills include leadership, great rapport with customers, a conscientious attitude and real enthusiasm for the job.

Most of the company's machinery and spares are imported from Asian countries. The relationship with the suppliers is excellent and all foreign suppliers are paid promptly. Whilst these suppliers are slightly more expensive than their counterparts in other continents, they have the advantage of short and certain delivery times, enabling Mwinilunga Metals Ltd to carry reasonable inventories of spare parts. All local suppliers are paid in cash.

In the recent past, Zambia experienced reduced economic growth mainly due to low copper prices. However, the prices have started rising and the current price per tonne is almost $7,500 compared to $3,800, six months ago. At the moment production is significantly below demand.

In an attempt to stimulate production, the company is considering outsourcing production. The government is also considering public and private sector partnerships to immediately open up mines which were closed and increase national copper production. The impact on the country's GDP will be enormous.

The Chief Financial Officer has, however, raised a number of concerns regarding the restructuring in general. He believes the financial implications have not been adequately addressed. Although, the company is experiencing gradual improvement in its liquidity position following the rising prices on the London Metal Exchange, it may take at least eighteen months to reach the targets set by the board. In addition, most old people have technophobia. They are distrustful and sceptical about the alleged benefits of technology. Mwinilunga Metals Ltd has invested a significant amount of money in a website which generated 12% of the total sales last year. The Chairman and Chief Executive Officer appreciates that the company is gradually trying to accumulate a cash surplus but the restructuring cannot be delayed any further given the volatility of the various fundamentals in the extractive industry. He even warned that the tax regime may be changed soon, even before the conclusion of a tax investigation involving tax evasion allegations. There is also pressure to meet the financial benchmarks set by lenders.

You work as an Audit Manager for Brand & Co, a firm of Chartered Accountants. In April 2017, the Managing Partner accepted the audit of Mwinilunga Metals Ltd for the year ended 31 December 2017. The interim audit was completed in September 2017, and you have been assigned the task of planning the final audit. Unfortunately most of the experienced audit staff have already been assigned to other engagements. Mwinilunga Metals Ltd's employees and managers are heavily indebted and their net pay is generally about 20% of their gross earnings.

During the year, management classified some non-current assets as held for sale. Since these assets are still being used by Mwinilunga Metals Ltd, they have been depreciated. The depreciation amount on these assets shown in the draft financial statements is K17 million. The total figure for non-current assets in the draft financial statements is K710 million (included in this figure are the non-current assets held for sale which are valued at K36 million), while the profit before tax is K245 million.

Required:

(a) Explain what is meant by an audit risk based approach to an audit. (3 marks)

(b) Identify and explain six (6) audit risks and eight (8) business risks that exist at Mwinilunga Metals Ltd. (14 marks)

(c) Explain the importance of the role of 'Quality control' in the audit of Mwinilunga Metals Ltd, and discuss appropriate quality control measures that may be used.

(8 marks)

(d) Identify and explain six (6) fraud risk factors and discuss the current responsibility auditors have to detect fraud. (9 marks)

(e) Evaluate the accounting treatment regarding non-current assets held for sale in Mwinilunga Metals Ltd, and recommend the impact on the audit report if management refuses to make the required corrections. (6 marks)

[Total: 40 Marks]

SECTION B

There are four (4) questions in this section. Attempt any three (3).

QUESTION TWO

You are an Audit Manager in HP Accountants. You are reviewing the following matters which have arisen in connection with four clients:

1. The Managing Partner of HP Accountants has been approached by the management of Mukwa Ltd to give advice on a tax dispute with the Zambia Revenue Authority (ZRA), and to prepare all outstanding tax returns and submit the same before the end of tax amnesty period. The tax dispute involves material tax calculations which were done by the tax department of HP Accountants.

2. Njila Ltd, a road construction company, has engaged HP Accountants to carry out a due diligence exercise. This is needed because Njila Ltd is considering acquiring Ngosa Quarries Ltd, which supplies crushed stones to Njila Ltd. HP Accountants and Njila Ltd have already agreed the procedures to be performed. However, one of the senior auditors believe HP Accountants' independence has been compromised with respect to this assignment. Both of these companies are not audit clients of your firm.

3. HP Accountants provide all employees with an opportunity to put forward suggestions as to how they believe the firm can be improved. During the course of the audit of Lilayi Ltd, the Audit Senior discovered a pattern where after a deposit of money was made, the same (or nearly the same) amount was wired to another financial institution.

   Before carrying out further enquiries and investigations, the Audit Senior alerted the Finance Director of Lilayi Ltd, about the discovery of this potential fraud, informing him that investigations may soon be instituted. The Finance Director left the country soon after. You have been asked by one of the partners to evaluate the Audit Senior's conduct in alerting the Finance Director and suggest any system which can be put in place by HP Accountants.

4. Kalunga Plc is one of your longest serving clients. This is the sixth year for the Engagement Partner on this audit. He has actually improved audit quality and reduced time spent on the audit. The Managing Partner wants the Engagement Partner to continue for the next five years.

   Required:

   (a) Discuss the current professional guidance on due diligence assignments. (3 marks)

   (b) Explain the ethical and professional issues raised by each of the above matters and the steps, if any, that HP Accountants should now take. (12 marks)

   (c) Explain five (5) main differences between the UK Corporate Governance Code and the US Sarbanes Oxley Act. (5 marks)

[Total: 20 Marks]

QUESTION THREE

You are an Audit Manager in Gwembe Associates, a ZiCA registered accountancy firm. You are responsible for the audit of the consolidated accounts of the Rosette Group of Companies. The group's main business activity is the design and manufacture of ladies wear. The group comprises a parent company and three subsidiaries. The parent company is situated in Zambia and one of the subsidiaries, acquired during the year is situated in a country known as Farland, a developing nation. The other two subsidiaries were acquired a long time ago and are situated in Western Europe. The turnover of the subsidiary in Farland is 23% of the group's turnover.

In recent years the Rosette Group of Companies has achieved a degree of dominance over other specialist foreign clothing manufacturers. The Rosette Group Companies' product range now enjoys an international reputation based not only on design and the quality of handmade tailoring but also on the attractive and well-known brand name, which is perceived to be associated with a country lifestyle of wealthy society leaders. The garments are distributed to and sold at premium prices through the best department stores in Brussels, Cape Town and Cairo and are especially popular with foreign tourists visiting the Victoria Falls.

The subsidiaries are audited by other local audit firms in the countries in which they operate. The Engagement Partner has asked you to consider the work which should be carried out to ensure that non-controlling interest is computed and treated correctly in the consolidated accounts. The total group assets are K1,150 million.

The schedule on non-controlling interest is as follows:

	K'million
Non-controlling interest at date of acquisition	75
Post-acquisition total comprehensive income	12
Non-controlling interest in consolidated statement of financial position	87

Required:

(a) Evaluate how the ethical behaviour of auditors may fail to meet expectations of users, especially in the context of the Rosette Group of companies (5 marks)

(b) Explain the extent of work required on the subsidiary in Farland. (5 marks)

(c) Discuss the matters to consider and evidence to expect in respect of the carrying value of the non-controlling interest. (8 marks)

(d) Explain the objective of the Public Interest Oversight Board (PIOB). (2 marks)

[Total: 20 Marks]

QUESTION FOUR

Filimina Breweries Ltd manufactures and sells opaque beer, popularly known as 'Mina'. No credit sales are allowed. It is wholly owned by Evaristo Mande, and has a large factory in Lusaka. The Zambia Environmental Management Agency (ZEMA) has directed the company to decommission and dispose of a damaged coal plant.

At a recent board meeting, it was decided that it would be best to dispose of the coal plant by sinking it in deep water in the Kafue River. The proposal to do so immediately enraged environmental campaigners and the community, who are deeply concerned about the consequences of this action. They have warned the company not to treat the Kafue River as a large dump site and set a very bad precedent to other companies and individuals.

You are the Audit Manager in Greenwings Chartered Accountants, a firm registered with ZiCA and you are currently planning the audit of the integrated report for the year ended 31 March 2017. Detailed formal reporting systems exist for both management and financial reporting. The following figures have been obtained from the financial statements of Filimina Breweries Ltd:

	2017	**2016**
	K'000	**K'000**
Revenue	432,200	398,500
Gross profit	100,120	98,760
Provision	17,600	23,480
Receivables	6,345	1,347

The provision relates to the decommissioning and disposal of the damaged coal plant, while the receivables relates to a possible insurance claim which may be claimable in respect of the damaged coal plant. Filimina Breweries Ltd has been an audit client of your firm for six years.

Required:

(a) Explain what is meant by integrated reporting, clearly stating its importance to users. (6 marks)

(b) Discuss the suitability of using analytical procedures in the audit of the financial statements of Filimina Breweries Ltd. (6 marks)

(c) Suggest five (5) appropriate audit procedures you should perform in relation to the provision. (5 marks)

(d) Suggest three (3) appropriate audit procedures you should perform in relation to the figure for receivables. (3 marks)

[Total: 20 marks]

QUESTION FIVE

You are the Partner in JKB Accountants and you are reviewing the Audit Manager's audit report proposals for three clients. You are also responsible for providing direction on current technical matters. You are currently preparing a brief on 'Big Data' and 'Data Analytics' which are a big current issue at the moment.

Details of the three clients for the year ended 30 June 2017 are as follows:

1. The soap manufacturing company, Kilini Ltd is a subsidiary of an overseas parent company, Elthy Ltd. Your firm is the auditor of the parent company and you have noticed from the working papers that a material foreign loan in the subsidiary has been translated at the closing rate at the year-end.

   The Audit Manager is satisfied with the accounting treatment and has proposed an unmodified opinion.

2. MAIC Plc.'s business strategy is to produce quality products to satisfy customer requirements, focusing on delivering products at the right time in order to secure profitable business. One of the key challenges it faces is meeting the increasing demand for its products, since the financial base is limited. The company has been surviving on short-term overdrafts.

   The Audit Manager concludes that going concern basis of accounting is appropriate but there is a material uncertainty. A modified opinion with an emphasis of matter paragraph is proposed.

3. Monde Ltd's major customer has not replied to the receivables' confirmation letter. The Audit Manager has obtained sufficient appropriate audit evidence on the operating effectiveness of the relevant controls and has assessed the risk of material misstatement as low. In addition, the population consists of a large number of small, homogeneous account balances and a very low exception rate is expected. The Audit Manager is not aware of circumstances or conditions that would cause customers to disregard the requests.

   The Audit Manager has proposed a disclaimer of opinion.

Required:

(a) Explain the main revisions to the standard unmodified report contained in ISA 700 (Revised) *Forming an Opinion and Reporting on Financial Statements,* and their relevance. (5 marks)

(c) For each situation above, comment on the appropriateness or otherwise of the proposed auditor's opinion. (10 marks)

(d) Explain the terms 'Big Data' and 'Data Analytics' as they relate to audit work. (5 marks)

[Total: 20 Marks]

END OF PAPER

SUGGESTED SOLUTIONS

DECEMBER 2018 EXAMINATIONS SERIES

PAPER 3.2 ADVANCED AUDIT AND ASSURANCE

SOLUTION ONE

a) Risk-based auditing refers to the development of auditing techniques that are responsive to risk factors in an audit. The auditors apply judgement to determine what level of risk pertains to different areas of a client's system and devise appropriate audit tests.

This approach ensures that the greatest audit effort is directed at the areas in the financial statements which are most likely to be misstated, so that the chance of detecting errors is improved and time is not spent on unnecessary testing of 'safe' areas.

The increased use of risk-based auditing reflects two factors.

- The growing complexity of the business environment increases the danger of fraud or misstatement. Factors such as the developing use of computerised systems and the growing internationalisation of business are relevant here.
- Pressures are increasingly exerted by audit clients for the auditors to keep fee levels down while an improved level of service is expected.

b) **Audit risks in Mwinilunga Metals Ltd**

i. First audit – Brand & Co. lacks cumulative audit knowledge and experience since this is the first audit of this client by Brand & Co. The risk of not detecting material misstatements could be high.

ii. Dominant individual – Mwinilunga Metals Ltd is basically controlled by one man, who is the Chairman and Chief Executive Officer. This has an impact on going concern e.g. if anything were to happen to him.

iii. Inventory valuation – Inventories are at risk of being stolen, and the inventory valuation could include inventories which have been stolen (do not exist).

iv. Website sales – there is a possibility of cut-off problems especially if the controls are weak.

v. Incorrect provision for restructuring – the computations and disclosures may not be in line with IAS 37.

vi. Non-availability of experienced auditors – this could affect the quality of the audit. Inexperienced staff may not be able to detect material misstatements.

vii. Valuation of payables (foreign suppliers) – translation may not be in line with IAS 21 *The Effects of Changes in Foreign Exchange rates.*

Business risks in Mwinilunga Metals Ltd

i. High staff turnover – this may not please some customers, and in the process the company may be losing customers to competitors. The impact on going concern could be significant.

ii. Foreign exchange rate changes – the company may experience significant exchange losses which could impact on cash flows negatively.

iii. Mining license – this could be withdrawn due to non-compliance with laws and regulations e.g. emitting excessive pollutants, health and safety matters etc.

iv. Tax investigation – reputational risks could be high since some business contacts like customers, financial institutions and suppliers may not want to be associated with tax evaders.
v. **Technophobia** – this will impact negatively on the operations of Mwinilunga Metals Ltd. The efficiency levels will drop drastically and sales could decrease.
vi. Outsourcing the production facilities – Mwinilunga Metals Ltd.'s management will lose flexibility and control which are cardinal in modern business organisations.
vii. Inadequate cash resources – Mwinilunga Metals Ltd could be overtrading.
viii. Possibility of overproduction in the industry – the many players opening in the industry could start pushing the price down due to overproduction. The resulting reduced prices could be below the cost of production.
ix. **Website** sales – the business could lose sales as a result of computer fraud and viruses which may threaten the company's liquidity position and eventually going concern status.

c) Quality control in Mwinilunga Metals Ltd:

Audit quality is not defined in law or through regulations, nor do auditing standards provide a simple definition. The question of what audit quality is and how it is achieved is addressed in the IAASB's *A Framework for Audit Quality: Key Elements that Create an Environment for Audit Quality,* published in 2014, and the objectives of which are to:

- Raise awareness of the key elements of audit quality
- Encourage key stakeholders to explore how to improve audit quality
- Facilitate greater dialogue between key stakeholders on audit quality.

The Framework states that 'the terms audit quality encompasses the key elements that create an environment which maximises the likelihood that quality audits are performed on a consistent basis.'

The importance of quality control in the audit of Mwinilunga Metals Ltd includes:

- Quality control on an individual audit, in this case Mwinilunga Metals Ltd, is a requirement of ISA 220 *Quality Control for an Audit of Financial Statements.*
- This meets public expectation and ensures users get value for money.
- Avoid reputational damage, which could lead to loss of clients and subsequently loss of income. This could threaten the going concern of the audit firm.
- Avoid litigation and high professional insurance costs.

The appropriate quality control measures are:

- Leadership responsibilities – the engagement partner is required to set an example with regard to the importance of quality. He shall take responsibility for the overall quality on the Mwinilunga Metals Ltd.'s audit.
- Ethical requirements – throughout the audit engagement, the audit engagement partner shall remain alert, through observation and making enquiries as necessary, for evidence of non-compliance with relevant ethical requirements by members of the engagement team.
- Assignment of engagement teams – the engagement partner must ensure that the team is appropriately qualified and experienced as a unit.
- Engagement performance – this includes
  - Direction

- Supervision
- Review
- Consultation
- Quality control review

- Monitoring – the audit engagement partner is required to consider the results of monitoring of the firm's (or network's) quality control systems and consider whether they have any impact on the Mwinilunga Metals Ltd audit he is conducting.

d) **Fraud risk factors:**

ISA 240 *The Auditor's Responsibilities relating to Fraud in an Audit of Financial Statements,* identifies a number of risk factors. The following risk factors exist in Mwinilunga Metals Ltd:

1. Pressure for management to meet expectations of third parties
2. Excessive pressure on management or operating personnel to meet financial targets
3. Low morale among senior management
4. Local suppliers paid in cash
5. Changes in behaviour or lifestyle
6. Personal financial obligations

Management and those charged with governance in an entity are primarily responsible for preventing and detecting fraud. It is up to them to put a strong emphasis within the company on fraud prevention. This will include establishing a strong control environment, with an emphasis on the principles of good corporate governance.

Auditor's responsibilities with regards fraud:

ISA 240 gives the key responsibility of an auditor with regards fraud. It states that an auditor conducting an audit in accordance with ISAs is responsible for obtaining reasonable assurance that the financial statements taken as a whole are free from material misstatements whether caused by fraud or error. The standard also requires discussions by members of the engagement team of the susceptibility of the entity's financial statements to material misstatement due to fraud, including how fraud might occur.

e) Accounting for non-current assets held for sale:

In accordance with IFRS 5 *Non-Current Assets held for Sale and Discontinued Operations,* a non-current asset held for sale should be presented separately in the statement of financial position. A non-current should be classified as held for sale if its carrying amount will be recovered principally through a sale transaction rather than through continuing use. A number of detailed criteria must be met:

- The asset must be available for immediate sale in its present condition
- The sale must be highly probable.

Non-current assets held for sale should not be depreciated even if they are still being used by the entity.

The accounting treatment in Mwinilunga Metals Ltd falls short of the IFRS 5 recommended accounting treatment. In Mwinilunga Metals Ltd, the assets are not separately presented and they are being depreciated. This is incorrect and adjustments will be required to suit the recommended

IFRS 5 guidelines. If management refuses to make the required amendments, the audit report will be modified with a qualified opinion since the issue is material [6.9% (17/245 X 100%) of profit before tax and 2.4% (17/710 X 100%) of total assets] but not pervasive.

SOLUTION TWO

a) Guidance on due diligence assignments:

There is no international standard on due diligence engagements, so in practice the engagement would be conducted in accordance with whichever standard best fits the particular engagement being conducted – perhaps ISRE2400, ISAE 3000 (Revised) or ISRS 4400.

b) Ethical and professional issues in HP Accountants:

1. **Mukwa Ltd:**

Preparation of tax returns and submission before amnesty period ends:

The *International Ethics Standards Board for Accountants* (IESBA) code states that the assistance with tax return preparation should not generally cause a threat to independence provided that management takes responsibility for the returns. This is because tax return preparation services are normally based on historical information and are reviewed and approved by the tax authority. This assignment can be accepted provided Chinese walls are (different teams) used.

Assistance in the resolution of the tax dispute may be provided, depending on whether the firm itself provided the service which is subject of the dispute, and whether the effect is material to the financial statements. In this case, the service was provided by HP Accountants and it is material. Safeguards like using professionals who are not members of audit team to perform the service, and obtaining advice on the service from an external tax professional are unlikely to work because of the significant self-interest and self-review threats. Hence HP Accountants should decline this assignment.

2. **Njila Ltd:**

Non- audit clients:

The degree of independence required is less stringent for assignments with non-audit clients. In this case, HP Accountants has been engaged to perform a due diligence exercise, in the form of agreed-upon procedures.

Agreed-upon procedures:

The objective of an agreed-upon procedures engagement is for the auditor to carry out procedures of an audit nature to which the auditor and the entity and any appropriate third parties have agreed and to report on factual findings. No assurance is provided and therefore the effect on auditor independence is reduced. It is therefore highly unlikely that independence has been compromised. HP Accountants should go ahead with the assignment.

The users of the report must form their own conclusions from the report by auditor. This report is restricted to those parties that have agreed to the procedures to be performed since others, unaware of the reasons for the procedures, may misinterpret the results.

3. **Lilayi Ltd:**

Money laundering:
The Audit Senior may have committed an offence of tipping off. Tipping off is when the Money Laundering Reporting Officer (MLRO) or any individual discloses something that might prejudice any investigations. It is a defence if the Audit Senior did not know or suspect that it was likely to prejudice the investigation.

HP Accountants should introduce a money-laundering programme. All employees must be trained in money laundering issues and a Money Laundering Reporting Officer (MLRO) must be appointed. Individuals should make internal reports of money laundering to the MLRO, to avoid tipping off offences.

4. **Kalunga Plc.:**

Long association of senior personnel with assurance clients:
The IESBA code sets out specific rules for public interest entities in this situation. These state that for the audit of listed and other public interest entities key audit partners should be rotated after seven years, and should not return to the engagement as a member of the team or as key audit partner for two years. This should be brought to the attention of the Managing Partner.

HP Accountants must not allow the Engagement Partner to continue beyond the seven year limit. However, in rare unforeseen situations outside of the control of the firm (such as serious illness of the intended key audit partner), key audit partners whose continuity is key to audit quality may be allowed an additional year on the audit team, provided the threat to independence can be eliminated or reduced to an acceptable level.

c) Differences between UK Corporate Governance Code/law and the US Sarbanes-Oxley Act.:

	UK guidance	US guidance
1. Scope	All types of internal control including financial, operational and compliance.	Internal control over financial reporting.
2. Code of ethics	No equivalent guidance.	Companies should adopt a code of ethics for senior financial officers.
3. Non-audit services	Audit committee should review non-audit services provided by auditor to ensure auditor objectivity and independence is safeguarded.	Auditors forbidden by law from carrying out a number of non-audit services including internal audit, bookkeeping, systems design or implementation, valuation, actuarial, management, expert services.
4.Reports on internal control	Accounts to include statement of responsibility of	Accounts should include statement of responsibility of

	management for internal controls. Also disclosure that there is a process for identifying, evaluating and managing risks and how board has reviewed this.	management for internal controls and financial reporting and accounts should also include audited assessment of financial reporting controls.
5. Certification by directors	Under UK legislation directors are required to state in directors' report that there is no relevant audit information that they know and that auditors are unaware of.	Certification of appropriateness and fair presentation of accounts by chief executive and chief finance officer.

SOLUTION THREE

a) Ethical behavior of auditors may fail to meet the expectations of users of financial statements due to non-compliance of auditors with the fundamental principles of ethical behaviour.

A distinguishing mark of the accountancy profession is its acceptance of the responsibility to act in the public interest.

Therefore, a professional accountant's responsibility is not exclusively to satisfy the needs of an individual client or employer.

Non-compliance with the following will result in the expectations of users of financial statements not being met:

1. Integrity – To be straightforward and honest in all professional and business relationships. In some countries, the levels of integrity may be questionable and the reports issued are highly debatable and therefore open to many interpretations.
   Lack of integrity may result in the auditors conducting themselves in unethical manner in the performance of the audit and hence putting its reliability into question.
2. Objectivity – Not to allow bias, conflict of interest or undue influence of others to override professional or business judgements.
   In the event that the auditors lose their objectivity, it is unlikely that they will make the correct judgments and conclusions.
3. Professional competence and due care – To maintain professional knowledge and skill at the level required to ensure that a client or employer receives competent professional service based on current developments in practice, legislation and techniques and act diligently and in accordance with applicable technical and professional standards.
   If the auditors lack the necessary skills and competences to perform the audit the resultant conclusions reached are questionable and not in public interest.
4. Confidentiality – To respect the confidentiality of information acquired as a result of professional and business relationships and, therefore, not to disclose any such information to third parties without proper and specific authority, unless there is a legal or professional right or duty to disclosure, nor use the information for the personal advantage of the professional accountant or third parties.
   It is possible that the auditor may act contrary to the given guidance knowingly or unknowingly against the interests of users of the financial statements.
5. Professional behaviour – To comply with relevant laws and regulations and avoid any conduct that discredits the profession. Auditors may disregard the laws and regulations which may result in them not complying with standards in the performance of audits and also act in a manner that is against professional etiquette against the interests of stakeholders.

b) Audit work of group auditors in subsidiary in Farland:

ISA 600 *Special consideration – Audits of Group Financial Statements (including the work of component auditors)* distinguishes between significant components and other components which are not individually significant to the group financial statements. The standard states that a component is significant (material to a group) where a chosen benchmark is more than 15% of the same figure for the group as a whole. The subsidiary's turnover is 23% of the group's turnover. The subsidiary in question is therefore a significant component.

Gwembe Associates should be involved in the assessment of risk for the subsidiary. The basic rule is that where the component is significant, the group auditor must be involved in the component auditor's work. Gwembe Associates may perform the following procedures:

- Meeting with the component management or the component auditors to obtain an understanding of the component and its environment.
- Reviewing the component auditor's audit strategy and audit plan.
- Performing risk assessment procedures to identify and assess risks of material misstatement at the component level. These may be performed with the component auditor or by Gwembe Associates.

c) **Matters to consider – carrying value of non-controlling interest:**

- **Materiality**
  Non-controlling interest is material to the consolidated statement of financial position, comprising 7.6% (K87m/ K1, 150 m x 100%) of total assets.
- **Accounting treatment**

  IFRS 3 *Business combinations gives* a choice:

  For each business combination, the acquirer shall measure any non-controlling interest in the acquiree either at fair value or at the non-controlling interest's proportionate share of the acquiree's identifiable net assets.

- **Risk**
  There is a risk that the non-controlling interest could be misstated and wrongly presented. Non-controlling interest at fair value will be different from non-controlling interest at proportionate share of the acquiree's net assets.

- **Impact on goodwill figure**
  The non-controlling interest forms part of the calculation of goodwill. Hence, any misstatement in the computation of non-controlling interest will also affect the goodwill figure.

- **Impact on audit for audit report**
  If the company does not make the necessary amendments, the audit opinion will be modified due to a material misstatement. A qualified opinion could be appropriate.

Evidence expected:

- Purchase agreements and other legal documents to confirm group shareholding structure.
- Copy of the computation of non-controlling at date of acquisition, including supporting documentation e.g. valuation report.
- Consolidation workings, including computation of post-acquisition total comprehensive income.
- Audited accounts of subsidiaries and the parent.

d) Objectives of the Public Interest Oversight Board(PIOB):

In February 2005, the Public Interest Oversight Board (PIOB) was launched in response to high profile corporate scandals to exercise oversight for all of IFAC's 'public interest activities' including its standard-setting bodies such as the IAASB. Its work involves:

- Monitoring the standard-setting boards
- Overseeing the nomination process for membership of these boards
- Co-operation with national oversight authorities.

The **objective** is 'to produce high quality global standards that are responsive to the public interest'. The **aim** of the international PIOB is to increase the confidence of investors and others that the public interest activities of IFAC are properly responsive to the public interest.

SOLUTION FOUR

a) Meaning of integrated reporting:

Integrated reporting draws together the many different types of capital which an organisation has, and aims to paint a broad picture of an organisation's ability to create value into the medium to long term.

Integrated reporting (IR) is topical, and is in line with the recent focus across the profession on non-financial forms of reporting. The idea is to produce a single report which integrates the various strands of information reported into a coherent whole – i.e. financial, management commentary, governance and remuneration, and sustainability reporting.

The importance of integrated reporting to users:

By reporting on more than just financial capital, users are to be provided with information on how an organisation creates value over time. This entails a more forward-looking focus than historical financial statements, which is more meaningful to determining business value. It is hoped that the integrated report will help prepare the foundation for the next generation of annual reports.

The International Integrated Reporting Council (IIRC) issued its 'International IR Framework' in 2013, which aims to encourage the adoption of integrated reporting across the world. The *Framework* is aimed primarily at private sector companies, but it could also be adapted for public sector or not for profit organisations.

This Framework is principles-based, acting as a platform to explain what creates value in a business. It is envisaged that reports will draw on material that is already available to management from a variety of different sources.

The Framework refers to an organisation's resources as 'capitals'. Capitals are used to assess value creation. Increases or decreases in these capitals indicate the level of value created or lost over a period. Capitals cover various types of resources found in a standard organisation. These may include financial capital, such as the entity's financial reserves, as well as non-financial capital, such as intellectual capital which is concerned with intellectual property and staff knowledge.

b) Use of analytical procedures in Filimina Breweries:

Guidance on analytical procedures is given in ISA 520 *Analytical Procedures.* There are a number of factors which the auditors should consider when deciding suitability of the use of analytical procedures as substantive procedures. For Filimina Breweries Ltd, the following factors make the use of analytical procedures suitable:

- The plausibility and predictability of the relationships identified for comparison and evaluation – in a manufacturing company, like Filimina Breweries Ltd, most costs have a strong direct relationship with the level of activity. For example, if more beer is sold, inputs purchased will be more and in this case cash-flows from operating activities will increase. Hence the increase in revenue of 8.5% is expected to match the increase in direct cost. Any unusual fluctuations should be explained by management.
- The detail to which information can be analysed – Filimina Breweries Ltd is a large company which has detailed formal reporting to support planning, decision making and control.
- The knowledge gained during previous audits – Filimina Breweries has been an audit client for six years. This could assist Greenwings Chartered Accountants when checking for expected and unexpected fluctuations in the figures.

c) **Audit procedures the provision amount:**

- Obtain details of the provision of K17,600 included in the accounts.
- Obtain a detailed analysis of the provisions showing opening balances, movements and closing balances. The movement of 25% is material.
- Determine whether the company has a present obligation as a result of past events by reviewing correspondence relating to decommissioning.
- Determine whether it is probable that a transfer of economic benefits will be required to settle the obligation by:
  - Checking whether any payments have been made after the year end in respect of decommissioning.
  - Reviewing correspondence with insurance company.
  - Sending a letter to the solicitor to obtain their views.
  - Discussing the position of similar past provisions with the directors. Were these provisions eventually settled.
- Recalculate the provision made.
- Compare the amount provided with any post year end payments and with any amount paid in the past for similar items.

d) **Audit procedures on receivable amount:**

- Obtain the relevant insurance covers.
- Review correspondence with the company's insurers.
- Ensure accounting treatment is in line with IAS 37 *Provisions, Contingent liabilities and Contingent Assets.*
- Confirm the receivable amount with the insurers. The movement of 371% is material.
- Obtain written representation that all details relating to insurance has been disclosed to Greenwings Chartered Accountants.

SOLUTION FIVE

a) Revisions to the standard unmodified report:

Existing International Standards on Auditing (ISAs) on reporting were revised by the IAASB in 2015 and are effective for audits of financial statements for periods ending on or after December 15, 2016. A new ISA on Key audit matters (ISA 701) was also issued.

The IAASB believes that the revisions are 'essential to the continued relevance of the audit profession globally' – so quite important then! The aims of the revisions are to respond to feedback from users of the financial statements that:

- The audit opinion is valued, but could be more informative
- More relevant information is needed about the entity and the audit.

The main response has been to include Key audit matters in the middle of the auditor's report. The order of the report has been changed, with audit opinion now placed at the start of the report. There is also a more detailed description of the auditor's responsibilities and the key features of an audit.

b) Appropriateness of proposed reports:

1. **Elthy Ltd**

IAS 21 *The Effects of Changes in Foreign Exchange rates* gives guidance on translation. Parent companies must translate the financial statements of overseas subsidiaries into its reporting currency before consolidation into group accounts. It states that assets and liabilities must be translated at the closing rate at the period end. Hence the translation in Elthy Ltd is correct and the proposed opinion is correct.

2. **MAIC Plc.**

A material uncertainty exists in respect of this company. ISA 570 *Going Concern* gives excessive reliance on short-term borrowings as a one of the possible indicators of going concern problems. MAIC Plc. has been surviving on short term overdrafts. If the financiers were to cancel this facility, the company's going concern could become questionable.

The nature of the audit report depends on whether adequate disclosure has been made in the financial statements. We can assume adequate disclosure has been made since the Audit Manager is proposing an emphasis of matter paragraph, which only applies where there is adequate disclosure. However, an emphasis of matter paragraph cannot be used together with a modified opinion. Hence, the Audit Manager's proposal is not suitable.

If going concern basis of accounting is appropriate and adequate disclosure has been made, then a suitable opinion is an unmodified opinion. The material uncertainty must be included in the audit report under a section headed 'Material Uncertainty Related to Going Concern'. This has replaced the use of an 'Emphasis of Matter paragraph' which was previously used in this situation.

3. Bbenkele Ltd

When confirmation is undertaken the method of requesting information from the customer may be either positive or negative. The scenario mentions all the conditions required for a negative confirmation. It is therefore likely that negative confirmation was used. In negative confirmation, the confirming party responds directly to the auditor only if they disagree with the information in the request. If negative confirmation was used, then there was no need to respond if in agreement.

The Audit Manager should have checked the type confirmation used. If positive confirmation was used, then non response should have meant auditors performing alternative audit procedures to obtain relevant and reliable audit evidence. These could have included reviewing subsequent cash receipts. The proposed disclaimer of opinion is premature. More audit work is required. Hence, the opinion to be issued will depend on additional evidence which will need to be obtained by carrying additional audit procedures, if necessary.

c) Explanations of 'Big Data' and 'Data Analytics'

BIG DATA is a broad term for the larger, more complex datasets that can be held and interpreted by modern computers. The term refers to a qualitative shift in the amount of data that is available in comparison with the past.

DATA ANALYTICS is the examination of data to try to identify pattens, trends or correlations. As the quantity of data has increased, it has become more and more necessary to evolve ways of processing and making sense of it.

It has been said that there are 3 Vs. of big data: there are larger **V**olumes of data, at faster **V**elocity, with more **V**ariety. Some add a 4th V – Veracity – which refers to widespread uncertainties over the reliability of data. The general idea is that having much more data around allows a surprising number of new things to be done. Big data has implications for auditors as well. Recent advances in IT make it increasingly possible for auditors to examine a complete data set – 100% of the transactions – and to represent trends graphically, almost instantly. Sampling techniques are under serious threat.

Data analytics are likely to lead to an improvement in audit quality, although this is dependant on data analytics processes being implemented intelligently. Data analytic might help in a number of areas such as:

- Analysis of revenue trends into product or region
- Three-way matches between purchases/sales orders; goods received/dispatched documentation and invoices.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

ADVISORY LEVEL

CA 3.3: STRATEGIC BUSINESS ANALYSIS

WEDNESDAY 12 DECEMBER 2018

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 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.

SECTION A

This question is compulsory and must be attempted

QUESTION ONE

INTEL'S TWO STRATEGIC INFLECTION POINTS

An inflection point is an event that results in a significant change in the progress of a company, industry, sector, economy or geopolitical situation and can be considered a turning point after which a dramatic change, with either positive or negative results, is expected to result. Companies, industries, sectors and economies are dynamic and constantly evolving. Inflection points are more significant than the small day-to-day progress typically made, and the effects of the change are often well known and widespread. (http://www.investopedia.com).

Intel Corporation had two such strategic inflection points within the past 30 years. The first came in the mid-1980s, when memory chips were Intel's principal business and Japanese manufacturers, intent on dominating the memory chip business, began cutting their prices 10% below the prices charged by Intel and other U.S companies but managed to match the Japanese price cuts.The Japanese manufacturers responded with another 10 percent price cut. Intel's management explored a number of strategic options to cope with the aggressive pricing of its Japanese rivals building a giant memory chip factory to overcome the cost advantage of Japanese producers, investing in research and development (R&D) to come up with a more advanced memory chip, and retreating to niche markets for memory chip which were not of interest to the Japanese.

At the time, Gordon Moore, Intel's chairman and co-founder, and Andrew Grove, Intel's chief executive officer (CEO), jointly concluded that none of these options offered much promise and that the best long-term solution was to abandon the memory chip business even though it accounted for 70 percent of Intel's revenue. Grove, with the concurrence of both Moore and the board of directors then proceeded to commit Intel's full energies to the business of developing ever more powerful microprocessors for personal computers; Intel had invented microprocessors in the early 1970s and had recently been concentrating on memory chips because of strong competition and excess capacity in the market for microprocessors.

Grove's bold decision to withdraw from memory chips, absorb a $173 million write-off in 1986 and go all out in microprocessors produced a new strategic vision for Intel-becoming the preeminent supplier of microprocessors to the personal computing industry making the personal computer (PC) the central appliance in the workplace and the home, and being the undisputed leader in the driving PC technology forward. Grove's new vision for Intel and the strategic course he charted in 1985 produced spectacular results. Since 1996, over 80 percent of the world's PCs have been made with Intel microprocessors and Intel has become the world's most profitable chip maker.

Intel encountered a second inflection point in 1998 opting to refocus on becoming the preeminent building block supplier to the Internet economy and spurring efforts to make the Internet more useful. Starting in early 1998 and responding to the mushrooming importance of the Internet, Intel's senior management launched major new initiatives to direct attention and resources to expanding the capabilities of both the PC platform and the Internet. It was this strategic inflection point that led to Intel's latest strategic vision of playing a major role in getting a billion computers connected to the Internet worldwide, installing millions of servers and building an Internet infrastructure that would support trillions of dollars of e-commerce and serve as a worldwide communication medium.

Source: Thompson, Strickland and Gamble, (2007), Crafting and executing Strategy, McGraw –Hill Book Company. Boston.

Required:

(a) Explain the impact of the two Intel's strategic inflection points on its overall performance in the industry. (10 marks)

(b) Discuss with illustrations, any five (5) company values that Intel Corporation or any business organisation may adopt as part of its mission or vision. (15 marks)

(c) Describe any five (5) payoffs an organisation will derive from a well-conceived and clear vision statement. (15 marks)

[Total: 40 Marks]

SECTION B

Answer any THREE (3) questions from this section.

QUESTION TWO

Business performance at Choma Cooperative Union Limited has gone through a very difficult time in the last five years. The Board and management has decided to review its strategic plan for those five years and have appointed you to give an independent evaluation.

Required:

Evaluate any five (5) limitation of a strategic plan. (20 marks)

QUESTION THREE

You have recently been appointed as a Strategy Manager of Kantu Breweries of Lusaka. As a starting point, you have been requested to give a management brief to both the board and management on what goes into strategy making. Discuss any five (5) determinants or factors that influence the make-up of a strategy in and around the organisation.

(20 marks)

QUESTION FOUR

The National Markets hygiene Company (NAMAHCO) is a subsidiary company of the National Marketeers 'Association of Zambia (NAMAZ) that has been constituted to ensure that cholera that has ravaged the nation does not lead to closure of markets by the government again. Each participants including farmers and other suppliers to the Marketeers will be levied an agreed fee.

Required:

Evaluate the ethical considerations that NAMAHCO will have to take when dealing with interests and associated risks of at least five (5) of its external stakeholders.

(20 marks)

QUESTION FIVE

(a) The Zambia Pork Products Limited is a successful wholly Zambian company in the pork products as its name implies. Its board of directors has approved the managements desire to venture into the international market in the SADC region and the Nigerian and Ghanaian markets. Describe any five (5) strategic appeal or benefits for such a move into such markets. (10 marks)

(b) Explain the main categories of risks that Zambian Pork Products Limited will face as it enter the International Market. (10 marks)

[Total: 20 Marks]

END OF PAPER

CA 3.3: STRATEGIC BUSINESS ANALYSIS – SOLUTIONS

SOLUTION ONE

a) The two inflection points, the first being the one that occurred in mid-1980's and the second which started in early 1998 had long term profitability and in making it a market leader in its area of business.

The first inflection, in which it had serious price undercutting from Japanese manufacturers in the memory chip business, had to make a dramatic change in its operations. Its serious change of business into more powerful microprocessors for personal computers as a resulted it being a market leader in driving the PC technology forward and by 1996 over the 80 percent of world's PC being made with Intel microprocessors as well as the world's profitable chip maker.

The second inflection that started in early 1998, when Intel opted to refocus on becoming the preeminent building block supplier to the Internet economy and spurring efforts to make the Internet more useful. It was this strategic inflection point that led to Intel's latest strategic vision of playing a major role in getting a billion computers connected to the Internet worldwide, installing millions of servers and building an Internet infrastructure that would support trillions of dollars of e-commerce and serve as a worldwide communication medium.

b) Common Company shared Values

1. **Fair treatment** of all employees and Stakeholders,
2. **Integrity** in the way business will be conducted by those entrusted with business of the company,
3. **Accountability** shall be reflected in all company dealings to all stakeholders,
4. **Ethical behaviour** shall be expected in all business conduct and operations,
5. **Innovation** shall be key in company operations and development,
6. **Teamwork** shall be encouraged and expected from all employees,
7. **Top-notch quality** service and products shall be given to all customers,
8. **Superior customer service** shall be availed to all our customers,
9. **Corporate social responsibility** shall be our relationship with the society and
10. **Community citizenship** shall be our top priority in and around the community we operate in.

c) Payoffs that an organisation will derive from a well-conceived and clear Vision statement:

1. It chrystallises management's own vies about the firm's long term direction.
2. It reduces the risk of rudderless decision making;
3. It is a tool for winning support of the organisational members for internal changes that will help in making the vision a reality;
4. It provides a beacon for lower level- level managers in forming departmental mission, setting departmental objectives and functional strategies that fit into the company's overall strategy;
5. It helps the organisation prepare for the future.

SOLUTION TWO

Limitations of a strategic plan include the following:

1. ENVIRONMENT MAY PROVE DIFFERENT FROM THAT EXPECTED

   Forecasting is not an exact science and plans that are based upon predictions that prove incorrect may fail. Unexpected events in government action such as a contract cancellation, a change in labour union activities, a decline in economic activity, or a sudden price discount by a major competitor – all are uncertainties that make planning difficult.

2. INTERNAL RESISTANCE

   In many organisations the introduction of a formal planning system raises anti-planning biases that can prevent effective planning. In larger organisations, old ways of doing things, old rules, and old methods may be so entrenched that it is difficult to change them.

3. PLANNING IS EXPENSIVE

   In a typical corporate planning effort of even a medium-sized company a significant effort is required to do effective planning. The time of may people is occupied and costs are incurred for special studies and information. Planning is expensive and managers throughout the planning process must continuously apply a cost-benefit gauge.

4. CURRENT CRISES

   Formal strategic planning is not designed to get a company out of sudden current crises. It should therefore be looked at a long term solution to it present problems.

5. PLANNING IS DIFFICULT

   Planning is hard work. It requires a high level of imagination, analytical ability, creativity, and fortitude to choose and become committed to a course of action. Planning involves a different type of mental process from that generally employed in dealing with day to day operating problems.

6. PLANS WHEN COMPLETED LIMIT CHOICE

   Plans are commitments, or should be, and thus they limit choice. They tend to reduce initiative in a range of alternatives beyond the plans. This should not be a serious limitation but should be noted.

7. IMPOSED LIMITATIONS

   Besides the intrinsic limitations of strategic planning, there are imposed limitations that deserve note. Planning systems will probably not be effective when they are excessively ritualistic and formal, when line managers try to delegate the task to staff, when managers give lip service to planning but make their attention to short-range problems and neglect thinking about the future.

SOLUTION THREE

The factors that influence the make-up of a strategy in and around the organisation include:

1. SOCIETAL, POLITICAL, REGULATORY AND CITIZEN CONSIDERATIONS

   What an enterprise can and cannot do strategies is always constrained by what is legal, by what is in compliance with government regulations and policies, by what is considered socially acceptable and by what constitutes community citizenship. More and more companies now consider societal values and priorities, community concerns and for the potential for onerous legislation and regulatory requirements. The concept of corporate, social responsibility is now showing in company's mission statements.

2. INDUSTRY ATTRACTIVENESS AND COMPETITIVE CONDITIONS

   Industry attractiveness and competitive conditions are big strategy – determining factors. When a firm concludes its industry environment has grown unattractive, and it is better of investing company resources elsewhere, it may craft a strategy of disinvestments and abandonment. When competitive conditions intensify significantly, a company must respond with strategic actions to protect its position. A strategist therefore, has to be a student of industry and competitive conditions.

3. SPECIFIC COMPANY OPPORTUNITIES AND THREATS

   A well-conceived strategy aims at capturing a company's best growth opportunities and defending against external threats to its well being and future performance. The particular business opportunities a company has and the threats to its position that it faces are key influences on strategy.

4. ORGANISATIONAL STRENGTHS, WEAKNESSES, AND COMPETITIVE CAPABILITIES

   Experience shows that in matching strategy to a firm's internal situation, management should build strategy around what the company does well and avoid strategies whose success depends heavily on something the company does poorly or has never done at all. A company's strategy ought to be grounded in what it is good at doing (ie its organisational strength and competitive capabilities and avoid what it is not so good at doing (ie its organisational and competitive weaknesses

5. THE PERSONAL AMBITIONS, BUSINESS PHILOSOPHIES AND ETHICAL BELIEFS OF MANAGERS

   Managers decisions are often influenced by their own vision of how to compete and how to position the enterprise and by what image and standing they want the company to have managers personal ambitions business philosophies, and ethical beliefs are usually woven into the strategies they craft sometimes the influence of the manager's personal values and experiences is conscious and deliberate, at other times it is unconscious. Attitudes toward risk also have a big influence on strategy. Risk avoids favour "conservative" strategies that minimise downside risk, have a quick payback and produce sure short term profits. Risk takers lean more toward opportunistic strategies where bold moves can produce a big pay off over the long term. Risk takers prefer innovation to imitation and strategic offensives to defensive conservation. Managerial values also shape the ethical quality of a firm's strategy.

6. THE INFLUENCE OF SHARED VALUES AND COMPANY CULTURE ON STRATEGY

An organisation's policies, practices, traditions, philosophical beliefs and ways of doing things combine to give it a distinctive culture. A company's values and culture sometimes dominate the kind of strategic moves it will consider or reject. This is because culture related values and beliefs become so embedded in management's thinking and actions that they condition how the enterprise responds to external events.

SOLUTION FOUR

The ethical considerations that NAMAHCO will have to take when dealing with interests and associated risks of its external stakeholders will include the following:

1. **Bankers –** whose many interests are security of loans and adherence to loan agreements who may pose risks involving denial of credit, impose interest charges or enter into the business into receivership should there be failure to pay the loan.
2. **Suppliers –** The main interests may include profitable sales, payment for their goods and long-term relationship with the business. Risks involved may include, refusal of credit, take legal action against the business and wind down the existing business relationship
3. **Government and regulatory agencies –** These will to the business to create jobs, provide training of all kinds and will administer tax on profits and incomes. Risks will however involve tax increases, formulate and impose regulations and take legal action for failure to comply with the law and regulations
4. **Interest and pressure groups –** Their areas of interest lie in the compliance of all kinds of pollution, rights of all stakeholders to the business and any other that affect both civil and environmental concerns. Risks involved with these are in form of adverse publicity, direct legal or civil action, Sabotage and pressure on political and government intervention.
5. **Industrial associations and trade unions-** will press for members rights if they are violated or infringed. If this is so, these stakeholders may take legal action or direct or civil action.
6. **Non –Governmental organizations and civil society –** Their main interest is in upholding of Human right and will take legal action against the offending business concern.

SOLUTION FIVE

The strategic appeal or benefits from the Zambia Pork Products Limited (ZPPL)for such a move into markets in SADC, Nigeria and Ghana may be due to the following:

1. **To gain access to new customers** – Expanding into the foreign markets in SADC, Nigeria and Ghana offers great potential for increased revenues, profits and long- term growth. It becomes an especially attractive option when a company's home market is in a mature stage.
2. **To achieve lower costs and enhance the firm's competitiveness** – Many companies like ZPPL area driven to selling more than one country because domestic sales volume is not large enough to capture manufacturing economies of scale or learning/experience curve effects and thereby substantially improve the firm's cost competitiveness. The relatively small size of a country market in Zambia explains why ZPPL and Zambeef began selling their products especially the latter in Nigeria.
3. **To capitalize on its core competitiveness** – A company may be able to leverage its competencies and capabilities into a position of competitive advantage in foreign markets as well as it does in the domestic market.
4. **To spread its business risk across a wider market base** – A company can spread business risk by operating in a number of different foreign countries rather depending entirely on operations in its domestic market. Thus, if the economies of certain countries turn down for a period of time, a company with operations across much of the world or Africa may be sustained by buoyant sales in other countries where it also operates.
5. **Company's customers going and living abroad** – The world has become a global village and it is a common feature for the company's customers, who for one reason or the other, are going and living abroad and require international servicing.

END OF SOLUTIONS

CHARTERED ACCOUNTANT ZAMBIA

ADVISORY LEVEL – PUBLIC PRACTICE ROUTE

CA 3.4: ADVANCED TAXATION

THURSDAY 13 DECEMBER 2018

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.
2. This paper is divided into TWO 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 7 of the question paper.

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 from mineral processing	30%
On income from mining operations	30%

Mineral Royalty

Mineral Royalty on Copper

Range of Norm Price	Mineral Royalty Rate
Less than US$4,500	4% of norm value
From US$4,500 to less than US$6,000	5% of norm value
From US$6,000 and above	6% of norm value

Mineral Royalty on other minerals

Type of mineral	Mineral Royalty Rate
Base Metals (Other than Copper)	5% 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:	
Standard wear and tear allowance	25%
Wear and tear allowance if used in manufacturing and leasing	50%
Wear and tear allowance if used in farming and agro-processing	100%
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	
ear and Tear Allowance	2%
Farming Allowances	
Development Allowance	10%
Farm Works Allowance	100%
Farm Improvement Allowance	100%

Presumptive Taxes

Turnover Tax

Monthly turnover	Turnover Tax per month
K1to K4,200	3% of monthly turnover above K3,000
K4,200.01to K8,300	K225 per month+3% of monthly turnover above K4,200
K8,300.01 to K12,500	K400 per month+3% of monthly turnover above K8,300
K12,500.01 to K16,500	K575 per month+3% of monthly turnover above K12,500
K16,500.01 to K20,800	K800 per month+3% of monthly turnover above K16,500
Above K20,800	K1,025 per month+3% monthly of turnover above K20,800

Annual turnover	Turnover Tax per annum
K1to K50,400	3% of annual turnover above K36,000
K50,400.01to K99,600	K2,700 per annum+3% of annual turnover above K50,400
K99,600.01 to K150,000	K4,800 per annum +3% of annual turnover above K99,600
K150,000.01 to K198,000	K6,900 per annum+3% of annual turnover above K150,000
K198,000.01 to K249,600	K9,600 per annum+3% of annual turnover above K198,000

Above K249,600	K12,300 per annum +3% of annual of turnover above K249,600

Presumptive Taxes for Transporters

Seating capacity	Tax per annum	Tax per day
	K	K
Less than 12 passengers and taxis	900	2.40
From 12 to 17 passengers	1,800	4.95
From 18 to 21 passengers	3,600	9.90
From 22 to 35 passengers	5,400	15.00
From 36 to 49 passengers	7,200	19.50
From 50 to 63 passengers	9,000	24.60
From 64 passengers and over	10,800	29.55

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 the Realized value on the 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 2 to 5 years		Aged over 5 years	
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

Motor cars and other motor vehicles principally designed for the transport of persons including station wagons and racing cars	Aged 2 to 5 years		Aged over 5 years	
	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 2 to 5 years		**Aged over 5 years**	
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

	Aged 2 to 5 years		Aged over 5 years	
	Customs duty	**Excise duty**	**Customs duty**	**Excise duty**
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 duty on new 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

Mfuwe plc is a Zambian resident manufacturing company which is listed on the Lusaka Stock Exchange. The company owns 30% of the ordinary share capital of Greyton plc, a company that is incorporated in a foreign country. Key management and commercial decisions that are necessary for the conduct of Greyton plc's business are made in the foreign country in which the company operates.

The following information is available in respect of the tax year 2018:

Transactions between Mfuwe plc and Greyton plc

Mfuwe's plc 's tax adjusted trading profit from Zambian operations for the year ended 31 December 2018 was K1,630,000. 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 Mfuwe plc and Greyton plc during the year:

(1) On 1 January 2018, Mfuwe plc made a loan of K2,600,000 to Greyton 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 27% per annum.

(2) Mfuwe plc regularly exports goods to Greyton plc which are used by Greyton plc as inputs in one of its production processes. All intra- company transfers of goods are made at a transfer price equal to the full cost of production of the supplying company. During the year ended 31 December 2018, Mfuwe plc exported goods to Greyton plc at a transfer price of K1,200,000 being the full production cost of the goods to Mfuwe plc. The goods were included at this amount in sales revenue in the financial statements of Mfuwe plc. Mfuwe plc sells these goods on the Zambian market at full production cost plus a mark-up of 30%.

(3) Mfuwe Ltd received gross dividends of K225,000 from Greyton plc on 31 December 2018. The dividends have not yet been accounted for by Mfuwe plc in its financial statements.

Greyton's financial performance

The summarised results of Greyton plc for the year ended 31 December 2018 were as follows:

	K	K
Trading profit before interest and tax		2,500,000
Company income tax		(625,000)
Distributable profits		1,875,000
Dividends paid		
Net	465,000	
Withholding tax	285,000	
		750,000
Retained profits		1,12 5,000

All of the above figures are in Zambian Kwacha.

Chief Executive Officer's remuneration

The Chief Executive Officer of Mfuwe plc, David Chicheleko, is resident in Zambia for tax purposes. Chicheleko earns an annual salary of K456,000. He is accommodated in a company house which has a market value of K650,000 and had it been let out, the company would have charged commercial rentals of K5,500 per month.. The company pays incidental expenses in connection with his living accommodation of K1,500 per month.

He is provided with a 2,000 cc petrol driven company owned motor car for both business and private use. The company bought the motor car for K360,000 and it had an income tax value of K216,000 at 1 January 2018. Out of the 20,000 kilometres that he drove in the tax year 2018, 12,000 kilometres were for business purposes. The company pays him a fuel allowance of K3,500 per month. Other payments made by the company on his behalf in the tax year 2018 include monthly life insurance premiums of K1,200, annual professional subscriptions of K2,300 and annual golf club subscriptions of K1,300.

Chicheloko pays 5% of his annual salary as NAPSA contributions and he pays a further 5% of his annual salary as pension contribution into the employer's approved fund. He made donations of K5,500 to approved public benefit organisations in the tax year 2018.

Chicheleko has a shareholding of 10% in Greyton plc. In the year ended 31 December 2018, he received net dividends of K46,500 from a Greyton plc. Chicheleko also holds a fixed deposit account in the foreign country in which Greyton plc operates, from which he received net fixed deposit interest of K14,300 during the tax year 2018. Withholding tax amounting to K7,700 on the fixed deposit interest was paid at source to the taxation authorities in the foreign country.

Double Taxation Relief

In the absence of a double taxation convention between Zambia and the country in which Greyton plc operates, any double taxation relief is given to Zambian residents unilaterally in Zambia by way of crediting the foreign taxes paid against Zambian income tax.

Mfuwe plc's Future Plans

Mfuwe plc plans to embark on a major expansion programme of the company in the near future which will involve significant purchases of non-current assets and the construction of an ultra-modern production plant to increase the company's production capacity.

The directors are considering the following possible financing options for this programme:

- Issuing convertible debt
- Hire Purchase
- Sale and lease back of property (land and buildings)

The directors wish to know the taxation implications that may arise from using each one of the above financing options.

Required:

(a) Briefly discuss any **five** (5) general principles contained in the Organisation for Economic Cooperation and Development's (OECD's) model double taxation convention which gives guidance on how countries may avoid double taxation of income. (5 marks)

(b) Explain the taxation implications for Mfuwe plc of:

(i) The loan made to Greyton plc. (2 marks)

(ii) Export of goods to Greyton plc at a transfer price equal to the company's full cost of production. (2 marks)

(c) Calculate the following amounts for the tax year 2018:

(i) The final taxable income for Mfuwe plc and the final company income tax payable. (6 marks)

(ii) Chicheleko's income tax payable. (10 marks)

(d) Describe the nature of each one of the following financing methods and advise the directors of Mfuwe plc of the taxation implications that will arise for the company from using each option:

(i) Issue of convertible debt (4 marks)

(ii) Hire Purchase (5 marks)

(ii) Sale and lease back of property (land and buildings) (6 marks)

[Total: 40 marks]

SECTION B

Attempt any THREE (3) questions in this section

QUESTION TWO

The following summarised statement of profit or loss has been extracted from the financial statements of Mukuba Mining Corporation, a Zambian resident company which engaged in open cast mining operations of copper in Zambia. Mukuba Mining Corporation is a 100% owned subsidiary of a foreign multinational mining company. The group finanacial statements are prepared in United States Dollars.

MUKUBA MINING CORPORATION
STATEMENT OF PROFIT OR LOSS FOR THE YEAR ENDED 31 DECEMBER 2018

	Note	**K'000**
Revenue	(1)	198,000
Cost of sales		(50,129)
Gross profit		147,871
Operating expenses	(2)	(48,320)
Other income	(3)	2,866
Interest expense	(8)	(195,000)
Loss before taxation		(92,583)

The following information is available:

(1) The figure for sales revenue in the statement of profit or loss above represents the gross sales of copper based on the average London Metal Exchange cash price, which was above US$4,900 per tonne throughout the tax year 2018. Mineral royalty has been accounted for.

(2) Included in operating expenses is depreciation on non-current assets amounting to K958,000 expenditure incurred on constructing clinics in the local mining township of K6,250,000, expenditure incurred on upgrading roads in the local mining township of K10,680,000, expenses incurred in complying with health and safety regulations of K128,000 and mineral royalty tax paid during the year amounting to K9,900,000. The balance represents business expenses which are allowable for tax purposes.

(3) Other income include company rental income of K2,520,000 (gross) received from investment property the company owns which is let out in Zambia on a commercial basis, fair value gains on the investment property arising during the year of K220,000, fixed deposit interest of K34,000 (gross) and realised foreign exchange gains of a revenue nature amounting to K92,000.

(4) There were no capital assets qualifying for capital allowances at 1 January 2018. During the year ended 31 December the company constructed a new copper smelter at a cost of K1,600,000 and new administration buildings at a cost of K1,250,000

(6) The company incurred a tax adjusted mining loss of US$2,200,000 in the year ended 31 December 2017.

(7) Mining losses may be indexed using the formula:

$$\left[1+\left(\frac{R2-R1}{R1}\right)\right] x\ Mining\ loss\ brought\ forward$$

(8) The following information relating to the capital structure of Mukuba Mining Corporation has been extract from the statement of financial position at 31 December 2018:

Equity and liabilities	K'000
Equity	
K1 Ordinary shares	142,000
Share premium	38,000
Revaluation reserve	22,500
Retained earnings	97,500
Non- current liabilities	
30% Bank loan	75,000
10% Debentures	1,725,000
Current liabilities	
Trade payables	60,000
Total equity and Liabilities	2,160,000

Interest on the bank loan and the debentures is payable annually in arrears and was paid in full as at 31 December 2018. The interest expense in the statement of profit or loss shown above relates entirely to the above loans. The company does not have any other borrowings.

(9) The following Zambian Kwacha per US Dollar (K/US$) exchange rates have been provided by the Bank of Zambia and approved by the Commissioner General:

Date	*Exchange rate*
	ZK/ US$
31 December 2017	9.50
31 December 2018	10.50

Required:

(a) Explain what is meant by thin capitalisation in the context of the taxation of mining operations in Zambia, clearly stating the criteria for determining whether a mining company is thinly capitalised, and evaluate whether Mukuba Mining Corporation is thinly capitalised. (6 marks)

(b) Compute the taxable business profits for the year ended 31 December 2018. (11 Marks)

(c) Calculate the total amount of tax payable by the company for the tax year 2018. (3 Marks)

[Total: 20 Marks]

QUESTION THREE

Kanungwe has been in business for many years running a chain of high class boutiques as a sole trader under the name Kanu Fashions Enterprises (KFE). The annual turnover of the business has always exceeded K800,000. She has always prepared accounts to 31 December each year. The business is registered for Value Added Tax (VAT). She has always involved her daughter Mutinta in running the business.

Kanungwe wishes to incorporate their business and start running it as a private limited company, known as Kanu Classic Boutiques (KCB) Limited from 1 June 2018. The share capital of the company will be held by Kanungwe and Mutinta with Kanungwe holding 90% of the ordinary share capital and Mutinta holding the remaining 10%. Kanungwe and Mutinta will run the company as full-time working directors, preparing accounts to 31 December each year. All assets held by the business at 31 May 2018, will all be transferred to KCB Limited.

Kanungwe is not sure of what the taxation implications of incorporating the business will be and do not know how the income tax assessement will be done, following the incorporation of their business. She has approached you for advice and have provided you with the following information in respect of the year ended 31 December 2018:

5 month Period to 31 May 2018
She has estimated the tax adjusted business profit for the five months to 31 May 2018, to be K850,000. This profit figure is before accounting of capital allowances, salaries for Kanungwe and Mutinta and any NAPSA contributions. Kanungwe is entitled to an annual salary of K300,000, whilst Mutinta's annual salary is K180,000.

Capital assets the business will hold on 31 May 2018, will include fixtures and fittings which was acquired in 2016 at a cost of K80,000, Toyota, Prado which was acquired at a cost of K280,000 in 2017 and shop buildings which were acquired in 2008, at a cost of K450,000. The Toyota, Prado has a cylinder capacity of 2500cc. Kanungwe has always used the motor car, 25% for private purposes. All of the above assets have been stated at their VAT exclusive costs.

It has been established that on 31 May 2018, the Toyota, Prado will have a market of K750,000. The market values of the fixtures and fittings and Shop buildings on the same date are expected to be K65,000 and K600,000 respectively. These market values are all exclusive of VAT.

7 month ended 31 December 2018
The tax adjusted business profit for the KCB Limited for the seven months to 31 December 2018, are expected to be K920,000. This profit figure is before taking into account capital allowances on business assets, withdrawals of profits by Kanungwe and Mutinta and before employer's NAPSA contributions.

After incorporating their business on 1 June 2018, Kanungwe and Mutinta will maintain their entitlement to annual salaries of K300,000 and K180,000 respectively. Kanungwe will continue using the business Toyota, Prado 25% for private purposes.

NAPSA contributions payable should be taken to be 5% of the relevant income per annum and the earnings ceiling for the purposes of NAPSA contributions should be taken to be K238,800 per annum.

Required:

(a) Advise Kanungwe of the taxation implications arising from incorporating their business. (5 marks)

(b) Explain how Kanungwe and Mutinta will be assessed to Income Tax in the tax year 2018.

Your answer should include:

(i) A computation of the final taxable profits for Kanu Fashions Enterprises for the five months period to 31 May 2018 together with an explanation of the basis of assessment of these profits. (6 marks)

(ii) An explanation of the basis of assessment for the profits generated by KCB Limited company, together with a computation of the final company income tax payable by the company for the tax year 2018.
(Ignore tax implication of personal –to –holder cars) (6 marks)

(iii) A computation of the final income tax payable by Kanungwe and Mutinta in the tax year 2018. (3 marks)

[Total: 20 marks]

QUESTION FOUR

MKN Limited is a Zambian resident company engaged in construction commenced in business on 1 January 2017, importing and exporting construction material. At the start of the tax year 2017, the company estimated the taxable profits to be K2,550,000. The company calculated and paid the provisional income tax correctly on the due dates and also submitted the return of provisional income for the tax year 2017 correctly. At the end of the tax year 2017, the company's actual final taxable profit was K2,860,000. The company calculated the balance of income tax still to be paid for the tax year 2017.

In January 2018, the taxable profit for the tax year 2018 was estimated to be K3,200,000. Upon losing a lucrative tender to supply building materials to a major customer, in February 2018, the estimated taxable business profit for the tax year 2018 was revised from the original estimate of K3,200,000 to only K2,700,000. As a result of the loss of the contract, the company also experienced serious cash flow problems such that the provisional income tax for the quarter ended 31 March 2018 was paid on 10 August 2018. The return of provisional income for the tax year 2018 was also submitted on 10 August 2018.

The provisional income tax for the quarter ended 30 June 2018 together with the balance of income tax for the tax year 2017 was paid on 1 September 2018. The self-assessment income tax return for the tax year 2017 was also submitted on 1 September 2018. Cash flow problems were fully resolved after 1 September 2018 and the company is certain that all the outstanding taxes thereafter were paid properly.

In October 2018, the company received a notice from the Commissioner General that the company will be subjected to a tax audit to be conducted by Zambia Revenue Authority.

You should assume that, the income tax rates and bands for the tax year 2018 apply throughout and that the Bank of Zambia discount rate is 9.75% per annum.
Required:

(a) Explain the meaning of a tax audit and describe **three** (3) categories of tax defaults that may be uncovered during a tax audit. (8 marks)

(b) Advise MKN Limited of the amounts of penalties and interest on overdue taxes and tax returns charged on all payments and tax return submissions made up to and including 1 September 2018. (12 marks)

[Total: 20 marks]

QUESTION FIVE

Assume that today's date is 30 October 2018

You are employed in a firm of chartered accountants and are dealing with the tax affairs of Changa Ltd, a company that manufactures goods for sale both to the local Zambian market and for export to neighbouring countries. The board of Changa Ltd comprise five executive directors who each own 20% of the ordinary share capital of the company. Each of the five directors is entitled to a fixed monthly salary of K65,000.

Whilst reviewing the self-assessment return for the year ended 31 December 2017, you noticed that the company generated a significant amount of income from exports during the tax year 2017. However this income was not included in the self-assessment tax return in the computation of the final income tax payable for that year, resulting in a significant underpayment of tax. The directors have told you that since the company has not received any query from the ZRA into the self-assessment return filed at the end of the tax year 2017, no disclosure of the omitted income should be made to the ZRA.

The directors of Changa Limited are planning to introduce a new executive incentive scheme before the end of the tax year 2018. Under this scheme each of the executive directors will be entitled to the following:

(1) Personal to holder motor cars. The cost of each motor car that will be provided to each director during the tax year 2018 is expected to be K250,000 and each car will have a cylinder capacity of 3000cc.

(2) The purchase of goods from the company at 30% below the normal selling price. Goods with a total normal sales value of K120,000 are expected to be sold at 30% below this value to the executive directors of the company during the tax year 2018.

(3) Interest free loans which can either be repaid by each director in future or not all, since the company belongs to each of the executive directors. The total amount of loans expected to be made out to the directors in the tax year 2018 is K500,000.

Required:

(a) Explain from an ethical viewpoint how you should deal with the suggestion that no disclosure is made to ZRA of the omitted income from foreign exports. (3 marks)

(b) Explain the meaning of the following in the context of company income tax:

(i) Effective shareholder (2 marks)

(ii) Nominee (2 marks)

(iii) Loan to an effective shareholder (2 marks)

(c) Advise Changa Ltd of the taxation implications of:

(i) Provision of personal to holder motor cars to each director. (2 marks)
(ii) selling goods worth K120,000 at a price that is below this value by 30% (3 marks)
(iii) Making loans amounting to K500,000 in total to the executive directors. (2 marks)

(d) Advise Changa Ltd of the taxation implications of writing off the loans to the executive directors and of recovering such loans from the executive directors. (4 marks)

[Total: 20 marks]

END OF PAPER

CA 3.4: ADVANCED TAXATION – SOLUTIONS

SOLUTION ONE

(a) Main Principles of the (OECD) Model Tax Convention

The Organisation for Economic Cooperation and Development (OECD) has developed a model double taxation convention which may be used to determine how double taxation is avoided. The main principles of the model convention are as follows:

(1) Total exemption from tax is given in the country where income arises in the hands of certain persons such as visiting diplomats and teachers on exchange programmes.
(2) Preferential rates of withholding tax are applied to payments of investment income whereby the usual rate would be replaced by the rate of 15% or less.
(3) Double taxation relief is given to taxpayers in their country of residence by way of a credit for tax suffered in the country where income arises. This may be in the form of relief for withholding tax only or for underlying tax on profits out of which a dividend is paid as well.
(4) There is exchange of information so that tax evaders can be pursued internationally.
(5) There are rules to determine a person's residence and to prevent dual residency.
(6) There are rules which render certain profits taxable in only one country of the two contracting countries.
(7) There is a non-discrimination clause so that a country does not tax foreigners more heavily than its own nationals.

(b) (i) Tax implications of 10% loan to Greyton plc

Charging interest at the rate of 10% on the loan of K2,600,000 made to Greyton plc will reduce Zambian profits and hence Zambian company income tax of Mfuwe plc.

A true commercial market rate of interest will therefore have to be substituted for the actual interest rate used. The commercial rate will be an arm’s length one that would be charged if the parties to the transaction were independent of each other. This interest rate will be the commercial rate of interest on loans of this type in Zambia of 27% per annum.

Mfuwe plc will be required to make the adjustment in its self-assessment income tax return. The adjustment would involve adding back to the profit the difference between the commercial rate of interest on the loan and the actual rate of interet used. The amount of profit to be added back will be;

(27% - 10%) x K2,600,000

= K442,000.

(ii) Tax implications of Transfer price

Exporting the goods to Greyton plc at full production cost will reduce Zambian trading profits and hence Zambian company income tax.

A true market price will therefore have to be substituted for the actual transfer price used. The market price will be an arm's length one that would be charged if the parties to the transaction were independent of each other. This price will be the market price at which Mfuwe normally sells the goods on the open market.

Mfuwe plc will be required to make the adjustment in its self-assessment income tax return. The adjustment would involve adding back to the trading profit the difference between the market price and the actual transfer price used. The amount of profit to be added back will be K360,000 (i.e. 30% x K1,200,000)

(c) (i) MFUWE PLC

COMPANY INCOME TAX COMPUTATION FOR THE TAX YEAR 2018

	K	
Business profits	1,630,000	
Add:		
Income on loan to Greyton plc		
(27%-10%) x K2,600,000	442,000	
Profit on goods transferred to Greyton plc		
(K1,200,000 x30%)	360,000	
Dividends from Greyton Plc	225,000	
Total taxable profit	2,657,000	
Company income tax		
K2,657,000 x 35%	929,950	
Double Taxation Relief on:		
Dividend from Greyton plc (W)	(78,750)	(W)
Company income tax payable	851,200	

Workings

Double taxation relief on dividend from Greyton Plc is the lower of:

(1) Zambian company income tax on the dividend :

= 35% × K225,000

= K78,750

(2) Foreign withholding tax paid

= K285,000/K750,000 × K225,000

= K85,500

(ii) DAVID CHICHELEKO

PERSONAL INCOME TAX COMPUTATION FOR THE TAX YEAR 2018

	K	K
Annual salary		456,000
Accommodation expenses (K1,500 x 12)		18,000
Fuel allowance (K3,500 x 12)		42,000
Life insurance premiums (K1,200 x 12)		14,400
Golf club subscriptions		1,300
		531,700
Less Approved public benefit donation		(5,500)
		526,200
Gross Foreign dividends (K46,500 x K750,000/K465,000)	75,000	
Gross foreign deposit interest (K14,300 + K7,700)	22,000	
		97,000
		623,200
Income tax		
On the first K74,400		9,960
On the balance (K623,200 – K74,400) x 37.5%		205,800
Less double taxation relief on:		215,760
Foreign dividend (W1)	25,966	
Foreign fixed deposit interest (W2)	7,617	
		(33,583)
Income tax payable		182,177

Workings

1 *Double taxation relief on dividend from Greyton Plcis the lower of:*

(i) Foreign withholding tax paid = K285,000/K750,000 × K75,000

= K28,500

(ii) Zambian income tax attributed to the foreign dividend

= K75,000/ K623,200 × K215,760

= K25,966

2 *Double taxation relief on the foreign fixed deposit interest is the lower of:*

(i) Foreign withholding tax paid

= K7,700

(ii) Zambian income tax attributed to the foreign interest

= K22,000/ K623,200 × K215,760

= K7,617

(d) Tax implications of financing options

(i) Convertible debt

Convertible debt is debt that gives the investor the right (but not an obligation) to convert their bonds at a specified future date into other securities, normally ordinary shares, at a pre-determined price and a conversion rate that is also specified when the bonds are issued. Convertible bonds are normally fixed rate bonds and carry coupon rate of interest that is lower than on similar conventional bonds without the conversion option.

The lower coupon rate allows for a low stress on liquidity and are seen as a way of issuing deferred equity. Before conversion, the security will represent debt finance and thus increase gearing level of Mfuwe plc and on conversion will reduce the level of gearing for the company. As the convertible debt carries the right of conversion into the underlying ordinary shares, its price will be directly linked to that of the equity for as long as the conversion option exists.

The taxation implications will be that:

(1) While convertibles remain debt, the interest is tax deductible, provided the proceeds raised are not used by Mfuwe plc for capital purposes, if issued for capital purposes then the interest will not be allowable.

(2) Similarly, issues costs will be allowable if not used for capital purposes.

(3) Once converted into equity the tax implications will be just the same as for equity finance.

(ii) **Hire Purchase**

(1) Acquisitions of assets under a hire purchase agreement by Mfuwe plc will be treated as outright purchases since the hire purchase company will effectively provide the finance.
(2) The asset will be capitalised in the books of Mfuwe plc. The amount outstanding after making an initial deposit towards the purchase price of the asset will be accounted for as a payable in the books of Mfuwe plc. Each instalment paid for the asset by the company will comprise two components, a capital repayment towards the cost of the asset and a hire purchase finance charge (interest).
(3) Title to the asset will passes to Mfuwe plc on payment of the final instalment.

Taxation implications

The tax implications for Mfuwe plc will be as follows:

(1) The interest element will be tax deductible, in the computation of taxable business profits.

(2) Mfuwe plc will be able to claim input VAT on the cost of the assets acquired provided the VAT is the type which is recoverable. There will be no VAT on the instalments as they effectively relate to financing which is an exempt activity.
(3) Mfuwe plc will claim capital allowances on the cost of the asset (excluding interest), which will be allowable deductions when computing the taxable business profits.

(ii) Sale and Lease Back

A sale and leaseback transaction, will involve Mfuwe plc selling property (land or buildings) to a financial institution like a bank and leasing back the same assets sold.

It is one way of raising finance whilst retaining the use of the related assets. The lease payment and sale price are normally interdependent because they are negotiated as part of the same package.

Taxation implications

The taxation implications will be as follows:

(1) For tax purposes VAT will be chargeable on the sale of the property.
(2) Property transfer tax will additionally arise as land and buildings are chargeable property for property transfer tax purposes.
(3) A balancing charge or allowance will arise on the disposal of the building by the Mfuwe plc which will be computed in the normal way.
(4) If the asset is subsequently leased back to Mfuwe plc under a short lease (i.e. a lease that does not exceed a period of 50 years) then, the lease rentals will be allowable in computing the taxable business profits. Input VAT on the lease rentals will also be recoverable.
(5) If the asset is leased back under a lease that covers a period of more than 50 years, then tax treatment will follow the substance of the transaction (i.e. its accounting treatment) and Mfuwe plc will continue claiming any available capital allowances on the asset.

SOLUTION TWO

(a) A mining company may be said to be thinly capitalised when it has excessive debt in relation to its arm's length borrowing capacity.

Currently, a mining company is said to be thinly capitalised if its Debt to Equity ratio exceeds 3:1. If a mining company is thinly capitalised, then interest on the amount of debt in excess of the Debt: Equity ratio of 3:1 is not deductible for taxation purposes.

Mukuba Mining corporation has total Debt of K1.8 m (K1.725m + K75m) and total equity of K300m (K142m + K38m + K22.5m + K97.5m).

The Debt: Equity ratio is therefore K1,800m : K300m and hence 6:1. Therefore Mukuba Mining Corporation is thinly capitalised this ratio is above the ratio 3:1.

(b) COMPUTATION OF TAXABLE BUSSINESS PROFIT FOR THE TAX YEAR 2018

	K	K
Loss before tax		(92,583,000)
Add		
Depreciation	958,000	
Construction of clinics	6,250,000	
Upgrading roads	10,680,000	
Excessive Interest (3/6 x K195,000,000)	97,500,000	
		115,388,000
		22,805,000
Less		
Rental income	2,520,000	
Fixed deposit interest	34,000	
Fair value gains on investment property	220,000	
Capital allowances (W1)	4,657,500	
		(7,431,500)
		15,373,0500
Less loss relief (W3)		(7,686,750)
Taxable mining profit		7,693,000
Fixed deposit interest		34,000
Business profit		7,720,750

WORKINGS

(1) COMPUTATION OF CAPITAL ALLOWANCES

	K
Constructing of clinics	

(K6,250,000 x 25%)	1,562,500
Upgrading roads	
(K10,680,000 x 25%)	2,670,000
Copper Smelter	
(K1,600,000 x 25%)	400,000
Central administration offices	
(K1,250,000 x 2%)	25,000
	4,657,500

(2) LOSS RELIEF

Indexed loss brought forward (W4)	23,100,000
Loss Relief available (K15,373,500 x 50%)	(7,686,750)
Unrelieved loss c/f	15,413,250

(3) COMPUTATION OF INDEXED LOSS

Amount of mining loss b/f US$2,200,000 x K9.50 =	K20,900,000
Indexed mining loss	
K20,900,000 x [1 + [((10.50 – 9.50)/9.50)]	K23,100,000

(4) MINERAL ROYALTY

The norm price of US$4,900 per tonne in the tax year 2018, is between US$4,500 per tonne and US$6,000 per tonne; and therefore the applicable rate of mineral royalty is 5%.

Mineral royalty= 5% x 198,000,000

= K9,9000,000

(c) COMPUTATION OF TAX PAYABLE

	K
Tax on mining profits (K7,720,250 x 30%)	2,316,225
Tax on Fixed deposit Interest (K34,000 X 35%)	11,900
	2,328,125

Less Tax already paid	
WHT on Fixed deposit interest (K34,000 x 15%)	(5,100)
Tax payable	2,323,025

Total Tax payable = 2,323,025 + 9,900,00 = K12,233,025

SOLUTION THREE

(a) Tax implications of incorporation

As a result of the incorporation, the following will be the taxation implications:

(1) There will be a change of the status of the business. The original business run as a partnership, will be deregistered for VAT so that the new company can be registered.

(2) Assets qualifying for capital allowances will be deemed to have been disposed of at their market values, and therefore, acquired by the new company at those values.

(3) Cessation rules will be applied to determine the tax year in which profits for the business generated in the 5 month period to 31 May 2018, will be assessed.

At the same time, commencement rules would be applied to determine tax year in which profits generated by the company in the 7 month period ended 31 December 2018 will be assessed.

(4) No VAT will be not chargeable on assets held by the business on 31 May 2018, as the transfer of the assets to the company will be as a going concern.

(5) No property transfer tax will arise on any property (land and buildings) held by the business on 31 May 2018, as the transfer of the assets to the limited company will be as a going concern.

(6) The company will be assessed separately to company income tax at the rate of 35% on the tax adjusted business profit made in the 7 months period to 31 December 2018.

(b) Income generated by Kanungwe in the first five months from KFE will be classified as business profit, whilst the income she will generate in the last seven months as a Director of KCB Limited after incorporation of the business will be classified as employment income. This income will be aggregated and then subjected to the personal income tax rates.

The income by Mutinta before and after incorporation will be assessed on her as employment income.

(i) COMPUTATION OF FINAL TAXABLE PROFITS

	K	
Taxable profit as per question	850,000	
Less Mutinta's salary (K180,000 x 5/12)	(75,000)	
Employer's NAPSA contributions (5% x K75,000)	(3,750)	
Add Net Balancing charge (W1)	509,500	W
	1,280,750	

Workings

COMPUTATION OF CAPITAL ALLOWANCES

	K		K
Buildings			
ITV b/f (K450,000 x 80%)	360,000		
Market value (restricted to cost)	(450,000)		
Balancing charge			(90,000)
Fixtures and fittings			
ITV b/f (K80,000 x50%)	40,000		
Market value	(65,000)		
Balancing charge			(25,000)
Toyota Prado			
ITV b/f (K280,000 x 80%)	224,000		
Market value	(750,000)		
Balancing charge	(526,000)	x 75%	(394,500)
Net Balancing charge			(509,500)

BASIS OF ASSESSMENT FOR FINAL TAXABLE PROFITS

Cessation rules will then be applied to determine the tax year in which the above final taxable profits, will be assessed on Kanungwe. Since the last accounting period of operating as a sole trader is less than 12 months, the profits made in the five month period will be assessed in the tax year following the one in which the profits of the second last accounting period of running the business as sole trader were assessed, that is the tax year 2018 (given that last accounting period of running the business as a sole trader was the year ended 31 December 2017 and the taxable profits made in this period were assessed in the tax year 2017).

(ii) BASIS OF ASSESSMENT FOR KCB LIMITED

Commencement rules would be applied in determining the tax year in which the final taxable profits made by KCB Limited in the 7 months to 31 December 2018, will be taxed. Since the first accounting period of trading as a private limited company is made up of less 12 months, the normal rules will apply. Specifically the current year basis of assessment will apply as the accounting date falls between 1 April and 31 December inclusive. The profits will be taxed in the tax year 2018.

COMPUTATION OF FINAL COMPANY INCOME TAX PAYABLE BY KCB LIMITED

	K
Taxable profit as per question	920,000
Less:	
Salaries	
(K300,000 x 7/12) + (180,000 x 7/12)	(280,000)
Employer's NAPSA contributions	(12,215)
(K139,300 x 5%) + (K105,000 x 5%)	
Capital allowances (W1)	(66,250)

Final taxable profits	561,535
Company income tax K561,535 x 35%	196,537

Workings

COMPUTATION OF CAPITAL ALLOWANCES

	K
Shop Buildings	
Wear & tear allowance	
K600,000 X 2%	12,000
Fixtures and Fittings	
Wear and tear allowance	
(K65,000 x 25%)	16,250
Toyota Prado	
Wear and tear allowance	
(190,000 x 20%)	38,000
Total	69,250

(iii) KANUNGWE AND MUTINTA

PERSONAL INCOME TAX COMPUTATIONS FOR THE TAX YEAR 2018

	Kanungwe	Mutinta
	K	K
Employment income		
(K300,000 x 7/12)/ (K75,000 + K105,000)	175,000	180,000
Business Profits (W)	1,280,750	-
Total income	1,455,750	180,000
Income Tax		
On first K74,400	9,960	9,960
On excess K1,381,350/K105,600 x 37.5%	360,506	39,600
	527,966	49,560

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 intention is to establish the correct level of tax liability. 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 Pay As You Earn or Value Added Tax. 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.

Categories of Tax Defaults

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.

Careless behaviour with significant consequences

Careless may be defined as a failure to take reasonable care. Significant consequences applies where the tax underpaid 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.

Careless behaviour without significant consequences

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. This category arises where the tax underpaid is not significant with reference to the amount of tax liability ultimately due.

(b) Penalties and interest on overdue taxes and penalties for late submission of returns

Penalties for Late Payment of Taxes and Interest on Overdue Taxes

(1) Provisional Income tax for the quarter ended 31 March 2018

The amount of K236,250 (W) was delayed by 4 months from 10 April 2018 to 10 August 2018.

Penalty for late payment of tax:

= 5% x K236,250 x 4

= K47,250

Interest on overdue income tax:

= 11.75% x K236,250 x 4/12

= K9,253

WORKING 1

Provisional Income tax payable

K2,700,000 x 35% = K945,000

Provisional income tax payable per quarter

K945,000/4 = K236,250

(2) Provisional Income Tax for the quarter ended 30 June 2018

The amount of K236,250 (W1) was delayed by 2 months from 10 July 2018 to 1 September 2018.

Penalty for late payment of tax

= 5% x K236,250 x 2
= K23,625

Interest on overdue income tax

11.75% x K236,250 x 2/12
= K4,627

(3) Balance of income tax for the tax year 2017

The balance of income tax for the tax year 2017 of K108,500 paid on 1 September 2018 was delayed by two and a half months from its due date of 21 June 2018.

Penalty for late payment of tax

= 5% x K108,500 x 3
= K16,275

Interest on overdue income tax

= 11.75% x K108,500 x 3/12
= K3,187

WORKING 2

COMPUTATION OF THE BALANCE OF INCOME TAX FOR THE TAX YEAR 2017

	K
Company income tax payable on actual taxable profits (K2,860,000 x 35%)	1,001,000
Less: Provisional income tax for the tax year 2017 (K2,550,000 x 35%)	(892,500)
Balance of Company income tax payable	108,500

The tax returns that were filed (submitted) late are as follows:

(1) The return of provisional income for the tax year 2018

This return must have been filed by 31 March 2018. When filed on 10 August 2018, it was delayed by four months and 10 days. The penalty is chargeable for a company at the rate of K600 (2,000 penalty units) per month or part thereof.

Penalty chargeable is therefore:
= K600 x 5= K3,000

Alternatively:

Penalty chargeable is therefore:

= 2,000 penalty units x 5
= 10,000 penalty units

(2) The self-assessment income tax return for the tax year 2017

This return must have been filed by 21 June 2018. When filed on 1 September 2018, it was delayed by two months and a nine days late.

Penalty chargeable is;

K600 x 3 = K1,800

Alternatively:

Penalty chargeable is

2,000 penalty units x 3 = 6,000 penalty units

SOLUTION FIVE

(a) How to deal with the failure to disclose is a matter of professional judgement.

A tax practitioner is expected to act honestly and with integrity. The principles of honesty and integrity impose an obligation on the practitioner to ensure straightforwardness, fair dealing, a commitment not to mislead or deceive and truthfulness.

This means that a member providing taxation services must not knowingly be associated with reports, returns, communications or other information where the member believes that the information contains a materially false or misleading statement or calculation.

Changa Ltd should therefore be advised to disclose details of the omitted income to the ZRA. None disclosure of the income may amount to money laundering and if such disclosure is not made by Changa Ltd, you would be obliged to report under the money laundering regulations, and you should also consider ceasing to act for Changa Ltd.

(b) In relation to a company, the terms are defined below:

(i) Effective shareholder

An effective shareholder, in relation to a company, is an individual who is the beneficial owner of or able to control, either alone or with his nominees, five per cent or more of the issued share capital of or five per cent or more of the voting powers in such a company.

(ii) Nominee

A nominee, in relation to an individual being considered as an effective shareholder, is:

(1) The spouse of the individual; or
(2) The child of the individual; or
(3) A person who holds shares in a company directly or indirectly on behalf of the individual; or
(4) A person who can be required to exercise, or a person who can require the exercise of voting powers in the affairs of a company in accordance with the directions of the individual;

(iii) A loan to an effective shareholder is:

(1) The amount of money advanced,
(2) The extent of credit facilities provided,
(3) The difference between the cost of providing any benefit or advantage and the amount paid for such benefit or advantage when provided, whether such benefit is convertible into cash or not, or
(4) The difference between the open market value, as determined by the Commissioner General, of an asset transferred and the amount paid for that asset at the date of transfer, as the case may be, if an asset is transferred to an effective shareholder.

(c) (i) Provision of personal to holder motor cars:

A motor car benefit will be assessed on the company which will be disallowed in computing taxable business profits. As the cylinder capacity of each car will be 3000cc the amount disallowed in respect of each car will be K40,000 giving a total benefit of K200,000 (K40,000 x 5).

Changa Ltd will claim capital allowances on the cost of each car at the rate of 20%. Which will be allowable in computing taxable business profits. The total allowances claimable will be:

(K250,000 x 20%) x 5 = K250,000

(ii) Sales at below market Price

Each of the executive directors in Changa Ltd are effective shareholders as they each have a shareholding in Changa Ltd of 20%. When Changa Ltd sells goods worth K120,000 to the executive directors at a price below this amount by 30%, then the company will have made loans to effective shareholders.
(1 mark)

The amount of loans would be equal to the discount offered to the effective shareholders. As a result, the company will be required to pay income tax at the rate of 37.5% on the gross amount of the actual benefit to the effective shareholders. The amount of loans in total would be:

30% x K120,000 = K36,000.

Changa Ltd would be required to pay tax of: 37.5/62.5 x K36,000 = K21,600.

(ii) Interest free loans

When Changa Ltd makes interest free loans of K500,000 to the executive directors, it will have made loans to effective shareholders.

Each loan would be deemed to be an emolument from which income tax has been deducted at the highest rate of personal income tax of 37.5%. The company will therefore be required to pay tax of:
37.5/62.5 x K500,000 = K300,000

(d) When the loan to an effective shareholder is written off, there would be no tax implications for Changa Ltd. Instead, the amount written off will be grossed up and included in the self-assessment income tax return of the individual effective shareholder.

When a loan to an effective shareholder is recovered, Changa Ltd would make a claim to recover the tax that it had paid when the loan was made.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

ADVISORY LEVEL

CA 3.5: ADVANCED MANAGEMENT ACCOUNTING

TUESDAY 11 DECEMBER 2018

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 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.

SECTION A

This question is compulsory and must be attempted.

QUESTION ONE

Palicha Group of companies (PG) was formed in 1988 as a local enterprise but has since evolved into an international company trading in many diverse areas. In 2002, the company launched PG Coaches which operates in major cities within Southern Africa region and has proved to be one of its most successful business ventures. In 2013, the company established PG Rail and obtained franchises for running rail services in its home country. However, PG Rail has not been a success and is frequently publicly criticised for providing services which do not run on time.

PG has achieved a reputation for entering markets which are dominated by major companies, and has been successful in taking business from some major competitors by exposing their consistently poor service and complacency. The company has enjoyed considerable success in its ventures within its domestic market. However, the Directors believe there is much opportunity to develop the brand name within the emerging highly populated retail markets elsewhere in the world where currently it is relatively unknown

The principal business approach which has been adopted is that of 'brand stretching' across different products and services. Each company within the group runs its own affairs but they are all encouraged to help each other resolve their particular problems in a kind of family spirit.

The majority of the citizens in PG’s home country have heard of the brand and the CEO believes the reputation of the brand name places a heavy burden of responsibility on PG not to disappoint its customers. The CEO himself has impressed his own personality on PG by pursuing personal publicity in business ventures and becoming involved in high-profile and sometimes dangerous 'leisure' activities.

Key strategic factors

At the recent Board meeting, Wisdom Amano, the CEO has stated that PG is in business 'to be different' and that the PG brand name should be clearly associated with this.

It is considered essential by the Directors that any products or services incorporated within the brand must help to build its good reputation, provide an opportunity to add value, and yield an appropriate trade-off between risk and rewards.

Amano considers that there are a number of key factors which have contributed to the success of PG. The brand name is associated with being the consumer’s champion, and has been very successful in delivering what he refers to as a 'sense of excitement' in most ventures to which it has been applied. In addition, the business contacts which have been established are important and he recognises that his own personality attracts customers and venture partners. PG also encourages talented staff within the group to interact with each other in order to solve problems. The management style of PG is therefore seen as a major contributory factor in its corporate success. Much weight is placed on its corporate image. Amano explains that the quality of a customer's experience when coming into contact with PG is the most important item in determining its success.

Management style

The Directors agree that the first priority in being able to achieve success is for PG to ensure that the Group employs personnel of the best quality and calibre. Their simple philosophy is that motivated staff lead to satisfied customers which results in repeat and new business and provides benefit to the shareholders.

PG has a flat management structure with few authority levels within the hierarchy. Amano is committed to providing good communication channels within and outside the group. He believes very firmly that managers within the organisation must be prepared to listen both to the customers and also the staff.

Financial performance

The business approach which has been developed is that the brand name is provided by PG with a cash injection from a joint venture partner. This has generally proved to be a very successful formula although this has not been the case with the latest venture into the domestic railway market. The Directors consider that the performance of PG Rail will improve following a programme to upgrade the infrastructure inherited from the previous nationalised rail network. They suggested the need of implementing benchmarking as a performance evaluation process as they believe that business is dynamic and therefore requires constant planning.

Comparative financial information relating to PG Coaches and PG Rail for the last two years at 31 December is as follows:

	2016	**2017**
	K'm	K'm
Turnover		
Coaches	1,140	1,356
Rail	820	846
Pre-tax Profit		
Coaches	120	160
Rail	60	64
Capital employed		
Coaches	1,500	1,580
Rail	1,060	1,280

Other performance indicators

The following information is provided relating to PG's coaches and rail business:

	Coaches		**Rail**	
Year	**2016**	**2017**	**2016**	**2017**
Number of passengers carried	0.6 million	0.7 million	4.5 million	4.3 million
Passenger miles travelled	1,500 million	1,650 million	160 million	150 million
Ratio of staff to passengers :				
Ordinary	1 to 3	1 to 5	1 to 100	1 to 120
Executive	1 to 4	1 to 5	1 to 20	1 to 25
Number of road routes travelled	40	44	25	25

- PG Coaches sells ordinary and executive seats to passengers. The prices reflect the level of comfort and service. For example, executive seats cost ten times the price of ordinary. PG Rail sells ordinary and executive seats to its passengers.

- Coach passenger numbers are expected to increase by 5% in the next two years in the long distance ordinary market from which PG attracts most of its customers. An increase of 7% in total rail passengers is expected over the next four years.
- There is an increasing level of partnerships emerging among coaches whereby each carries the other's passengers as well as its own on designated routes. PG is engaged in such partnerships for two of its routes.
- A general survey of satisfaction among coach passengers carried out by independent representatives from the travel industry in PG's home country ranks PG as being within the top three for most services. Where the survey carried with regards to PG's services showed that the punctuality and service on its trains was poor.
- PG operates the railway services under a franchise agreement, which is due for renewal in five years' time.
- The government has established a Railway Regulatory Authority to monitor the quality of the services provided by the PG Group and other railway franchisees, and is constantly increasing pressure on the franchisees to improve their services.

Required:

Write a report that includes the following:

(a) Evaluate the performance of the PG Coaches and PG Rail using the comparative financial and other performance indicators. Recommend ways in which they may increase their individual contribution to the future development of the Group.
(15 marks)

(b) Discuss the importance of the external forces which PG faces in its worldwide business development. Indicate the Key performance indicators (KPIs) that could be used to monitor the impact of these forces. (15 marks)

(c) Explain the term 'benchmarking' and briefly discuss the process and potential benefits that can be obtained as a result of undertaking a successful programme of benchmarking. (10 marks)

[Total: 40 Marks]

SECTION B

Attempt any THREE (3) questions in this section.

QUESTION TWO

Robert Construction Enterprises (RCE) is a commercial contractor, design builder, general contractor and developer. Its clientele include hospitals, schools, aviation, entertainment industrial and commercial organisations. RCE is a leader in the building construction process for sustained growth and profitability through professional performance creating value for their customers, a company wide commitment to a safe work environment, ethical business practices and providing an environment where individual professional growth is the foundation for company growth. Its written mission statement in the reception foyer reads "To be the pre-eminent provider of superior construction services by consistently improving the quality of construction; add value for clients through innovation, foresight, integrity and efficient performance; and to serve with character and purpose".

RCE operates in a highly competitive construction market and is therefore, forced to be very innovative to maintain its market share. Clients consider price and quality when buying products and services from RCE. Currently the company uses standard costing to report its monthly performance. However, it is considering adopting Kaizen costing due to stiff competition.

The existing financial system for RCE are outdated and cannot cope with business growth. Replacement software suitable for construction industry called Construction Financial Information Systems (CFIS) is ear-marked for installation. It was justified because it could reduce costs. A multidisciplinary steering committee has recommended that a phased approach to the introduction of the CFIS be used.

Required:

(a) Explain how a mission statement can help in the planning process and performance measurement process. (6 marks)

(b) Once a new system has been agreed and satisfactorily tested, changeover can begin. The four approaches to changeover are direct changeover, parallel running, pilot operation and phased or modular implementation.

Outline the two (2) advantages and two (2) disadvantages of these four changeover approaches. (8 marks)

(c) In the scenario it is stated that RCE is considering adopting Kaizen costing.

Discuss why Kaizen Costing would possibly be advantageous to RCE in measuring performance compared to the current standard costing system. (6 marks)

[Total: 20 Marks]

QUESTION THREE

Limpopo Plc (L Plc) manufactures three products, small (S), medium (M) and Large (L). During the last 15 years, L Plc's manufacturing operation has become increasingly automated, with computer controlled robots replacing a number of workers. However, some aspects of production are still operated by workers. Their wage rate is K8 per hour.

The following information provides details of the costs, volume and cost drivers for the year ended 31 Dec. 2017.

		Products	
	Small	**Medium**	**Large**
Production and Sales Units	1,000	750	400
Direct material (Square metres per unit)	$8m^2$	$12m^2$	$6m^2$
Direct material cost per unit	K10	K6	K12
Direct labour (minutes per unit)	48	80	120
Number of set ups	12	6	4
Number of batches	20	10	32

Overhead costs for stores receiving and inspection, set-up costs, and material handling and despatch are currently absorbed by product units on the basis of direct labour hours.

Overhead costs for the period ended 31 December 2017 were budgeted in total as K97,500. Further analysis of these overheads shows that the total overheads can be allocated as follows:

Costs relating to Stores receiving & inspection	32%
Costs relating to Set up costs	40%
Costs relating to Material Handling and Despatch	28%
	100%

The management accountant has recently attended a conference on activity based costing and the overhead costs have been re-analysed by the major activities in order to compute activity based costs. He ascertained that cost drivers for the overhead costs are as follows:

Cost	**Cost Driver**
Stores receiving and inspection	Number of batches of material
Set Up Costs	Number of Set Ups
Material Handling and Despatch	Quantity of square metres of material handled

Required:

(a) Calculate the budgeted product cost per unit for each product detailing the unit cost for each cost element using:

(i) Labour hours to absorb overheads (5 marks)
(ii) The activity based costing method (8 marks)

N.B. For the sake of part (b), overhead costs should be analysed and presented as stores receipt and inspection, set up cost and material handling and despatch in both parts (a)(i) and (a)(ii).

(b) Discuss the significance of cost drivers in the ABC technique. Refer to some of the figures in part (a) to illustrate your answer as to why there are differences between overheads traced by the current system and the ABC system. (7 marks)

[Total: 20 Marks]

QUESTION FOUR

(a) Clotherite Ltd is a clothes manufacturing company. After 10 years in operation, the growth of the company was only 55% of the expected growth. A new CEO, Linda Mutale, has just joined Clotherite Ltd and decides to change the policies of the company. She designs the policies so as to maintain the growth needed to have a healthy market price, which will help to raise profit. She is of the opinion that the current budgeting process is driving the wrong behaviour in employees; instead of focusing on their achievement, employees are focused on the target mentioned in the budget. She tries to improve the budgeting process by changing the culture of the company.

She analyses the market to find out what kind of customers are available in which market and what kind of clothes they like to buy.

According to the report on the market conditions, she changes the production planning and costing provided in the budget as follows:

(i) She decides to produce the goods required by the customers and not those planned in the budget.

(ii) She changes her sales target.

(iii) Taking into account the trends in the market and that the festive season is approaching, she invests money in promoting new goods in the market which hadn't been allocated in the budget.

Consequently, rather than having a budget target, there is a growth target.

She also starts to give the employees a performance bonus which is not a part of the budget. She asks managers to provide a monthly report on how far they are ahead of or behind the new target. Sales are closely monitored against the previous year's figures rather than the budget for the current year.

As a result of these policies, the company's profit shows an increase of 65% on the previous year's profit which is more than the budgeted profit.

Required:

Explain, using examples from the given scenario, how beyond budgeting model can improve the performance of a company. (8 marks)

(b) Abaleya Airways Ltd (AA Ltd) has been operating in the coaches industry for the past ten years providing passenger and cargo flights to a number of destinations in the world. It had set itself operating efficiency and low fare prices as a strategic theme.

To date it has evaluated its performance using monthly financial measures. These financial measures seem to have worked well for AA Ltd. However, recently low cost, no frills coaches operators have now entered the market and consequently AA Ltd faces stiff competition on several routes. Passenger and cargo numbers have been falling.

A newly recruited hybrid accountant has been appointed as management accountant. He has advised the Chief Executive Officer of AA Ltd that the balanced scorecard could be a better alternative way to measure performance.

Required:

Explain the "Balanced Scorecard" and how it could be used by the AA Ltd to assess its performance. (12 marks)

[Total: 20 Marks]

QUESTION FIVE

Water Affairs (WA) Ltd is a Zambia based company that has been producing and selling a range of water pumps. The company has been in existence for over 30 years and has grown gradually.

In 2012, WA opened a state of the art factory which has proved to be very successful but currently operating at about 70%. The pumps are made on the basis of the customers' needs and specifications. There is a quality cycle team that reviews and recommends on the product specifications.

The market in which WA operates is very competitive and innovative. For example the market leader recently launched a new kind of system that enables it to design and produce pumps to customer specifications remotely via an integrated design and manufacturing system.

A few months ago, WA Ltd had reviewed its management accounting system with the help of an external consultant, however, WA Ltd delayed in implementing the recommendations made by the consultant on the information system and process improvement. This has resulted in inefficiencies in production and stores management. The company has been experiencing stock outs, increased supply costs and consequently reduced sales due to high prices.

The managing director of WA Ltd has requested that the information system be designed in line with the consultant's recommendations to make it more effective and also consider implementing Business Process Re-engineering to make the processes more efficient and reduce costs.

Required:

Prepare a report to the managing director that includes the following:

(a) Explanation on the design and constituents of an effective information system. (10 marks)

(b) Explanation of nature of BPR, including a description of how BPR might be applied to a manufacturing company such as Water Affairs Ltd. (10 marks)

[Total: 20 Marks]

END OF PAPER

Formulae Sheet

Learning curve

$Y = ax^b$

Where $Y =$ cumulative average time per unit to produce x units
$a =$ the time taken for the first unit of output
$x =$ the cumulative number of units produced
$b =$ the index of learning (log LR/log2)
$LR =$ the learning rate as a decimal

Demand curve

$P = a - bQ$

$$b = \frac{\text{change in price}}{\text{change in quantity}}$$

$a =$ price when $Q = 0$

$MR = a - 2bQ$

Modified Internal Rate of Return

$$MIRR = \left[\frac{PV_R}{PV_I}\right]^{\frac{1}{n}}\left(1 + r_e\right) - 1$$

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

CA 3.5: ADVANCED MANAGEMENT ACCOUNTING - SOLUTIONS

SOLUTION ONE

To: The Chief Executive Officer
From: Consultant
Date: 12th December 2018
Subject: Performance evaluation

This report addresses the performance of two divisions, recommends ways in which performance of the divisions could contribute to the whole Palicha group. It also discusses the importance of external forces the company faces and outlines the key performance indicators that could be used. One tool that can be used in the evaluation of performance is benchmarking. This report discusses the process and potential benefits that can be obtained as a result of undertaking a successful programme of benchmarking.

(a) During 2017, the turnover of the Coaches business increased by almost 19%, whilst the turnover of the rail business only increased by just over 3%. There were marked differences in the performance of these respective divisions of the PG:

Financial Results:

	2016	**2017**
Coaches	**%**	**%**
Pre-tax profit as percentage of turnover	10.5	11.8
Return on Capital Employed	8.0	10.1
Turnover/Capital employed	76.0	85.8
Rail	**%**	**%**
Pre-tax profit as percentage of turnover	7.3	7.6
Return on Capital Employed	5.7	5.0
Turnover/Capital employed	77.4	66.1

Non-financial results:

	Coaches	**Rail**
Number of passengers carried	16.7% more	4% less
Passenger miles travelled	10% more	6.3% less
Number of road routes travelled	10% more	No change

PG Coaches

A comparison of the results of the two years reveals that no significant change has occurred in any of the ratios, however some of the trends may become significant in the future. The profitability of the Coaches division has improved and the ROCE has increased by over 2%. However, the ROCE of the Rail division has declined and this will surely cause anxiety within the management team.

As regards the Coaches division the management needs to review the current strategy to ensure that the company is able to cope with the competition and the problems faced by those companies within this volatile industry which is subject to international influences. The company should undertake a review of its cost structure and its selling prices, as it is vital that these aspects are closely monitored in order to ensure that the Coaches division does not become uncompetitive. The development of overseas business should be given serious consideration, as this is critical to the development of those organisations within the coaches industry.

Whilst coaches traffic in terms of passengers, passenger miles travelled and the number of routes covered have increased it is possible that the management of the PG should consider investing additional funds to ensure that these favourable trends continue. PG should take steps to ensure that they benefit from the 5% projected growth in the long-distance economy market from which Coaches attracts most of its customers. In order to ensure that the customers are given good service it may be necessary to improve the ratio of cabin staff to passengers in both the ordinary and executive classes. PG must take steps to ensure that the good reputation it has earned and which has become a source of competitive advantage is not lost, hence it is essential to ensure that service levels provided to passengers are maintained and preferably enhanced.
A review of all routes and alliances with other coaches should be undertaken in order to ensure that PG is operating efficiently and effectively. It is possible that expanding into too many routes could cause fragmentation and this could be injurious to the overall success of organisation. PG should ascertain the profitability attached to each route and try to focus upon the most profitable routes.

It is likely that price competition may become fierce as competitors attempt to take market share from PG. It is necessary for the Coaches division to protect its strength in the economy class markets where by the customers are very much aware of prices charged by PG and its competitors.

PG Rail
A comparison of the two years shows that the profitability of the division is static and this makes it essential for management to review its strategic options. Perhaps ways could be devised which may permit management to increase the level of fares currently being charged, decrease operating costs and reduce the level of capital employed. Of paramount importance is the need for management to successfully address the operating problems which have precipitated a loss of customer confidence. If such problems persist it is quite possible that these could have a seriously detrimental effect on every division of the PG. Punctuality is probably the most significant issue that needs to be addressed. The management of PG should give consideration to the fact that the reduction in the number of attendants could be impacting adversely upon customers' perception of the service being offered.

Passenger traffic has decreased in terms of both the number of passengers and the passenger miles travelled and management should attempt to ascertain the reason for this as soon as possible. There has been a significant fall in the turnover to capital employed ratio and a solution to this problem will be required if the objectives of the organisation are to be met.

The Regulator poses another threat that the management of the PG need to address. The loss of the franchise would be a major problem for the organisation. The results of the passenger survey were not good and thus it is vital that punctuality and the services provided improve quickly. The reduction in the number of attendants should be investigated as this could well be a partial cause of customer dissatisfaction.

Unless PG is able to improve the services it offers, it may not be able to take full advantage of the projected growth of the market over the next four years.

(b) If a business is to be successful it must not only establish but also maintain competitive advantage. During the last 30 years the PG has developed internationally and has a trading presence in many diverse areas. This inevitably means that the company is likely to encounter many external forces which will make it much more difficult for PG to meet its objectives. The external forces, to which PG is subject in developing its business, can be analysed using Michael Porter's 'Five Forces Model':

Power of the buyers
Management must have knowledge of the needs of their customers and also information of the conditions that subsist in the different markets in which they have a presence. Such information assumes critical importance if PG is to be successful in different sectors. The conditions in the market place will invariably differ and thus if PG is to be successful then due consideration should be given to the political, legal and social environments which exist within each market place. It is possible that the buyers may benefit from the entry of the PG, as it is likely that the existing suppliers may have become too self-satisfied, however this situation could well change and become a threat to the PG. The Key performance indicators would include: Number of new customers over a period, number of returning customers and customer account profitability. These will enable PG to track customer trends and potential profit earned from these different groups, to perhaps enable them targeting higher profit earning customers.

Power of suppliers
The management of PG must be certain that there are available suppliers who can provide them with the materials and services needed. The quality and reliability of suppliers could potentially become a major issue; hence managers should take steps to ensure that supplies of materials, services and appropriately skilled personnel can be obtained. The Key performance indicators would include: Length of time as a supplier/prices charged and other alternative suppliers/prices. This could track supplier costs and reliability to the PG.

Rivarly competitors
In attempting to enter new markets PG will be faced with competitors who are already established and have acquired market knowledge. It will be difficult to compete effectively in these markets and thus it is essential that PG acquired skilled managers in order to improve the likelihood of attaining the objectives of the organisation. The Key performance indicator would be the percentage (%) market share of competitors. By tracking market share it will allow PG to see how they compare to their competitors

Availability of substitutes
PG is involved in different businesses and it is probable that the tastes and life style of customers within each business will differ. It is therefore essential that products and services of the PG be adapted in order to be able to meet the requirements of different types of customer. By the same token it is essential that such differences are incorporated into the strategic and marketing plans of the organisation. If PG is to be successful it is vital that its product and service offerings represent 'value for money' and satisfies the needs of its customers. The Key performance indicators would include: Costs of alternatives and sales in alternatives. This will enable PG to see how they compare to various alternatives to their business, how they change and whether the alternatives change more or less than their business to see if customers are likely to 'switch' to these.

Threats of new entrants
The structure and business conditions may vary considerably within each industry and information should be obtained in order for PG to be able to operate in an effective manner. If

the management of PG are able to introduce new ventures which, are innovative and 'exciting' within particular industries, then it is possible that they are simultaneously creating barriers to entry of those industries.

Each time PG mounts a challenge to major companies it will probably require the commitment of significant resources. It is therefore of paramount importance that the external forces be evaluated before any major decisions are made. The Key performance indicators would include: Percentage (%) of revenue from potential new markets or costs of entry to new markets. This will enable PG to see if there is any potential for additional profit to be earned in these areas.

(c) Benchmarking has been defined as 'the establishment, through data gathering, of targets and comparators through whose use relative levels of performance (and particularly areas of underperformance) can be identified. By the adoption of identified best practices it is hoped that performance will improve.'

A major problem facing the management of PG lies in the accessing of information regarding the activities of a competitor firm that may be acknowledged to display best practice. Internal benchmarking i.e. using another function within the same firm as the standard can help in the avoidance of the problems of information access, but that clearly limits the scope of what can be achieved. The most common approach is process benchmarking, where the standard of comparison is a 'Best Practice' firm which may be entirely unconnected with the benchmarking organisation and not even operating within the same industry.

The objective is to improve performance. This is best achieved by means of the sharing of information which should prove of mutual benefit to both parties to the benchmarking programme. As a result of receiving new information each party will be able to review their policies and procedures. The very process of comparing respective past successes and failures can serve as a stimulus for greater innovation within each organisation.

To evaluate the performance of PG they need to establish a basis for targets which reflects the performance of an organisation which displays 'Best Practice'. As a direct consequence of a comparison of existing standards with the 'Best Practice' organisation, managers can focus upon areas where improvements can be achieved and evaluate measures to help attain those improvements.

A principal benefit that will be derived by PG Ltd as a result of undertaking a successful programme of benchmarking will be the identification of areas where cost savings are possible. Hence the levels of cost of sales and operating expenses can be reduced leading to increased profitability.

Another benefit will be the setting of more realistic targets that will result in improved budgeting. The improved performance of the staff will serve as a better platform for the introduction of initiatives such as, for example, performance related pay for the staff.

Signed.

SOLUTION TWO

(a) A mission statement (MS) can help in the planning process and performance management process by doing the following:

(i) Providing a basis for consistent planning decisions.
(ii) Assisting in translating purposes and direction into objectives suitable for assessment and control.
(iii) Establishing organisational goals and ethics
(iv) A focus on strategies
(v) Acting as a screening device for unacceptable projects, practices and activities.
(vi) Improving understanding and support from key groups outside the organisation.

The MS framework is supposed to influence both strategic (e.g. which business areas are acceptable, i.e. screening) and operational plans (e.g. where to source supplies, how customers are dealt with by RCE staff)

For the owners of RCE the MS can include a broad target to improve shareholder wealth, e.g. a return of 20% on investment.

The MS will therefore, result in the cascading down of increasingly more detailed plans and goals. These goals/targets will be set for the corporate entity, Strategic Business Units and individuals. The comparison between these targets and the actual outcomes provides the basis for performance measurement.

Good performance may suggest that RCE is performing well and therefore achieving the MS. Performance is concerned with assessing the extent to which a goal/ objective/ target has been achieved.

(b) Advantages and disadvantages of Changeover Methods

Method	Advantages	Disadvantages
Direct ("Big Bang") Changeover	Quick to implement Minimal cost Minimises workload	Risky: implementation can go wrong Could disrupt operations If fails, will be costly
Parallel running	Safe, built-in safety Provides a way of verifying results of the new system	Costly, two systems need to be operated Time-consuming Additional workload
Pilot operation	Less risky than direct changeover Less costly than complete parallel running	Can take a long time to achieve total changeover Not as safe as complete parallel running

Phased or modular Changeover	Less risky than a single direct changeover Any problems should be in one area – other operations unaffected	Can take a long time to achieve total changeover Interfaces between parts of the system may make this impractical

(c) Kaizen costing (KC) is a system of costing that focuses on achieving small incremental improvements in the production process with the objective of reducing costs. The approach to identifying small improvements involves the participation of all workers. It follows that RCE management should not be the only drivers of improvements but should involve all the workers.

Currently standard costing in RCE is measuring performance by comparing a standard cost which is set annually with actual costs. Adverse or favourable variances are reported. Managing by exception, significant adverse variances are investigated and corrective action taken.
With the adoption of KC, a target for improvement, e.g. reduction in RCE's costs will be set for the year and workers would be encouraged to find improvements throughout the year. Kaizen cost goals are often updated monthly to reflect the improvement that has been already achieved and to challenge RCE staff to improve even further.
Thus rather than being a target to be achieved and maintained (as is the case now), KC provides a constant moving target.
Because competition is strong, KC will be beneficial to RCE than standard costing. Strong competition calls for constant improvement and innovation in order to survive. Small improvements may require changes in the way RCE is operating currently. This will call for changes to procedure. The current standard costing system encourages maintaining the same procedures.

SOLUTION THREE

(a) (i) Product Cost Per Unit Using Current Basis

	S	M	L
	K	K	K
Direct Material	10	6	12
Direct Labour K8 x $[\frac{48}{60}\vert\frac{80}{60}\vert\frac{120}{60}]$	6.4	10.67	16
Overheads (W.2 & W.3)			
– Store Receipts K12 x $[\frac{48}{60}\vert\frac{80}{60}\vert\frac{120}{60}]$	9.6	16.00	24
– Set Ups K15 x $[\frac{48}{60}\vert\frac{80}{60}\vert\frac{120}{60}]$	12.0	20.00	30
– Material Handling & Despatch K10.5 x $[\frac{48}{60}\vert\frac{80}{60}\vert\frac{120}{60}]$	8.4	14.00	21
Product cost per unit	46.4	66.67	103

(a) (ii) Product Cost Per Unit Using ABC

	S	M	L
	K	K	K
Direct Material	10	6	12
Direct Labour	6.4	10.67	16
Overheads (W.4)			
– Store Receipts	10.06	6.71	40.25
– Set Ups	25.80	12.90	8.60
– Material Handling & Despatch	11.28	16.92	8.46
Product cost per unit	63.54	53.20	85.31

Workings

1. Analysis of Total overheads
   Stores Receipts & Inspection: 32% x K97,500 = K31,200
   Set Ups: 40% x K97,500 = K39,000
   Material Handling & Despatch 28% x K97,500 = K27,300
   K97,500

2. Stores Receipt & Inspection per hour = $\frac{31,200}{2,600\ hrs}$ = K12/direct labour hour

Set Up cost per hour = $\frac{39,000}{2,600\ hrs}$ = K15/direct labour hour

Material Handling and Despatch = $\frac{27,300}{2,600\ hrs}$ = K10.50/direct labour hour

3. ABC Workings

	S	M	L
Store Receipts & Inspections			
$[\frac{31,200}{20+10+32}]$=K503.23 x $[\frac{20}{1000}\vert\frac{10}{750}\vert\frac{32}{400}]$	10.06	6.71	40.25
Set Ups			
$[\frac{39,000}{12x1000+6x750+4x400}]$=K1,772.73 x $[\frac{12}{1000}\vert\frac{6}{750}\vert\frac{4}{400}]$	21.27	14.18	17.73
Material Handling & Despatch			
$[\frac{27,300}{8x1000+12x750+6x400}]$=K1.41 x $[\frac{8000}{1000}\vert\frac{9000}{750}\vert\frac{2400}{400}]$	11.28	16.92	8.46
Total Overheads per unit	42.61	37.81	66.44

(b) ABC recognises that it is activities which incur costs and not products. Products then absorb costs. A cost driver is a significant determinant of costs. To calculate a product cost using ABC, an overhead recovery rate based on appropriate cost driver is calculated for each cost pool and these are then used to trace or charge overheads to products. This can have a significant impact on product costs. This is illustrated below.

Overheads Differences Between Current System and ABC

	S	M	L
Current System (CS) (K)	30.00	50.00	75.00
ABC (K)	42.61	37.81	66.44
CS (Under Charge)/Over Charge	(12.61)	12.19	8.56

The current system has overcharged product L by K8.56 because it requires 120 minutes per unit but undercharges product S because it required only 48 minutes per unit. The current system assumes that all overheads are caused by labour hours.

However, ABC recognises the complexity and diversity of transactions and overhead influence.

Illustration for stores receipts and inspection

	S	M	L
Current System (K)	9.60	16.00	24.00

ABC (K)	10.06	6.71	40.25

For example, though product L is low volume (only 400 units compared to product M, 750 units) ABC has charged more stores receipting and inspection costs to it, i.e. K40.25 per unit compared to M (only K6.71 to M). This is because L requires 32 batches of material compared to 10 batches for M and therefore should have a lion's share of the K31,200 stores costs.

Again it can be seen that the current system is flawed and "short sighted". It has over charged (K16 per unit instead of K6.71 per unit) M which only requires 10 batches and undercharged L (K24.00 per unit instead of K40.25 per unit) though L requires 32 batches.

SOLUTION FOUR

(a) After ten years in operation, Clotherite Ltd was not achieving its expected growth; this suggests that the company's budgetary policies were not effective and needed to be changed.

Linda Mutale, the new CEO does not follow the traditional policies of the company which include working only in accordance with the budget targets. Instead, she carries out market research which enables her to see the 'bigger picture', beyond the limits of the budget. She then designs her strategy on the basis of this market research. The company is operating in a highly competitive market in which goods must be produced in order to meet the demands of the customer rather than budget targets. The price of the goods also plays an important role in achieving the target profit; the goods should be sold at a competitive market price according to the quality of the goods demanded by the customers.

In order to implement the new policies, the employees are given more importance. To ensure their cooperation, employees need to understand why the new system has been implemented, Their attitude towards their work needs to change; rather than working simply to achieve targets (a target-oriented approach) they need to work enthusiastically for their own as well as the company's financial growth (a self-improvement and achievement based approach). If this change takes place successfully, it will help to increase the profit.

As an example in the question, the CEO started to give the employees a performance bonus which would improve the quality and quantity of the work. The requirement of managers to provide a monthly report on how far they are ahead of or behind the new target and the monitoring of sales against the previous year's figures would also create a competitive work atmosphere which would lead to an increase in profit.

In the new approach to budgeting, managers have to connect with the strategic drivers of growth. They need to understand how the business and its markets are working and where the growth is going to come from. This means asking far more fundamental questions about products and the need of markets, the need of customers and how different products can be expected to perform in different markets. The new approach means that managers are far more focused on the issues that they need to address in order to deliver the growth. It involves breaking down the global target for growth into the various products and sales channels and finding out where that growth can realistically come from.

(b) Recent developments in performance evaluation have sought to integrate financial and non-financial measures and assist in clarifying, communicating and managing strategy. The balanced scorecard attempts to meet these requirements. It requires that managers view the business from the following four different perspectives: (a) customer perspective (how do customers see us?); (b) internal business process perspective (what must we excel at?); (c) learning and growth perspective (can we continue to improve and create value?), and (d) financial perspective (how do we look to shareholders?). Organizations should articulate the major goals for each of the four perspectives and then translate these goals into specific performance measures. Each organization must decide what are its critical performance measures. The choice will vary over time and should be linked to the strategy that the organization is following. By developing a wider focus of attention, the balanced scorecard encourages managers to look at the relationships between different aspects of performance and highlights the link between improving operational performance and achieving improvements in financial performance.

(c)

The balanced scorecard contains four basic perspectives:

Financial Perspective
The financial perspective provides performance measures relating to the financial outcomes of past actions. Thus, it provides feedback on the success of pursuing the objectives identified for the other three perspectives. AA Ltd has been measuring performance from this perspective using monthly financial reports, neglecting the other three perspectives.

Customer Perspective
In the customer perspective managers identify the customer and market segments in which the businesses unit will compete. Performance measures should be developed within this perspective that track a business unit's ability to create satisfied and loyal customers in the targeted segments. They include market share, customer retention, new customer acquisition, customer satisfaction and customer profitability. In the internal business perspective, managers identify the critical internal processes for which the organization must excel in implementing its strategy.

AA Ltd should measure this via customer surveys and questionnaires. Customer dissatisfaction could arise from lost baggage, delayed departure, flight cancellation and denied boarding rate.

Internal Business Process Perspective
The internal business process measures should focus on the internal processes that will have the greatest impact on customer satisfaction and achieving the organization's financial objectives. The principal internal business processes include the innovation processes, operation processes and after sales service processes.
AA Ltd could gather information on the percentage of sales from new products, sales growth compared with competitors speed of response to customer service requests, on time performance, percentage of seats occupied (a key element of operating efficiency), new routes, convenience of ticketing system (e.g. online ticket purchase and self-checking in).

Learning and Growth Perspective
Learning and Growth Perspective assesses the organisation ability to satisfy develop and motivate employees. Key measures include employee retention, productivity and satisfaction. Employee dissatisfaction could arise from unexplained absenteeism, worker safety, and lack of training. AA Ltd would use questionnaires, surveys and/or interviews to gather information on these areas.

The net result of making improvements in customer, internal business and learning and growth perspectives is that profitability, cashflow and other measures in the financial perspective should improve. If the balanced scorecard were to be introduced, the focus of AA Ltd's managerial attention would move from being on service provision to a more holistic model. That is, key performance measures linked to the achievement of objectives will be identified and monitored.

SOLUTION FIVE

Report

To: The managing Director
From: Consultant
Date:12th June 2018
Subject: Effective management information system and BPR in Water Affairs Ltd

The first part of this report sets some issues which you might wish to consider when designing an effective management information system and the second part explains the nature of BPR and describes how it might be applied to a manufacturing company like Water Affairs Ltd.

(a) Management information system

A management information system (MIS) collects data from various sources and turns it into the type of information that managers need to help them to run their business.

Information for strategic planning and control requires outwards- looking such as information on market requirements, competitors' plans, and developments in the local and wider economies. Information for tactical and operational planning and control is inwards-looking such as throughput rates, cycle times and capacity utilisation. It is forwards-looking, for example, cash flow forecasts, production plans and budgets. It is also backwards-looking like that provided by budgetary control systems and published accounts. This type of information can be sourced from within the business.

The methods of recording and processing adopted will need to consider a number of factors such as the volume of information required, the uses to which the organisation wants to put the information and IT systems. Water Affairs could use enterprise resource planning so as to overcome the delays it is currently going through its operations. The system must be able to deliver the information needs of the management accounting tools and techniques used by Water Affairs. This will speed up the process and use of information in the company. The level of information technology available will influence recording and processing methods.

The design of an MIS needs to take into account the way in which information will be disseminated to users. This hinges on a number of factors such as type of report, management structure, management style, controllability, security and access, systems compatibility, skills and systems knowledge of users, the accuracy of the report, the level of detail reported and the speed with which it is prepared.

Business process re-engineering
This is the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical contemporary measures of performance, such as cost, quality, service and speed.

BPR involves focusing attention inwards to consider how business processes can be redesigned or reengineered to improve efficiency. It can lead to fundamental changes in the way an organisation functions. In particular, it has been realised that processes, which were developed in a paper-intensive processing environment, may not be suitable for an environment that is underpinned by IT.

The following are the aspects that Water Affairs must consider:

(i) Focus on the outcome, not the task.
(ii) Ignore the current way of doing business. For example, WA may be divided into departments. The current organisation structure is not relevant to the process. Indeed having a large number of departments may make the process harder to manage, as it is split between several different responsibilities. The same customer's order may be passed from department to department.
(iii) Carefully determine how to use technology. IT has been used to automate existing processes rather than redesign new ones. This means that WA must have an information strategy for the company as a whole.
(iv) Review job design. Scientific management split jobs into their smallest components. BPR suggests that, in some cases, enlarged jobs are more efficient if they lead to fewer people being involved in the process.
(v) Do the work where it makes most sense. This might affect where sales order processing and credit controls are carried out.
(vi) Work must be done in logical sequence. This can affect factory layout but also the sequence of clerical activities.
(vii) Those who perform the process should manage it. The distinction between managers and workers should be eroded; decision aids such as expert systems should be provided.
(viii) Information provision should be included in the work that produces it.
(ix) The customer should have a single point of contract in the organisation.

In effect, BPR requires the asking of the fundamental question: 'If we were starting from scratch, what would we do?'

If I can provide any further information please do not hesitate to contact me.
Consultant

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

ADVISORY LEVEL

CA 3.6: ADVANCED FINANCIAL MANAGEMENT

FRIDAY 14 DECEMBER 2018

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 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.

SECTION A

This question is compulsory and must be attempted.

QUESTION ONE

EMM Ltd. is a company listed on the Lusaka Securities Exchange (LuSE). It began business in the 1980s as a small family owned enterprise. In 2003, due to its rapid growth it applied and successfully obtained a listing on the first tier of LuSE. Today, the company is a major manufacturer of consumer products. The Company has a slightly more than 50% share of the local market. The company Board is considering a twenty (20) years investment by setting up a subsidiary in a neighbouring country. The foreign currency (BP) for the investment country has appreciated against the Zambian kwacha over the years. The spot rate is ZMW/BP 7.8 – 8.2. The Board believes the investment will increase the shareholders wealth basing on the projections provided below:

Period(Years)	2-4	5-9	10-12	13-15
Annual Production & Sales (Units)	1million	2.5million	3.5million	1.5millon
Selling price per unit(BP)	10	15	18	22
Variable cost per unit(BP)	6	9	12	15
Annual fixed costs (BP' million)	1.2	1.3	1.45	1.52
Expected exchange rate ZMW/BP	8.1 - 8.9	9.1 – 9.7	10.1– 10.5	10.6-10.96

Note: These projection figures have been adjusted for inflation.

The investment under consideration requires an investment in non-current assets of K200 million during the first year of investment. The net realisable value of non-currents after 20 years is negligible. The initial investment in working capital is K100 million which is expected to be recovered at end of the investment. Since the company's inception it has firmly believed in the notion of financing all their investment projects with 100% equity which means that the company has essentially zero debt in its capital structure. There was an intense debate during the board meeting about the current capital structure, some members were of the opinion that the company should begin including debt in the capital structure. The board resolved to finance both the initial investments in non-current assets and working capital with 40% bonds and 60% equity. The bonds are expected to trade at K978.8 per K1,000 par value with 10 years to maturity and redeemable at 10% premium. EMM Ltd has 20 million shares in issue trading at K4.5 each. The company equity beta is 1.5. The five-year Government debt yield is currently estimated at 6.5% and the market risk premium at 5%. The annual inflation rate for Zambia and the neighboring country is expected to be 9.4% and 7% respectively. The corporate tax in both countries is 25% and there is a bilateral tax agreement between the two countries on double taxation.

The treasury department of EMM Ltd plans to enter into a repo agreement to Sell K2 million (nominal) Treasury Bills for K1.95 million and buy back 60 days later for K1.97 million. The Treasury department also plans to speculate on the oil price because it strongly believes that oil prices will fall over the next three months as indicated by credible financial analysts. The plan is to set the speculation level at 10 contracts. Oil futures on the international market are quoted with the following details:

- Futures price for 3 month delivery = $79.35
- Contract size = 1,000 barrels.
- Tick size = 1 cent per barrel.

- Initial margin = 10% of contract.

You are a financial consultant and you have been engaged by the company to provide consultancy service on financing as well as both the short term and long-term investments of the company.

Required:

Prepare a report to the company Board of Directors. Your report should include the following:

(a) Evaluation of the potential impact on shareholder wealth on the decision to introduce debt into the capital structure of the company. (8 marks)

(b) Calculation of the weighted average cost of capital (WACC) for the proposed investment. (7 marks)

(c) Evaluation of the proposed investment in the neighboring country using the Net Present Value (NPV) method. (15 marks)

(d) Calculation of the effective interest rate on the treasury bills and initial margin on the futures contract. (4 marks)

(e) Evaluation of the outcome of the speculation on the oil prices assuming the futures prices moves to $79.51 the next day. (6 marks)

[Total: 40 Marks]

SECTION B

Attempt any THREE (3) questions in this section.

QUESTION TWO

BAB Plc exports gemstones mainly to Europe. The company is considering entering into a joint venture with a retailer in the UK. The two companies will each own 50% stake in the venture (BAG) and will share profits equally. However, the Finance Director expressed concern about the exchange rate for the conversion of cash flows into Kwacha at the spot rate prevailing at the end of each year and questioned the reliability of forward rates of exchange as predictors of spot rates. Meanwhile, BAB Plc has entered into a commitment to borrow £20 million in five months' time for a period of three months in order to invest in the Joint Venture. Financial market analysts projected that the interest rates could significantly increase in five months' time. BAB Plc can currently borrow at LIBOR + 1.6%. Three months LIBOR is at 7.5%.

Current LIFFE £500,000 sterling three-month futures prices are:

September 92.10
December 91.80

Assume that it is now the end of June and futures contracts mature at the end of the relevant month.

Required:

(a) Discuss the concern raised by the Finance Director of BAB Plc and any other practical issues which should be considered before deciding to proceed with the investment.
(6 marks)

(b) Explain how BAB Plc could set up a futures hedge to protect it against the potential interest rate risk. (6 marks)

(c) Assuming an increase of 1% in LIBOR, estimate the futures price for the hedge at the close out of the contract. Advise whether it is a perfect hedge or not.
(8 marks)

[Total: 20 Marks]

QUESTION THREE

The Inter Trade Group is a company headquartered in Zambia with subsidiaries in Congo DRC, Malawi, Zimbabwe, Angola and Tanzania. The company has foreign currency transactions with two non-group companies in China and South Africa. The company also intends to use mezzanine finance to develop a green field iron ore mine in Nampundwe, Zambia.

To minimize currency flows and in turn transaction costs of settlements both within the group and with non-group members, the company entered into a netting agreement with the non-group companies to clear indebtedness. Inter Trade (Zambia) has been designated as the principal in the netting arrangement and that all settlements will be made in Zambian kwacha at the prevailing mid-market rates. The list of indebtedness at the year-end is as follows:

Owed by:	**Owed to:**	**Million**
Inter Trade (Zambia)	Inter Trade (Tanzania)	TZS 7.5
Inter Trade (Congo DRC)	Inter Trade (Zambia)	ZMW 6
Chemics Ltd (South Africa)	Baba Plc (China)	CNY 6.5
Inter Trade (Zimbabwe)	Inter Trade (Zambia)	ZMW 8.2
Inter Trade (Angola)	Inter Trade (Zambia)	USD 5.0
Baba Plc (China)	Inter Trade (Congo DRC)	CDF 8.0
Inter Trade (Angola)	Chemics Ltd (South Africa)	ZAR 14.0
Inter Trade (Zambia)	Baba Plc (China)	CNY 10

Mid-market rates as quoted by Stan chart Bank at the year-end were as follows:

Currency	**ZMW**	**USD**	**CNY**	**TZS**	**ZAR**	**CDF**
1 ZMW =	1·0000	0.1429	0.8740	261.2993	1.7223	131.4369
1 USD =	7.0000	1·0000	6.1507	1,838.9200	12.0562	925.0000

Required:

(a) Determine the currency transfers that will be required in the group and with non-group companies for settlement by Inter Trade (Zambia). (12 marks)

(b) Discuss the strategies that the Inter Trade Group could use to deal with restrictions in remittances. (4 marks)

(c) Explain what is meant by mezzanine finance, and discuss two (2) of its merits and de-merits when used to finance a green field project such as an iron ore mine. (4 marks)

[Total: 20 Marks]

QUESTION FOUR

North Western Energy Corporation (NWEC) is a company listed on LuSE, whose major source of revenue is power which is bought from a state electricity utility and supplied to the mines in the North Western Province of Zambia. The company is faced with various issues as follows:

It is reviewing its performance management system for remunerating its executive directors and other senior managers. For a number of years, the company's share price had performed well although there is now concern that the price and cost competition from entrants into the Zambian energy market will have a significant impact on the company's profitability and its stock price.

Consequently, the directors believe that investment in new sources of power generation such as hydro and solar, and diversification into a high speed (broad band) internet company using its power grid will be required over the next five years.

Previously, senior managers have been rewarded by salary, fringe benefits such as personal to holder cars, housing and education allowances, and a turnover related bonus scheme that has taken up to 5% of company profits.

The directors are considering introducing a performance management system that will utilise share options with a ten year vesting period. Some of the company's major shareholders have advised the company to liquidate some of its property holdings, and make share buy backs in order to boost the company's stock price, improve its liquidity and return cash to shareholders.

The company operates power stations in Zambia and five companies overseas, of which three are subsidiaries and two are management concessions. Growth in real estate in Zambia has averaged 5% per annum in recent years, whilst growth in the energy sector has remained static at an annual rate of 3%. However, growth in the information communication and technology (ICT) sector has been explosive averaging 10% over the last five years.

Other suggestions made at investor meetings include a sale and leaseback, or the flotation of a separate property company that would rent the properties to NWEC at commercial rates. The company's investors believe this would return value to them and create additional capital to grow the business locally and internationally.

Recently the company has been a target for acquisition by private equity funds. However, there are no on going discussions with potential investors.

The company directors are reviewing the company's internal pension scheme. Although the scheme is well funded the directors have proposed that the current defined benefit scheme should be replaced with a defined contribution scheme for all new employees, to avoid the risk of a financing gap in the long term.

Required:

As company secretary for NWEC, prepare a report for the attention of the finance committee of the board, discussing the strategic, financial and ethical issues the company may encounter in formulating its investment and financing decisions, and risk management policies.

[Total: 20 Marks]

QUESTION FIVE

Algorithmics Ltd has issued a bond which is redeemable after five years at a coupon rate of 9% and a face value of K100 million.

(a) Given that the Gross Redemption Yield (G five RY) is at 10%, determine the following:

(i) Macaulay Duration of the bond,
(ii) Modified Duration.

(10 marks)

(b) Explain two (2) benefits and limitations of duration to investors. (4 marks)

(c) Discuss the impact on duration of:

(i) Longer dated bonds,
(ii) Lower coupon bonds, and
(iii) Lower yields. (6 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.

CA 3.6: ADVANCED FINANCIAL MANAGEMENT - SOLUTIONS

SOLUTION ONE

To: Emma Ltd Board of Directors
From: Financial Consultant
Date: ……….

RE: Report on planned financing, short-term and long-term investments of the company
This report seeks to highlight the impact of introducing debt in the capital structure of the company as well as an evaluation of both proposed short-term and long-term investments.

Potential impact on shareholder wealth on the decision to introduce debt into the company capital structure

The introduction of debt in the capital structure will low the weighted average cost of capital (WACC) because of tax relief. Subsequently, this will increase the value of the company. However, there is need to establish the optimal capital structure. The capital structure of a company refers to the mixture of equity and debt finance used by the company to finance its assets. Some companies could be all-equity-financed and have no debt at all, whilst others could have low levels of equity and high levels of debt. The financing decision has a direct effect on the weighted average cost of capital (WACC) of Emma Ltd. The WACC is the simple weighted average of the cost of equity and the cost of debt. The current WACC for Emm Ltd is 13% as calculated below. This represents the minimum expected return by investors. The weightings are in proportion to the market values of equity and debt; therefore, as the proportions of equity and debt vary so will the WACC. Therefore, the first major point that should be understood is that, as a company changes its capital structure (ie varies the mixture of equity and debt finance), it will automatically result in a change in its WACC. If Emm Ltd introduce debt, the capital structure will change.
It's important to note that the wealth of shareholders is the present value of future cash flows discounted at the investors' required return (WACC). Therefore the market value of a company (wealth of shareholders) is equal to the present value of its future cash flows discounted by its WACC. The lower the WACC, the higher the market value of the company which effectively increase the shareholders wealth.
Hence, if we can change the capital structure to lower the WACC, we can then increase the market value of the Emm Ltd and thus increase shareholder wealth. So, the search for the optimal capital structure becomes the search for the lowest WACC, because when the WACC is minimised, the value of the company/shareholder wealth is maximised.

Therefore, it's important to first analyse the impact of introducing debt on the cost of capital (WACC) and the optimal capital structure that will result in the lowest WACC. In order to understand the relationship between the capital structure and the cost of capital, different theories have been developed. For instance the traditional theory clearly implies that the cost of capital decreases within the reasonable limit of debt and then increases as level debt goes beyond that limit. Thus an optimum capital structure exists and occurs when the cost of capital is minimum or the value of the firm is maximum. MM theory first assumes that if there is no taxes, the introduction of debt in the capital structure has no effect on the WACC and hence value of the company. However, with the introduction of tax, the theory postulate that corporate taxes does acknowledge tax savings and thus infers that a change in debt equity ratio has an effect on WACC (Weighted Average Cost of Capital). This means that the higher the debt, the lower is the WACC. Therefore, the introduction of debt will have increase the value of Emm Ltd to a certain extent.

Financial evaluation

Long-term investment

The financial evaluation indicates that the company has a positive NPV of **K69.28million** after discounting the cash flows at the cost of capital of **13%** and therefore the investment can be undertaken. In other words, the value of the shareholders will be increased by K69.28million.See appendix attached.

Short-term investment

The effective interest of the Treasury bill is **6.15%** which should be compared with the borrowing rates offered by the banks. The speculation on the oil prices using the futures contracts shows a loss of **$1,600**. It's not advisable for the treasury department to be speculating with the company funds because the risk of loss is high and could affect negatively the cash flows of the company. Derivatives are best used by companies to hedge against risk exposure.

SIGNED

APPENDIX

FINANCIAL EVALUATION OF INVESTMENT IN FOREIGN COUNTRY

Period	2 to 4 Yr	5 to 9 Yr	10 to 12 Yr	13 to 15 yr
	BP'm	BP'm	BP'm	BP'm
Annual Sales	10	37.5	63	33
Annual variable costs	(6)	(23)	(42)	(23)
Annual fixed costs	(1.2)	(1.3)	(1.45)	(1.52)
Cash flows before tax	2.8	13.7	19.55	8.98
Tax @25%	(0.70)	(3.43)	(4.89)	(2.25)
Net cash flows (BP'm)	2.10	10.28	14.66	6.74
Exchange rate	8.10	9.10	10.10	10.60
Net cash flows(K'm)	17.01	93.50	148.09	71.39
Discount@13%	2.09	1.62	0.79	0.54
Present Value	35.53	151.01	116.40	38.84

Total PV	341.78
Initial investment	(200.00)
Working capital (100 x 0.885)	(88.50)
Realisation of working capital(100 x 0.160)	16
NPV	69.28

W1. Annual Sales				
Selling Price	10	15	18	22
Units	1	2.5	3.5	1.5
Total Sales (KW'm)	10	37.5	63	33

W2. Annual Variable Costs				
Cost per unit	6	9	12	15
Units	1	2.5	3.5	1.5
Total Variable costs	6	22.5	42	22.5

W.3 Annuity Discount Factors

Period	Discount@13%
2 to 4years(2.974-0.885)	2.089
5 to 9 Years(5.132-2.974)	1.615
10-12 years(5.918-5.132)	0.786
13 to 15 years(6.462-5.918)	0.544

W.4 Cost of Capital

Cost of Debt

Period		Cash flow	Discount @ 11%	PV	Discount @7%	PV
0	MV of bond	(978.8)	1.000	(978.8)	1	(978.80)
1 to 10 years	Interest(1-25%)	82.5	5.889	485.843	7.024	579.48
10	Redemption value	1100	0.352	387.20	0.508	558.8
			NPV	(105.8)		159.48

IRR= 7% + 159.48/159.48 + 105.8 (11%-7%)

9.40%

Cost of debt = 9.40%

Cost of Equity= 6.5% + 1.5(5) = 14%

WACC = 14%(0.7) + 9.4%(0.3)

13%

Market Values:

Equity= (K300m x 60%) +(20m x K4.5) = K270million

Debt = (K300 x 40%) = K120m x 978.8/1000 = K117.45milllion

Total = K270m + K117.45m = K387.45m

Weight:

Equity = K270m/K387.45m x 100% = 70%

Debt = 117.45/387.45 x 100% = 30%

(d) Treasury Bills and Initial Margin
Interest rate = ((1.97- 1.95)/1.95) × (360/60) = 0.0615, or 6.15%

The Initial margin required will be as follows:
10% × 10 contracts × 1,000 barrels × $79.35 = $79,350.

(e) Futures contract out come

The oil price has increased therefore, the company will make a loss of (79.35 - 79.51) $0.16 per barrel or16 ticks. This equates to a total loss (which will need to be paid into the exchange) of $1600 (10 contracts × 16 ticks × $10 per tick = $1,600).

SOLUTION TWO

a) Reliability of forward rates as predictors of spot rates in the future

Forward rate
A forward rate is a rate agreed today at which currency will be exchanged on an agreed future date. Forward rates offered by banks are calculated from today's spot exchange rate and the fixed interest rate in each currency for the period in question. Because these rates are known with certainty, the forward rate can be fixed with accuracy: any variation from the computed rate would allow speculators to engage in risk-free arbitrage between the money markets and currency markets.

Spot rate
In a floating exchange rate system, however, the spot rate in the future is dependent on many economic factors affecting supply and demand for the currency, not just current factors but new events that arise between now and the future date. Factors include balance of payments, capital investment cash flows, interest rates, inflation rates and actions by speculators. The future spot rate is therefore subject to significant uncertainty.

Forward rate as predictor
If consistent patterns emerge, forward rates will be adjusted to take account. The forward exchange rate will be as likely to be above the eventual spot rate as below it. This is, however, completely different from saying that the forward rate is a reliable or accurate predictor of the spot rate. It clearly is not a reliable predictor because of the uncertainty in events which might arise between now and the future date. This is particularly likely to be true in a volatile currency such as the Kwacha. However, since BAB Plc will be the recipient of the strong currency (sterling), it is likely to gain.

b)

- BAB Plc will borrow in late October after expiry of September contracts; therefore it will use December futures contracts.
- The company will hedge against a possible increase in interest rates by selling December futures contracts now. If interest rate rise the futures price will fall and the company will make a futures profit by buying back at a lower price than it sold.
- The company will need to sell 40 (£20million/£0.5million) Number of December three-months sterling contracts at an excise price of 91.80

c)

	June		November
Cash market (100-7.5)	92.50	(100-8.5)	91.50
December future price	91.80		91.38
	0.70 x 1/6		0.12

The futures price and cash market price will converge to the same value at the maturity date of the futures contract at the end of December.
If the interest rates increase by 1% to the equivalent of 91.50 in the cash market, the futures price is expected to move to 91.38. The loss of 1% in the cash market will be offset by a gain of 0.42% (91.80 – 91.38) in the futures market, which is an imperfect hedge. However, there is no guarantee that the basis at the end of November will be 12 basis points.

SOLUTION THREE

a) The currency transfers required can be determined in a number of ways, one of which is a transactions matrix and the other is a route minimisation algorithm using a computer based program.

Given that all balances are to be cleared through the head office in Zambia, all indebtedness between all parties should be converted to Zambian kwacha using the specified exchange rates:

Owed by:	Owed to:	Million	Rates	ZMW('000)
Inter Trade (Zambia)	Inter Trade (Tanzania)	TZS 7·5	261.2993	28.703
Inter Trade (Congo DRC)	Inter Trade (Zambia)	ZMW 6	1.0000	6,000
Tronics (South Africa)	Baba Plc (China)	CNY 6.5	0.8740	7,437.071
Inter Trade (Zimbabwe)	Inter Trade (Zambia)	ZMW 8·2	1.0000	8,200
Inter Trade (Angola)	Inter Trade (Zambia)	USD 5·0	7.0000	35,000
Baba Plc (China)	Inter Trade (Congo DRC)	CDF 8.0	131.4369	60.866
Inter Trade (Angola)	Tronics (South Africa)	ZAR 14·0	1.7223	8,128.665
Inter Trade (Zambia)	Baba (China)	CNY 10	0.8740	11,441.648

Transactions Matrix

	Owed to (ZMW'000):							
		Zambia	Congo	SA	China	Tanzania	Zimbabwe	Angola	
Owed By:	Zambia	-			11,442	29			11,470
	Congo	6,000	-						6,000
	SA			-	7,437				7,437
	Zimbabwe	8,200							8,200
	Angola	35,000		8,129					43,129
	China		61		-				61
	Tanzania					-			
	Owed to:	49,200	61	8,129	18,879	29	-	-	
	Owed by:	(11,470)	(6,000)	(7,437)	(61)	-	(8,200)	(43,129)	
	Net	37,730	(5,939)	692	18,818	29	(8,200)	(43,129)	

Inter Trade (Zambia) will receive K5,939,000, K8,200,000 and K43,129,000 from its subsidiaries in Congo DRC, Zimbabwe and Angola respectively and pay K692,000, K18,818,000 and K29,000 to the non-group companies in South Africa and China, and its subsidiary in Tanzania respectively

b) Strategies would include:

- **Interest on loans** to a foreign subsidiary can be secured at lower rates and on- lent at high rates to subsidiaries to transfer and recoup profits.
- **Management fees** may be charged for consultancy and technical assistance. However, these would have to be at arms length.
- **Royalties** may be charged for use of patents and brands that are owned by the Inter Trade Group.
- **Transfer pricing** may be used to move profits through selling goods and services to subsidiaries and other trading partners.
- **Parallel loans** to subsidiaries of other companies and vice versa, where differentials in interest rates make it more economical for the Inter Trade to borrow than its subsidiaries.

c)

Mezzanine finance or debt is a hybrid form of capital. The private equity or venture capitalist provides a mix of debt and equity. There is an option attached to the debt capital that in case of default of repayment, the debt will be converted into equity shares.

It is beneficial in that a small, high growth firm such as the Inter Trade Group can raise debt finance where the risk of default is high and there is also a low level of asset coverage for the loan. However, it can raise the financial risk of a start-up considerably, for instance by raising a loan, the company would considerably raise its market gearing. This increase in borrowing for a green field project such as an iron ore mine may not be attractive to the commercial banks, and therefore requires specialized venture capital or private equity finance.

Mezzanine finance, can issued with warrants, which would give the lender the opportunity to participate in the success of the venture but with a reasonable level of interest payments assured. However, the disadvantage for the current equity investors is that the value of their investment will be reduced by the value of the warrants issued. Although it can be expensive, mezzanine finance can provide large amounts of finance a green field project.

SOLUTION FOUR

To : The Finance Committee

RE: Financial Sustainability Issues affecting NWEC

Introduction

As resolved during the last shareholder meeting, this brief report highlights a number of issues the directors of NWEC face, where my office was requested to provide guidance on their implications.

The major issues are as follows:

i) The company's more competitive energy sector with pressure on prices and costs;
ii) The use of organic growth to grow the business into an ICT business, which may be a low risk strategy, but can be slow, expensive and even difficulty.
iii) The need to offer management compensation that will better align share holder and management interests by providing an incentive for them to seek value adding business opportunities;
iv) The investor pressure to release the equity tied up in NWEC property with the implication that a property fund or private equity firm may do a better job of managing them; and
v) The ability of the firm to support the potential liabilities of a defined benefit pension scheme for its employees.

In dealing with these issues it is important to note that the overarching duty of the directors is to maximise the value of the company and to act in its (the company's) best interests. Traditionally this concept of duty to the firm has been taken to mean the same as duty to existing shareholders. However, this is neither the legal nor arguably the ethical duty of directors.

Financing & Investment Decisions

The threat of a private equity acquisition may suggestive that company's stock price in relation to its assets is undervalued. If the intention are real, it may be a ploy by institutional investors to unlock some of its equity by liquidating a part of the value of the firm with the assumption that the firm will be able to operate just as effectively without operating from its own properties.

Divesting some of the assets through the internet business or a separate property company can be a defensive mechanism against a forced takeover. Leaving aside the issue of whether such leases would be financial or operational, the investors do not appear to recognise that the market has valued the firm currently on the basis that its value generation is driven by both the energy and property business segments.

Disinvestment of the property portfolio will simply skew the risk of the business towards the energy and the internet broad band sectors and given the increasing competition in this sector, which has seen new internet companies including mobile companies, this may result in the company's value falling even if the firm manages to maintain its current levels of profitability and growth. As things stand the investors (and other stakeholders) in NWEC benefit from its diversified value generation with the added benefit that management can focus on the difficult job of managing the energy and internet segments, after divesting the property segment. Disinvestment of the property and development of the internet portfolio through organic growth could increase the risk of the business.

The move to a defined contribution pension scheme is indicative of a less favourable approach to the firm's future employees who it is safe to assume that the pension fund is principally designed for the various management grades within the firm. The move from a defined benefit to a defined contribution scheme benefits the company in terms of fund management and financing but passes risk to the beneficiaries of the fund particularly in terms of their exposure to future investment returns and annuity rates. Maintaining the defined benefit scheme for existing staff will no doubt be welcomed by them but the firm should realise that it may be more difficult to appoint staff of the same quality as currently at current rates of pay. In so far as the labour market is efficient we would anticipate wage rates to rise to compensate for the reduction of the pension benefit and so the gains from this move may well not be permanent.

Strategic and Risk Management

Currently, senior management and directors are compensated by a mixture of a salary, fringe benefits and profit related bonuses. To this extent there is a degree of risk sharing between owners and managers. The disadvantage with share option schemes is that they tend to increase the risk appetite of managers in that the holder is no longer so concerned about downside risk in the company's performance which is shifted to the writer (effectively the shareholders). However, to the extent that the firm is financed by debt, the shareholders in their turn hold a call option written by the lenders on the underlying assets of the firm and so the lenders are the ones who bear the ultimate risk. The combination of limited liability and equity options in the hands of directors may well create a wholly unacceptable appetite for risk and a willingness to take on new projects that they would otherwise have rejected.

Sitting the new hydro or solar plants can be very challenging, because they may need large tracts of land which may result in the displaced communities being compensated. New power plants also require environmental impact assessments.

Conclusion

From an ethical perspective, the directors are in the position of attempting to balance the interests of a range of different stakeholders as well as satisfying their own compensation requirements. It is clear that all the five issues involve the transfer of risk from one stakeholder group to another in ways which are not immediately obvious. The duties of directors in this case can be summarised as ones of transparency, effective communication and integrity in the choices that they make. It is important that the directors should not be seen as taking a position thats more beneficial with respect to other stakeholder groups, without their consent, either in terms of the return they take or the risk they bear.

Yours Sincerely,

Satoshi Nakasamu
Company Secretary

SOLUTION FIVE

a)

Year	Return@9(K'm)	DF@10%	PV of Return (K'm)	Weight	Present Value of Return x Weight (K'm)
1	9	0.909	8.181	1	8.181
2	9	0.826	7.434	2	14.868
3	9	0.751	6.759	3	20.277
4	9	0.683	6.147	4	24.588
5	109	0.621	67.689	5	338.445
			96.21		406.359

(i) Macaulay Duration = 406.359/96.21 = 4.22 years

(ii) Modified Duration =Macaulay Duration/(1+GRY) = 4.22/(1.1) = 3.836

b) Benefits and limitations

Investors who are bearish (those expecting a rise in interest rates ,and consequently a drop in bond prices) can speculate on changes in interest rates by increasing the duration of their debt portfolios to maximize their gains, and vice versa for bullish investors.

Investors are able to invest in line with their risk appetite by determining the sensitivity of debt instruments to interest rates such as the monetary policy rate, allowing them to create a portfolio consisting of debt instruments of different maturities and yields that match with respective investors' risk appetite.

Duration allows bonds of different maturities and coupon rates to be comparable, making evaluation easier. Interest rate risk of a portfolio can be managed by making changes in the duration of the portfolio of bonds.

One limitation is that duration is only an approximation of the price sensitivity of a debt instruments, and is only accurate as a measure of risk for relatively small changes in relation to the current market price or yield, ie it assumes a linear relationship between changes in interest rates and prices.This can be resolved by using convexity.

Another drawback is that duration does not consider changes in the price of the debt instrument due to a change in the credit rating or default by the company.

Additionally, duration also does not consider the fact that callable bonds/ debentures can be redeemed before their maturity by the issuer of the bond/ debentures.

c) The Impact on duration can be explained by looking at the relationship between the variables in the formula for duration as follows:

(i) Longer dated bonds will have longer durations, since they have an incremental effect on the multiple of PVs and weights.

(ii) Lower – coupon bonds will have longer durations, since their effect is to reduce cash flows.

(iii) Lower yields will give longer durations, since reductions in yield give higher NPVs.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

ADVISORY LEVEL

CA 3.7: PUBLIC SECTOR AUDITS AND ASSURANCE

THURSDAY 13 DECEMBER 2018

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 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.

SECTION A

This question is compulsory and must be attempted.

<u>QUESTION ONE</u>

Mezi Water Company is a wholly owned government company responsible for the supply of water and provision of sewerage services in Lusaka. The company operates on a commercial basis and charges economical rates for its products and services. Phiri is the Managing Director (MD) of Mezi Water Company. He was recently appointed and was all along a senior member of the ruling party.

The company was established in the year 2013 and since its inception it has undergone financial audits conducted by private audit firms. The Office of the Auditor General (OAG) intends to conduct financial, performance and compliance audits for the current year under review.

The following additional information is available:

Financial information:

The company prepares its financial statements using an information system that was set up five years ago. The majority of customers comprise private consumers who are given one month to pay for water and services for the previous month. The company also supplies water to all government ministries and most of them do not pay cash for the water and sewerage services. This has resulted in a huge debt owed by the government ministries and departments. As at the end of the current year, the draft financial statements of Mezi Water Company has a total of K23million as an amount outstanding from receivables. The government ministries only make payments when they have received funding from central government and the ministries appropriate funds for utilities. Management have refused to allow the SAI to circularize the receivables.

The company has twenty pay points located at all the major shopping malls in the city. These pay points are convenient for customers to make payments. The pay points are manned by one member of staff each who receive cash and also bank the cash the following day. The pay points use manual systems as they are not connected to the computer system at head office.

Suspected fraud:

There have been no reconciliations of the funds received at the pay points with funds deposited into the bank. A reconciliation of funds received and funds banked for the previous two years has revealed glaring differences with K12million having been receipted by all the pay points and only K7million banked by the pay points during the same period. The Board of Directors of Mezi Water Company has requested that in addition to conducting a financial audit, the Office of the Auditor General should also perform a forensic investigation to establish the extent of loss of funds.

IT system:

Mezi Water Company received donor funding amounting to $200 000 was for the purchase and installation of a modern computer system. The new system was installed in the year under review and has integrated all operations of the company including the outlets at which funds are receipted. The major suppliers and customers of Mezi Water Company are connected to the new computer system.

You are one of the Directors in the Office of the Auditor General. You have been assigned to conduct the audit of Mezi Water Company. On your first visit, you establish that the Finance Director is a long time friend of yours whom you met at University ten years ago. He has told you that he has been tipped to take a diplomatic posting and the company will soon advertise the position of Finance

Director. You are interested in taking up the job and you have submitted your curriculum vitae to the company.

Required:

(a) Distinguish between the financial audit, performance and compliance audits that will be carried out in the audit of Mezi Water Company. (9 marks)

(b) Identify and explain the threats to the independence of the auditors assigned to perform the audit of Mezi Water Company. (5 marks)

(c) With regard to the financial audit of Mezi Water Company:

(i) Distinguish between the positive and negative forms of circularization of the receivables of Mezi Water Company. (4 marks)

(ii) Explain the reason the positive form of circularization will be preferred than the negative form of circularization. (2 marks)

(iii) State the action the SAI should take in view of the refusal by management of Mezi Water Company to allow the SAI circularize the receivables. (4 marks)

(d) Explain any six (6) general principles of public sector auditing that the audit team of Mezi Water Company are required to comply with in accordance with ISSAI 100.

(6 marks)

(e) Discuss the possible objectives of the SAI conducting Information Technology (IT) audit of Mezi Water Company. (4 marks)

(f) Discuss four (4) factors that differentiate the planned forensic audit in Mezi Water Company and the audit of the financial statements of Mezi Water Company.

(6 marks)

[Total: 40 Marks]

SECTION B

Attempt any THREE (3) out of FOUR (4) questions

QUESTION TWO

(a) You are a senior auditor in the Office of the Auditor General and you have been assigned to carry out a forensic investigation at a public hospital.

A whistle blower has revealed that there is rampant theft of drugs and medical equipment at the hospital. This came to light through an anonymous letter to the Human Resources Manager of the hospital stating that the fraud has gone undetected for a long time because it involves collusion between staff in the finance department, the Chief Pharmacist, who is responsible for storage of drugs, and staff in the purchasing department.

The Cashier is a junior member of staff who is currently servicing the three year loan. The take home pay of the Cashier is below the normal minimum net pay that an employee should get and so she cannot get any more advances from the organization. The fees for the degree program that she is taking at a local university are overdue and she is threatened with exclusion.

Following a preliminary investigation with the aim of gaining an understanding of the institution and the alleged fraud you establish the following:

There is poor segregation of duties in the hospital in question. This came about because of staff retrenchments that were carried out by management with a view to cut down on the wage bill. For example, the Chief Pharmacist is responsible for requesting for orders of drugs and also is the custodian of the drugs. There is no evidence of drugs issued to satellite pharmacies within the hospital and the wards. The only record maintained is a record in a book showing details of drugs issued without confirmation of receipt by the recipients.

The Procurement Officer has been working for the hospital for ten years without promotion. During the last three years he has completed his studies in Human Resources Management and he has requested for a transfer to the Human Resources Department where he would get a higher salary. His request has been turned down and has been told to wait until a replacement is found, a matter which he is not happy about.

Among the audit procedures that you will be carrying out during the forensic investigation is to interview staff with the objective of obtaining information concerning the alleged fraud and also to obtain an admission of the people involved in the fraud.

Required:

(i) Distinguish between information seeking interviews and admission seeking interviews in the forensic investigation in the Ministry. (2 marks)

(ii) Identify and analyze the risk of fraud being committed in the hospital using the fraud triangle.

(6 marks)

(b) The Office of the Auditor General is the Supreme Audit Institution in Zambia. In accordance with ISSAI 12 *The Value and Benefits of Supreme Audit Institutions – making a difference to the lives of citizens,* it is argued that there is a fundamental expectation that the OAG should make a positive difference in the lives of the general citizenry.

ISSAI 12 gives three objectives that SAIs wish to achieve among them is that of being a model organization through leading by example.

In order for the SAI to remain objective in the performance of its duties, it is necessary that the institution and the staff who work under it maintain the applicable ethical values issued by the International Organization for Supreme Audit Institutions at all the time.

(i) Explain any four (4) principles of value and benefit of the SAI under the objective of being a role model organization in accordance with ISSAI 12. (4 marks)

(ii) Describe the relevance of the fundamental ethical values of the SAI auditors in forensic investigations. (8 marks)

[Total: 20 Marks]

QUESTION THREE

(a) Before the advent of the internet, computer systems were largely stand alone with no connectivity outside the organization. With the advent of the internet, there has been a noted increase in IT connectivity with the outside world.

Organizations now have their IT systems connected to the internet and so enabling direct interaction with suppliers’ service providers and customers. This has come with its own disadvantages posing a high cyber-crime risk to most organizations.

Required:

Explain the meaning of cyber-crime and describe four (4) main threats of cyber-crime to organizations. (8 marks)

(b) The Supreme Court of Zambia is the highest court in the land and is autonomous in its operations. It receives funding from government annually and it prepares financial statements on an annual basis.

In addition to government funding, the Supreme Court receives income from other sources. A substantial amount of funds is received from fines arising from cases heard in the Supreme Court. This happens in situations where the law allows a payment of a fine as an alternative to custodial sentence. These penalties are required to be in line with those stipulated in the penal code.

The Supreme Court is required to deposit all funds received by it and as per general orders guidelines, expenditure for operational use should be from the grants received from government and should be spent in accordance with provisions of the general orders. Any expenditure outside the general orders will be deemed as misapplication of funds and gives rise to audit queries.

In the year under review, the Supreme Court received a grant from a Donor amounting to K25 million. These funds are meant for the purchase of communication and recording equipment in the Supreme Court so that all proceedings will be recorded and kept in soft copy and hence doing away with the manual writing of court hearings.

There is an agreement that has been signed and agreed with the donor which contains conditions which must be complied with in the use of these funds. Periodic reviews by the Donor are carried out and any expenditure outside the agreed budget is disallowed and must be paid back.

You are leading a newly established team of auditors from the Office of the Auditor General (OAG) to perform a financial and compliance audit of the Supreme Court. In line with the general principles in the audit of public entities you wish to gain an understanding of the operations at the Supreme Court. You wish to assign an audit assistant to perform this task and so you are required to give him guidance on the methods that he will apply to gather information to gain an understanding.

Required:

(i) Explain the methods that the newly established SAI audit team on the audit of the financial statement of the Supreme Court shall use to obtain information in the process of assessing the risk of misstatements of the financial statements.

(4 marks)

(ii) Explain, giving a suitable example, the link between the subject matter and the criteria in the compliance audit of the Supreme Court. (2 marks)

(iii) Identify and explain the subject matters that can be subjected to a compliance audit of the operations in the Supreme Court and state the criteria.

(6 marks)

[Total: 20 Marks]

<u>QUESTION FOUR</u>

(a) Professional skepticism is required to be applied by the public sector auditor in the conduct of performance audits in the public sector;

Required:

Explain the meaning of professional skepticism in public sector auditing. (2 marks)

(b) Zambia has experienced an increase in road traffic accidents in the last four years. There has been a noted increase in fatal accidents and this has raised a lot of concern to the public, the government and other stakeholders.

The government has been sourcing funding for the commissioning of a road safety public sensitization program throughout the country. An analysis of the causes of the majority of the accidents has revealed that it is driver errors and so the accidents are avoidable.

The European Union has funded this activity and has donated a total of $300,000 which will be disbursed in two instalments.

This program will be coordinated by the Road Traffic and Safety Agency in conjunction with the Traffic Section of the Police. The approach will be to reach out to drivers across the country and this will be achieved through:

1. Road safety adverts on television coming at the prime time just before the main news.
2. Giving free leaflets on road safety. These will be printed in colour and distributed across the country for free issue to motorists.
3. Hiring five theatre groups who will tour the country performing plays on road safety to draw public attention and particularly drivers.

The agreement with the European Union is that these funds be separately monitored and a team of RATSA and Traffic Police should be responsible for ensuring that the funds are put to good use. At the end of the program an evaluation will be conducted to determine the effectiveness of the road safety program that will be undertaken.

You have just returned from a three day workshop organized by the International Organization for Supreme Audit Institutions. The workshop was organized in order to encourage member organizations to consider implementing the provisions of ISSAI 40 *Quality control for SAIs* on quality control.

Required:

(i) Describe the use of the three (3) principles of economy, efficiency and effectiveness in the performance audit of the program to reduce road fatalities in Zambia. (6 marks)

(ii) Explain the link, if any, between the use of ISAs and ISSAIs in a financial audit in the public sector. (2 marks)

(iii) Describe the difference between the audit objective in private audit and the public sector audits. (4 marks)

(iv) Explain any four (4) elements of quality control, in accordance with ISSAI 40, which the Office of the Auditor General should implement. (6 marks)

[Total: 20 Marks]

QUESTION FIVE

You are an audit senior in the Office of the Auditor General (OAG). You have been assigned to lead a team of auditors to perform a financial audit of the financial statements of Precious Stones Ltd, a company wholly owned by the government.

The company is involved in the mining and selling of precious stones. Due to the nature of the industry and the products produced, the risk of fraud is considered high. Over the years, the company has experienced losses of precious stones each time an inventory count is carried out.

Management of Precious Stones Ltd are paid a low salary but they are paid an annual bonus based on performance and the meeting of set profitability targets. In the previous financial year, it was observed that Management overstated revenue for that year and cut off was not performed correctly and it resulted in that year's purchases being processed in the following year.

Fraud is considered high risk in Precious Stones Ltd and there is a general feeling by the public that they do not see the need for the Supreme Audit Institution to perform a financial audit if they are not able to detect fraud that has taken place.

Required:

(a) Explain the responsibilities of the Management of Precious Stones Ltd and the Office of the Auditor General with regard to fraud. (2 marks)

(b) Describe the two (2) types of fraud in accordance with ISSAI 1240 *The Auditor's Responsibilities Relating to Fraud in an Audit of Financial Statements*.
(4 marks)

(c) Explain any six (6) general requirements in a performance audit in line with the provisions of ISSAI 3000. (9 marks)

(d) Identify and explain the three (3) parties in the performance audit of Precious Stones Ltd. (5 marks)

[Total: 20 Marks]

END OF PAPER

CA 3.7PUBLIC SECTOR AUDITS AND ASSURANCE

SUGGESTED SOLUTIONS

SOLUTION ONE

a) Distinction between financial, performance and compliance audits:

Financial audits:
Financial Audits focus on whether an entity's financial information has been presented in accordance with the applicable financial reporting and regulatory framework. This is accomplished by obtaining sufficient and appropriate audit evidence to enable the auditor to express an opinion about whether the financial information is free from material misstatement to error or fraud

Performance audits:
Performance audits are performed with the objective of obtaining evidence on whether government undertakings, systems, operations, programmes are operating in accordance with the principles of economy, efficiency and effectiveness.
Performance audits focus on value for money of the activities that have been undertaken.

Application to Mezi Water Company:
In the audit of Mezi Water Company a financial audit could be undertaken by the public sector auditors to establish whether the financial statement s for the current year under review show a true and fair view.

Compliance audits:
Compliance audits are conducted for the purposes of establishing whether a ministry, programme, activity or system complies with the set standard or guidelines. Actual performance is measured against a set criteria which may be laws and regulations or policies.

Application in Mezi Water Company:
A compliance audit could be conducted on the use of the donated funds for the purchase of a computer system. The criteria on the use of the funds is contained in the agreement between the donor and Mezi Water Company.
In this case the question will be to establish whether the use of the donated funds is in line with the provisions of the agreement.

b) Threats to the independence of Mezi Water Company Auditors:

The political connections of the MD of Mezi Water Company.
The fact that the Managing Diector of Mezi Water Company is connected to the people in power and held a senior position in the ruling party can cause an intimidation threat to the public sector auditor.

There could be fear by the public sector auditors that they may be victimized for adversely reporting on Mezi Water Company although this may be appropriate.

The relationship between the OAG Director and Mezi Water Company Finance Director:
These are two close friends who attended university together. They have a long time friendship which will create a self-interest threat to the auditor. This is compounded by the fact that the Finance Director has tipped the Director from the Office of the Director General on the fact that his position will be vacant. The auditor may not want to injure the friend who may facilitate in getting him this job.

Prospective employer:
The fact that the Director from the Office of the Auditor General has expressed interest in getting the job of Finance Director poses a threat to his independence. Mezi Water Company is a prospective employer and would not want to differ with a prospective employer.

c) Circularization of receivables:

i. Positive circularization:
Under this method of circularizing the receivables, the receivable (debtor) being confirmed is required to respond to the request for confirmation whether they agree or disagree with the balance being confirmed.
A follow up of non-responses will normally be carried out.

Negative circularization:
In the case of negative method of circularization, the receivable (debtor) only needs to respond when they do not agree with the balance being confirmed.
Follow up for non-responses normally not undertaken as non-responses assumed to be confirmation of balance.

ii. Preference for positive circularization over negative circularization:
The positive form of circularization is preferred over the negative form because the auditor will have evidence of the response from the receivables.
The negative form assumes that non responses are a confirmation of the balance. This is not a realistic assumption because non responses could arise from other reasons such as:
- Receivables simply not responding to the request for confirmation.
- Mail lost in transit.

iii. SAI action for management's refusal to circularize:
- Find out from management of Mezi Water Company the reasons for their refusal to allow circularization of receivables.
- Inform those charged with governance, the legislature or other appropriate oversight body, about the refusal of management of Mezi Water Company to allow circularization.
- Evaluate the implication of the refusal on the risk assessment and the risk of material misstatement of the receivables figure in the financial statements.
- Perform alternative audit procedures aimed at obtaining relevant and reliable audit evidence.

- If unable to gather sufficient appropriate audit evidence, consider the impact this will have on the audit report.

d) Principles of public sector audits: (ISSAI 100)

Ethics & independence – the SAI auditor should consider the relevant ethical requirements to ensure that they are truly independent of Mezi Water Company.

Professional judgment and professional skepticism – the officers of OAG on the audit of Mezi Water Company must apply professional skepticism, professional judgment and due care throughout the performance of the audit.

Quality control – the audit should be conducted following the relevant standards on quality control.

Audit team and management skills – the members of the audit team of Mezi Water Company should have the necessary skills and competences to perform the audit. In the event that experts will be used, care should be taken to ensure that the experts have the necessary skills and competences.

Audit risk – the auditors of Mezi Water Company should ensure that they consider risk before and during the audit. They should manage risk and ensure it is at an acceptable level.

Materiality – should be considered by the auditors throughout the audit. Materiality will impact on the nature, timing and extent of audit procedures.

Documentation- proper documentation must be retained on the audit which will provide evidence of the work that has been carried out and also will form the basis of the conclusion reached.

Communication – there should be effective communication between the officers from the OAG during the audit. Management of the entity being audited should be kept informed about matters relating to the audit and they should be provided with timely observations and findings throughout the audit.

e) Objectives of IT audits by SAI:
Mezi Water Company has just acquired a new integrated computer system in order to improve on it efficiencies.

The main objective for the OAG to conduct an IT audit of the system at Mezi Water Company is to obtain evidence that the system will enable the organization meet it intended objectives. It should be observed that the new system acquired by Mezi Water Company will be connected to the internet and result in increased risk of cyber-crime etc.

Other objectives include the following:

- The IT system in use can be relied upon as the basis for the preparation of the financial statements of Mezi Water Company. An IT audit will assist in giving the financial auditors the necessary comfort and assurance that they require over the appropriateness of the IT systems and associated controls.
- An IT audit of the systems in Mezi Water Company will be concerned with the entity's adherence to laws and regulations relating to an entity's IT system.

  There are laws and regulations applicable to IT systems such as over the use and storage of personal data.
- To confirm that the IT system gives Mezi Water Company value for money in terms of economy, efficiency and effectiveness.

  Economy involves the minimizing of resource cost of the IT system over its life.

  Efficiency by maximizing utilization of the IT resources and

  Effectiveness is consideration of whether the system has been implemented in such a manner that it meets the organization's objectives.

f) Factors differentiating forensic audit from financial audit:

Ad hoc rather than routine assignments – financial audits can be planned and conducted as a matter of routine say annually. Forensic audits on the other hand are not routine because they usually involve an investigation of a specific matter.

Objective – the objective of financial audits is to form an opinion on the financial statements. In the case of a forensic audit the objective is to establish whether fraud has taken place or determine the extent of fraud that has taken place. The subject of a forensic audit usually involves deception or other dishonest practices.

Consideration of wide variety of sources – in financial audits the source of information is largely from the financial records maintained by the client. In the case of a forensic audit the auditors likely to expand to other areas including extensive interview of staff and others.

May result in legal action – the work of a forensic auditor may lead to court action being taken against the culprits which is not necessarily the case with financial audits. The forensic auditor may be required to give evidence in court as an expert witness.

Different skills and mindset – the skills required to conduct a forensic audit are different from the ones required to conduct financial audits. Whereas, both the financial auditors and forensic auditors are trained accountants, the forensic auditors require additional skills including:

- Interview skills
- Investigative skills

Form of report – in financial audit there is a standard form of report that is the outcome of the audit.

In the case of forensic audits the form of the report produced depends on terms of the assignment and should be agreed at the outset of the engagement.

SOLUTION TWO

a) **Forensic investigation interviews:**

i. **Distinction between information seeking and admission seeking interviews:**
During a forensic investigation, the forensic accountant will conduct interviews of people from within and outside the organization.

The interviews will have one of two purposes as follows:

Information seeking: (Information seeking interviews)
The purpose of information seeking interviews is to assist the forensic auditor to gather information that he is not able to gather through other means such as scrutiny of documents. This usually involves interviewing staff simply because of information that they can provide. Usually the people being interviewed for this purpose may not be involved in the fraud or wrong doing.

Admission seeking: (Admission seeking interviews)
These interviews involve the suspect and the objective is to obtain an admission of guilt. This is despite that documentation may be available which gives an indication of the guilt of the individual, the best evidence is an admission of guilt.

ii. **Risk of fraud using the fraud triangle:**
Fraud can be committed because of the existence of fraud risk factors. These factors form part of the fraud triangle and are explained below.
The fraud triangle has three elements as follows:
- Opportunity
- Rationalization and
- Pressure

Applying the facts in the scenario the following is the position:

Opportunity:
The weaknesses in internal controls in the case at hand and specifically the lack of segregation of duties can give an opportunity for staff to commit fraud. This is motivated by the feeling that the fraud cannot be found out as a result. The lack of segregation of duties with regards to procurement, storage and issuing of drugs can motivate the Chief pharmacist to commit a fraud.

Rationalization:
This is a justification by someone committing fraud. In this case, the Procurement Officer has had no salary increase for many years. His efforts to move to the HR department have not borne fruit. The procurement officer may feel neglected and not wanted and so this is justification for him to commit fraud.

Pressure:
The cashier's net salary is far below the expected minimum and cannot borrow more money from organization. The cashier risks being excluded from the university due to non-payment of

fees. This may put so much pressure on the cashier who may end up misappropriating organization's funds.

b) Ethical values and value and benefits:

i. Principles of value and benefit for SAI being a role model:

Ensuring appropriate transparency & accountability – This means that the SAI should make public their mandate, responsibilities, mission and the strategy. They should use applicable standards in the performance of the audits and should be subject to independent external scrutiny including the external audit of its operations.

Ensuring good governance of SAIs – the SAI should have in place good corporate governance structures in the way it is managed.

Complying with the SAIs code of Ethics – the SAI should have a code of ethics which as a minimum should be like the code issued by INTOSAI. The code must be complied with by the SAI and the staff who work for the SAI.

Striving for service excellence & quality – there should be within the SAI a culture which considers quality important. There should be in place a monitoring system which ensures that their systems of quality control of work performed is relevant, adequate and operating effectively.

Promoting learning, knowledge sharing and capacity building – the SAI should have professional development strategy which includes training of its staff to ensure staff have the professional competences to enable them carry out their duties.

The SAI should also promote continuing professional development through regular training of staff for any changes in the public sector audit environment.

ii. Application of ethical values in forensic investigations:

Integrity:

This means that the forensic investigator should act honestly and in good faith in the best interest of the public. Should not consider personal and other interests above public interest.

Independence & objectivity:

The forensic investigator should be independent of the responsible party and the people under investigation. In the event that there is a threat to the independence of the forensic investigator, this should be brought to the attention of the SAI and suitable safeguards should be applied.

Competence:
Forensic investigation require appropriate skills and competences. The forensic investigator should have these skill before accepting to carry out this task. The investigator should engage experts where they do not have the required skills.

Professional behavior:
The investigator should not act in any manner that would discredit the SAI including accepting bribes to influence decisions of the SAI member.

Confidentiality & transparency:
The nature of forensic investigations is such that the investigator comes across sensitive and confidential information including information about the suspects. The forensic investigator should not disclose to third parties any information that comes to them by virtue of the position that they hold.

Any disclosure should be made after careful consideration to the principle of confidentiality.

SOLUTION THREE

a) The meaning of cyber-crime

This is a threat to an organization's computer systems that would adversely affect the organization. This threat arises from the fact that organizations no longer have closed systems and they are connected to outside entities such as their suppliers and customers and banks.

The threat arises from unauthorized access to a system with a motive to cause harm to the organization.

Cyber-crime threats to organizations:

Direct theft:

This involves theft by people who gain unauthorized access to an organization's systems. This could involve transferring funds from the organization to the criminal's bank account.

Malicious damage:

Simply accessing an organization's system and corrupting the programs and will range from deleting data to installing programs which cause damage over time through corrupting data.

Data theft:

This is unauthorized access to an organization's IT system and getting accessing sensitive data.
For example accessing bank account details of an organization or customer financial details such as the credit card details. This data is later in used for criminal activities for the benefit of the criminal.

Ransom-ware attacks:

This is the gaining of access to an organization's data and encrypt the data so that cannot be used and later demand a payment of a ransom so that the data can be decrypted and allow access.

Despite payment of a ransom data may have corrupted or stolen by the criminal.

Denial of service attacks:

This method of cyber-crime does not necessarily involve unauthorized aces to an Organization's system. It could for example involve targeting the website of the organization and flood it with traffic so that accessing for intended purposes is made very difficult.

Criminals could also demand ransom to desist from doing this.

b) The Supreme Court audit:

i. Methods used to obtain information in understanding Supreme Court operations:

Enquiry of management and other sources – this involves finding out about the functioning of the Supreme Court from those in charge of the operations and the other staff.

Analytical procedures – this will relate mainly to financial and other non-financial data and involves making comparisons. For example ratios on expenditure compared to grants received from government.

Observation and inspection – this involves the auditor gaining an understanding through the observations of what is going on and also through the inspection of documents.

The Supreme Court Website – The website is likely to contain a lot of information on the operations of the Supreme Court.

ii. Link between subject matter and criteria in the compliance audit:

The main objective of compliance audits is to determine whether financial performance and use of appropriated funds, activities, program activities, processes or physical characteristics of a road or building constructed comply with relevant laws and regulations and other set standards.

In compliance audits, there is a **subject matter** which is the matter being audited. For example in public sector, financial performance and use of appropriated funds in a ministry may be the subject matter of a compliance audit.

The **criteria** is the yardstick against which the subject matter is measured. In the example at hand of expenditure this may be the approved budget and other expenditure guidelines that must be followed.

iii. Subject matters and related criteria:

Subject matter	**Criteria**
Income from fines and fees	Provisions of the Laws & regulations contained in the penal code.
Expenditure for operational use	The general orders.
Use of grant for computerization	The signed agreement with the donor.

<u>SOLUTION FOUR</u>:

a) The meaning of professional skepticism:

Public sector auditors require to gather sufficient appropriate audit evidence which is meant to help reach an appropriate conclusion.

Professional skepticism is an attitude on the part of the auditor to have a questioning mind and also looking out for contradictory evidence in the course of the audit. In other words the public sector auditor should be alive to the fact that things may be wrong and must be alert to this fact.

b) Road traffic accidents:

i. The three Es in the performance audit on road accident program:

Economy in the performance audit of the program to reduce road traffic accidents refers to the cost of implementing the program and that it should be done in a cost effective manner.

In carrying out the activities there is need for massive advertising and the use of theatre groups. The cost of the advertising in all the various media should be cost effective and payment should be after evaluating competitive bids by the providers of the goods and services.

Efficiency compares the input into a program with the outcome. The aim is to get maximum output form a given input.
In the case at hand this may involve establishing how many target drivers have been reached compared to similar programs that have been run in the past or in other places.

Effectiveness refers to the achieving of the intended objectives of the program. In this case, the objective is to see a reduction in road traffic accident after running this program.
This can be done by comparing the level of accident before running the program and the level experienced after running the program.
If there is a noted reduction then it implies that the program has been effective.

ii. Link between ISAs and ISSAIs:

International Standards on Auditing (ISAs) give guidance to the auditors in the private sector.

International Standards for Supreme Audit Institutions (ISSAIs) give guidance to auditors in the public sector.

The International Organization for Supreme Audit Institutions (INTOSAI) takes part in the process of setting out ISAs. The ISSAIs consist of the equivalent ISA with the support of the relevant Practice Note (PN).

iii. Audit objectives in private sector audits and public sector audits:

The objective of auditing financial statements in the private sector is for the auditor to form an opinion on the financial statements prepared by management.

The concern of the auditor in the private sector is to concentrate on matters that have an effect on the figures contained in the financial statements.

The audit of financial statements in the private sector is based on International Standards on Auditing issued by the International Federation of Accountants (IFAC).

The objective of audits in the public sector is largely to obtain evidence that the custodians and users of public funds use them prudently for the benefit of the general citizenry. The scope of public sector audits is much wider and is not restricted to the figures contained in the financial statements.
Further public sector audits include performance and compliance audits which are not specifically performed in the audit of private entities.

iv. Elements of quality control:

Leadership responsibilities for quality – The OAG should promote a culture within the organization which recognizes that quality is essential in the performance of work. This should be managed from the highest level within the OAG.

Relevant ethical requirements – The OAG should have policies and procedures in place to ensure that staff who work for it comply with relevant ethical requirements at all times.

Human resources – The OAG should have sufficient resources including human resources who have the necessary skills and competences to carry out their duties. Policies should be in place to ensure that recruitment is based on merit and performance appraisals are in place.

Performance of audits and other work – This is the carrying out of the work in accordance with accepted standards and other legal frameworks and regulations. Further, the reports that are issued should be appropriate in the circumstances.

Monitoring – The OAG should have processes within the organization to ensure that the policies and procedures related to quality control are relevant, adequate and operating effectively.

Acceptance and continuance – The OAG should have policies and procedures in place which will ensure that it only performs audits that it has the capacity to do so. Consideration should be taken on other matters such as financial resources and time to carry out the work.

<u>SOLUTION FIVE</u>

a) **Responsibilities for fraud in the public sector:**
ISSAI 1240 *The Auditor's Responsibilities Relating to Fraud in an Audit of Financial Statements* gives guidance to the public sector auditor on responsibilities for fraud in an entity subject to audit.

The primary responsibility for the prevention and detection of fraud lies with those charged with management and those charged with governance. The auditors is responsible for obtaining reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or error.

In the case at hand, the controlling officer is responsible for the prevention and detection of fraud. The role of the auditor is to apply professional skepticism in the performance of the audit having regard to the fact that fraud could exist.

b) **Types of fraud in accordance with ISSAI 1240:**

Misappropriation of assets:
This involves the theft of an entity's assets for personal use by employees or management. This takes various forms including embezzling receipts of the entity into personal accounts and stealing physical assets.
In the case at hand this could be the case concerning missing precious stones at each inventory count.

Fraudulent financial reporting:
This involves the deliberate material misstatement of the financial statements. The purpose of the fraud is to misrepresent the financial statements to users of the financial statements and give them an incorrect picture of the performance or financial position of the organization.
In the case at hand this may be motivated by the payment of annual bonuses to management based on profitability targets. This could put pressure on the management to misrepresent the financial statements.

c) **General requirements in a performance audit: (ISSAI 3000)**

Independence – The auditors should remain independent of the audited entity so that they maintain their objectivity. The auditor should guard against any threat to his independence.

The parties to the audit – These should be identified at the onset.

Identification of the subject matter – This should be identified and could be specific programmes, systems, entities or funds. This will set the boundaries of the subject matter for the audit.

Communication assurance – Communication about the outcome of the audit should be done in a transparent manner. There should be clear communication throughout the audit by the auditor to the responsible party.

Audit objective – Clearly defined audit objective should be set. Should be clear such that the questions that will be answered are clearly understood.

Audit criteria – This is the measure against which the subject matter is measured. A criteria which corresponds with the audit objective should set and discussed with the audited entity. The audit criteria should provide an appropriate and reasonable basis for assessing against the audit objectives.

Audit risk – In terms of the competences of the team having sufficient competences to conduct the audit and whether the team has access to accurate, reliable and relevant information.

Supervision – Of the work carried out by senior members of the audit team. This involves directing, supporting and monitoring the work carried out.

Innovation – which will enable the auditor to deal with different situations. This means the auditor will be in a better position to identify opportunities to develop innovative audit approached from collecting, interpreting and analyzing information.

Quality control – should be maintained throughout the process of carrying out performance audits. The provisions of ISSA 40 should be followed.

d) Parties to a performance audit:

The three parties to the performance audit of Precious Stones Ltd are as follows:

- The Office of the Auditor General –This will be the audit team assigned to undertake the audit of Precious Stones Ltd.
- The responsible party – In this case this is Precious Stones Ltd who are the ones who prepare the financial statements and subject to the compliance audit.
- The intended users – This could be parliament and the general citizenry who have an interest in the affairs of Precious Stones Ltd.

END OF SUGGESTED SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

ADVISORY LEVEL

CA 3.8: PUBLIC SECTOR FINANCIAL MANAGEMENT

FRIDAY 14 DECEMBER 2018

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 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.

SECTION A

This question is compulsory and must be attempted

QUESTION ONE

The Government of Zambia is considering constructing a 900 kilometer tarred road network stretching from the Capital City to the boarder of the Southern Province.

A construction firm, JM Constructions Ltd recently won the bid to construct the road. The total cost of the project has been estimated at $500 million by JM Constructions Ltd. The Government has arranged a $300 million project loan agreement with the European Investment Bank (EIB) to partially finance the project. The balance of $200 million will be financed by a foreign project grant. The government recently paid $20,000 to an external consultant firm which was engaged to carry out a study on the proposed project.

The construction project is expected to last five (5) years after which it will be handed over to the Government. The project is under the supervision of the Roads Department which is an agency of Government responsible for road construction and maintenance.

The Government is expected to spend K45 million as compensation to individuals who will be displaced from their homes as a result of the road network passing through some communities. The payment is expected to be made before the commencement of the project.

The first 10% of the project cost will be paid before commencement of the project. The road will be constructed in five phases and payments will be based upon percentage completion as shown in the following table:

Cumulative kilometers completed	**Cumulative Percentage of project cost to be paid to the contractor**	**Timing**
100km	30%	Year 1
300km	50%	Year 2
500km	70%	Year 3
700km	80%	Year 4
900km	100%	Year 5

However the roads department Board of Directors recently expressed the following two (2) concerns regarding the proposed project:

(1) Whether JM Construction Ltd will meet the scheduled completion time of the project.
(2) The possibility of spending more on the project than the estimated $500 million.

The estimated lifespan of the road is 30 years. Government expects that the road will boost trade between Zambia and the countries near the Southern border. Additional export earnings of K200 million per annum are expected after the road is completed. Other benefits of the project include an influx of basic commodities from the neighboring countries near the Southern border. These commodities are currently in short supply in Zambia. This will certainly improve the living standards of the people in Zambia.

Assume today's ZMW/$ exchange rate is ZMW9.8/$. The forecast exchange rate for the Kwacha is that it is expected to remain constant against major international currencies for the next three (3) years until year four (4) when it will begin to depreciate at 2% per annum until the end of year ten (10).

A maintenance agreement for the road project is also being considered. It will cost the Zambian Government approximately K800 million per annum to maintain the road. The Roads Department spokesperson recently indicated that toll gates will be constructed for every 450 km stretch of the road network after completion of the road project. The revenue from the toll gates will be used to cover the cost of road maintenance. Estimated average revenue from a toll gate is K40 million per month.

For the evaluation of long term capital projects the government uses a discount rate based on the social time preference rate of 5%. This is derived from the post-tax savings rate adjusted for consumption growth and marginal utility. The relevant cumulative discount factor at this rate is as follows:

Period in Years	**Discount Factor**
Year 1 – 35	16.37

Required:

a) Assume you are the director of finance at the Roads Department. Write a report to the Board of Directors that evaluates the proposed construction of the road network and other related factors.

Your report should cover the following:

i) An appraisal of the proposed road construction project using the Net Present Value Method. Advise the Directors whether the project is worthwhile on financial grounds. (14 marks)

ii) Suggestions of ways to prevent and/ or mitigate the two (2) concerns expressed by the Board of Directors of the Roads Department. (10 marks)

iii) A discussion of three (3) financial risks that the Government and/or JM Constructions Ltd may be exposed to during the entire project life cycle. (6 marks)

iv) An explanation of the differences between the foreign project grants and project loan agreement which have been used to finance the road construction project. (4 marks)

b) The management of assets and liabilities has four (4) indicators and thirteen (13) dimensions under the Public Expenditure and Financial Accountability Framework (PEFA). One of the indicators being the management of public debt.

Explain the purpose and dimensions of public debt management. (6 marks)

[Total: 40 Marks]

SECTION B

Attempt any THREE (3) questions in this section

QUESTION TWO

The central government has become aware that the current medical facilities are unable to reliably meet the health needs of the population. As a consequence it is considering various options of increasing medical facilities in the country.

There are currently only two private hospitals in the whole country. The Government, through the Ministry of Health is considering increasing the number of private hospitals to sufficiently meet the increasing demand for quality health care. The Minister of Health was recently quoted in public media that government is not keen to enter into partnerships with the private sector in delivery of health care because of the challenges it has experienced with public private partnerships in other sectors of the economy.

Assume you are one of the directors at the Ministry of Health. You have been asked to make a presentation on the delivery method for the private hospitals project at the next management meeting.

Required:

Prepare some notes to use for the presentation. Your notes should cover the following:

(a) An explanation of the nature and key features of conventional procurement models for capital projects. (8 marks)

(b) A description of the most suitable delivery method for the private hospitals, giving at least one (1) reason for its suitability. (4 marks)

(c) A discussion of any four (4) key features of the model suggested in two (2) above. (8 marks)

[Total: 20 Marks]

QUESTION THREE

FB Local Authority was established twenty years ago. It is based in a mining township. The mining township has experienced significant development partly due to the increase in mineral prices in recent years. In addition the mines have contributed immensely to the development of the township through their sound corporate social responsibility programs.

The increase in business activity and general economic boom of the township has spilled over to FB Local Authority. The Local Authority has exceeded revenue collection targets for many years. Most businesses have exhibited willingness to support the Local Authority through the consistent payment of rates, levies and rentals to the Local Authority. In particular the rates collected from the mines have boosted FB revenue significantly.

In addition the FB management has practiced good financial discipline, avoiding unnecessary expenses and excessive trips. FB surplus funds have increased over the years and the Finance Director is now contemplating the best way to invest the surplus funds.

In a recent management meeting held in the Town Clerk's Office to discuss the possible investment opportunities available to FB, several suggestions were considered. Most of the officers who attended the meeting suggested that FB should invest in local bonds, foreign bonds and fixed deposit accounts.

The Town Clerk was of the view that the matter should be forwarded to a council meeting for approval. It was also unanimously agreed by management that the Finance Director should gather more information on these issues in order to guide management. The next meeting to discuss the issues further was scheduled for next month.

Required:

(a) Discuss the key issues which should be considered by the Local Authority when investing surplus funds. (8 marks)

(b) Explain the financial assets available to FB Local Authority for investment of its surplus funds as permitted by the Local Government Act 1991. (5 marks)

(c) As the Finance Director of FB, write a report to the Town Clerk providing guidance on the suggestions made during the meeting to invest the funds in various securities and forwarding the matters to a council meeting for approval. (7 marks)

[Total: 20 Marks]

<u>QUESTION FOUR</u>

(a) The President of Zambia, during a recent press conference appointed a new Minster of Finance.

The newly appointed Minister of Finance expressed concern about the realistic of the government budget and the extent to which it is implemented as intended. Her concerns were noted and government called for an assessment of budget reliability over a total of six dimensions used for scoring. This is in line with the Public Expenditure and Financial Accountability Framework (PEFA).

The results of the assessment for the three indicators are provided with a four point scoring system (A-D), were D indicates performance below a basic level. Each of the three indicators had at least one (1) dimension used for scoring.

INDICATOR	**SCORE (A – D)**
1) Aggregate expenditure outturn compared to budget	C
2) Expenditure composition outturn compared to budget	B
3) Revenue Outturn compared to budget	D

Required:

(i) Explain the dimensions which could have been used for scoring under each indicator. (6 marks)

(ii) Explain the importance of fiscal discipline in relation to the PEFA framework and one possible reason for the poor performance in revenue outturn (indicator 3). (6 marks)

(b) The National Commercial Bank (NCB), a state owned bank, is in the process of reviewing its customer loan facility. If a new customer requests for a loan, the Bank has three options. These options are rejecting the application, giving a high loan limit or giving a low loan limit. The probabilities of repayment of the loan by the customer are shown in the following table:

	Size of loan limit	**Probability**
Probability of full repayment	High/ low	0.75
Probability of non-repayment	High/low	0.25

The average profit per customer, made by the NCB is in the range of K1600 to K2500 for those who make full repayment. The average loss per customer, made by NCB is in the range of K800 to K1000 for those who do not repay their loan.

Required:

A new customer, whose credit rating is unknown, has approached the bank for a loan. By use of a decision tree, recommend to the bank management, whether they should give the new customer a high loan limit or a low loan limit. (8 marks)

[Total: 20 Marks]

QUESTION FIVE

You are a private financial consultant and a partner in an accounting firm, HXC consulting. HXC was recently invited to make a presentation at a workshop organized by reputable Audit firm to review the national budget for the last three years.

The presentation will be mainly focused on the key areas of public expenditure in Zambia.

As a partner of HXC you have been selected to make the presentation at the workshop on behalf of the firm.

Recent budgets as provided by the Audit Firm, by functions of government provide a clear indication of key areas of public expenditure in Zambia.

The table below is an extract of the Zambia national budget for the period 2015-2017 in percentages.

		2017	**2016**	**2015**
	REVENUES AND FINANCING	% OF BUDGET	% OF BUDGET	% OF BUDGET
1	Total tax revenues	58.3	59	67
2	Non Tax revenues	8.3	16.5	8.2
3	Domestic borrowing	5.9	4.72	8.0
4	Total foreign grants and loans	27.5	16	11.5

Required:

(a) Prepare notes for use at the presentation covering the following:

(i) Explanation of the reasons for government undertaking public expenditure. (4 marks)

(ii) The four (4) key areas of public expenditure in Zambia by functional category. (4 marks)

(b) Discuss the reasons the government has prioritized these areas of public expenditure. (4 marks)

(c) Explain any four (4) objectives of public sector financial management. (8 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

CA 3.8 FINANCIAL MANAGEMENT

SUGGESTED SOLUTIONS

<u>SOLUTION ONE</u>

REPORT

To: The Board of Directors, Roads Department

From: Director of Finance

Date: 18th May 2018

Subject: Report on the proposed construction of 900Km road network

Introduction

This report provides a financial evaluation of the proposed road network and discusses related factors.

a) Investment Appraisal using the NPV method
The results of my computation (see appendix) show that based on financial grounds, the project should not be undertaken as the Net Present Value of resultant Cash Flows is Negative. (K79.481m)

b) Ways to prevent and/or mitigate concerns raised by the Board of Directors
   i) Concerns of delay in completion time
      The following are the options available:
      - Completion guarantee extension to debt maturity
        This guarantees that debt will be guaranteed until maturity in the event that completion is not achieved by a certain date.
      - Completion/performance guarantees insure against financial loss from a delay in project completion attributable to specified causes such as failure of a party to perform on time.
      - Penalties or liquidated damages state an amount or rate calculated in advance usually payable by the contractor/construction company (In this case, JM Constructions) for a delay to a project or performance failure. It is usually specified in the contract as a fixed sum, daily or weekly rate.
      - Supply guarantee: the contractor or construction company (JM Constructions) insures himself that the supply (i.e. material or equipment) will be available were it is needed when it is needed.

   ii) Concerns of cost overruns
      - Contingency fund from Government. This is a percentage assigned to the budget for overruns or unforeseen costs.
      - Fixed price (lump sum) contracts, the contractor/construction company (i.e. JM Constructions) agrees to do the described and specified project for a fixed price.
      - Guaranteed maximum price agreement- the Government and Contractor Company can agree to cap the price once the project's design is substantially complete. Thus

if JM Constructions exceeds the capped amount it will be responsible for the difference and if the total cost of the project is below the capped cost the Government and JM Constructions may agree to share a savings benefit.

c) Financial Risks
   i) Interest rate fluctuations
      A fall in interest rates will lead to a capital flight as foreign investors will be earning less interest on their investments. This may make the kwacha exchange rate against the dollar to fall and hence increase the cost of the foreign loan.
   ii) Inflation
      A rise in inflation in Zambia will weaken the Kwacha as it will increase the price of goods and services. This will make the Wach exchange rate to fall against the dollar and hence increase the cost of the foreign loan.
   iii) Debt Servicing risk
      Debt has to be serviced through usually fixed rate payments. Any failure to service the debt may lead to a law suit or a multiplicity of interest payments and make the debt difficult to repay in future.
   iv) Exchange rate fluctuations
      There are other external factors on an international level that may lead to fluctuations in the exchange rate of the Kwacha.

d) Foreign project grants are provided to fund specific projects. As they are grants they do not need to be repaid provided that the conditions related to the grants are met.
   Programs and project loans differ from grants in that they must be repaid, and may also attract interest charges as well. These include World Bank Loans, EIB loans ADB loans.
   The loan obtained from the EIB by the Wonga Government must be repaid together with interest because it is a project loan while the foreign grant may not necessarily be repaid if certain conditions are met.

Appendix to the report

Workings

Work 1

<u>Investment Cost</u>

Yr 0 10% x $500,000,000=50,000,000

Yr 0 Compensation K45, 000,000

Yr 1-3 20% x $500,000,000 = $100,000,000

Yr 4 10% x $500000000=$50,000,000

Yr 5 20% x $500,000,000=$100,000,000

Work 2

<u>Year 6 to Year 35</u>

Toll Fees K40m x12= K480m x 2 = K960m p .a

Add: Export earnings =K200m p .a

Less: Maintenance costs =K800m p .a

Net Cash flows =K360m p .a

Work 3

<u>Annuity factor</u>

AF – Year 1 – 35 16.37

Less: AF – Year 1-5 4.329

AF – Year 6 -35 12.041

Work 4

<u>Exchange rate depreciation</u>

Year 4- 9.8*1.02= W9.996

Year 5- 9.996*1.02=W10.196

Year		Cash flows (m)	D.F	PV	Exchange rate	Cash Flows W(m)
0	Project cost	$50	1	50	9.8	490
0	Compensation	K45	1	45	1	45
1-3	Project cost	$100	2.723	272.3	9.8	2668.54
4	Project cost	$50	0.823	41.15	9.996	411.335
5	Project cost	$100	0.784	78.4	10.196	799.366
6-35	Net Cash Inflows (wk 2)	K360	12.041	4334.76	1	4334.76
	NPV					(79.481)

ii.) THE PURPOSE AND DIMENSIONS OF PUBLIC DEBT MANAGEMENT

Debt management assesses the management of domestic and foreign debt and guarantees.

The three dimensions are as follows:

- Recording and reporting of debt and guarantees, examines extent to which debt records are complete, accurate and up to date and information is provided on a regular basis.
- Approval of debt and guarantees; assesses whether there is a single responsible debt management entity that has been given powers by primary legislation and that acts in accordance with standardized rules, procedures, and within annual government or legislature set limits.
- Debt management strategy: reviews whether there is a current and publicly reported medium term debt management strategy that is linked to annual government plans.

SOLUTION TWO

a) Conventional Model

Under this procurement model, government contracts with private sector entities to build an asset according to a design specified by the public sector. The financing for the construction comes directly from the government paid for by either taxation or borrowing, and the public sector then takes responsibility for operating the asset once it has been built.

Features of the conventional model are as follows:

1. The cost of financing the asset is met up front by the public sector.
2. The public sector usually holds the risks related to construction delays and overruns.
3. The asset is the property of the public sector.
4. The public sector bears the financial and other risks related to demand for the asset and the services it provides.
5. The public sector bears the financial and other risks related to availability of the asset and the services it provides.
6. The public sector is responsible for the long term maintenance of the asset.

b) The most suitable model to use is the full private provision model. Under this model government will permit private sector entities to run public services in accordance with a license. The private hospital will be subject to indirect control via regulation, but otherwise it is free to operate the private hospital in accordance with its own commercial interest.

Reasons for suggesting this model are:

1. Since it is a private hospital with a commercial interest, there is no need for government involvement. Private hospitals do not have government involvement. They will be charging market prices for their services. This means also that the quality of their services will be high to justify the market charges for their services.

c) Key Features of private provision model.

1. The costs for building and maintaining assets are met by the private sector and are repaid by customers over the length of the license.
2. The private sector holds the financial risks related to construction delays and overruns.
3. The asset is the property of the private sector.
4. The financial risk related to demand for the asset and the services it provides rests with the private sector.
5. The private sector bears the financial risk related to the availability of the asset and the services it provides.
6. The private sector is responsible for the long term maintenance of the asset, with payments from customers financing maintenance.

SOLUTION THREE

a) The key issues to be considered are as follows

i) Liquidity
Cash may only be temporarily available. The date when it is required to be returned may either be known through cash flow forecasts, or alternatively it may be unexpectedly required at short notice. Where cash is expected to be only temporarily available, or there is a risk that it will be required at short notice, short term liquid investments such as bank deposits should be preferred for investments.

ii) Safety
This depends to a large extent on risk appetite, but given large domestic and foreign debts and ongoing deficits, focus should be on investments were capital return is almost guaranteed (such as deposits) or subject to limited risk in the short term (high quality bonds).

iii) Returns
Again this depends on risk appetite and other investments in the portfolio, but maximum return should be aimed for given a defined level of risk.

iv) Wider policy objectives
There may be reasons, concerned with wider policy objectives, why investment is made in longer term and riskier financial products which do not maximize direct financial returns from the investment. These could include investments in equities of companies that the government wishes to support. As these are likely to be longer term investments, however and likely to be in support of policy objectives, such investments should generally be subject to proper cost benefit analysis so that they can be compared to alternative methods for achieving the desired policy and funded through the usual appropriation and budget process.

b) FB's moneys which are not required for immediate use may be invested in

i) Stocks, securities or debentures issued by or on behalf of the Government of the Republic of Zambia or in stocks securities or debentures guaranteed by the government.
ii) Deposits with the Zambia National Building Society.
iii) The Post Office Savings Bank.
iv) Savings accounts or fixed deposits accounts with the Zambia National Commercial Bank
v) The stocks, bonds or debentures of any public body in Zambia.
Investments whose maturity period exceeds ninety days shall require a council resolution to be made.

c) To : The Town Clerk
From: Finance Director
Date: 21st May 2018
Subject: Investment opportunities of FB surplus funds

The local Government Act provides councils with broad powers to invest surplus funds. It does limit investments however to Zambian financial instruments. Examples include Bank of Zambia Bonds and Zambian corporate bonds. This means that FB cannot invest in foreign bonds as suggested during the meeting.

Furthermore, the act requires long term investments to be subjected to the passing of an additional resolution.

However, a council may invest any monies not required for immediate use in such securities as it may determine without a resolution provided the maturity period for such investments is not more than ninety days. Therefore investments in fixed deposit accounts may not require the passing of a council resolution provided their maturity period is not more than ninety days.

SOLUTION FOUR

a)

i)

1) Aggregate expenditure outturn
    - The extent to which aggregate expenditure outturn was close to approved budget expenditure.

2) Expenditure composition outturn.
    - Expenditure composition outturn by function: variance in expenditure composition by program, administrative or functional classification- this excludes contingency items and interest on debt.
    - Expenditure composition outturn by economic type: variance in expenditure composition by economic classification- this includes interest on debt but excludes contingency items.
    - Expenditure from contingency reserve

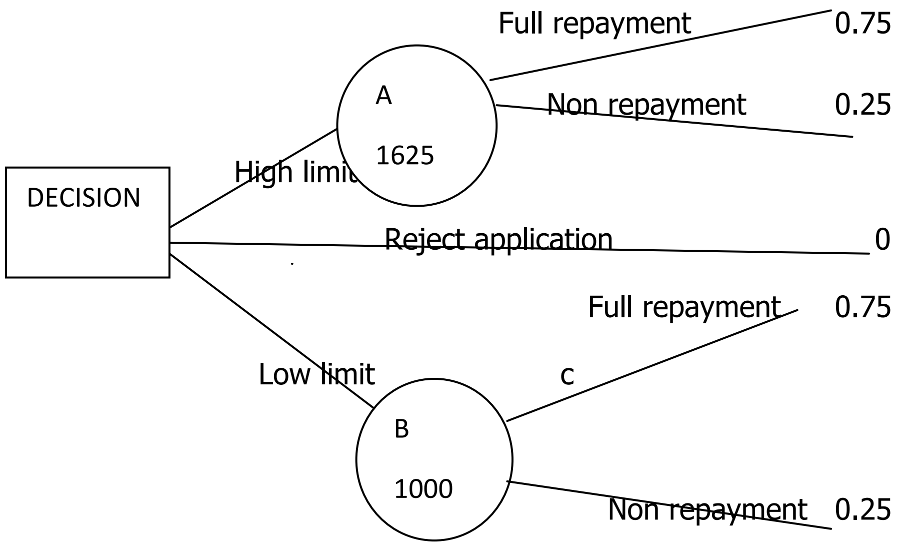
3) Revenue outturn.
    - Aggregate revenue outturn: the extent to which actual revenue was close to budgeted revenue.
    - Revenue composition outturn. Variance in revenue composition.

ii) Fiscal discipline means the control of the budget totals such that the actual outcomes show minimal variances in comparison with the approved budget.

It is one of the measures of budget credibility and reliability. A credible budget is a budget that fulfills the three budgetary objectives of fiscal discipline, allocative efficiency and operational efficiency. For a budget to be credible or reliable also means that the budget system functions to serve spending control, management and planning.

Budget reliability is one of the seven pillars of performance under the PEFA framework.

One possible reason for the poor performance in the revenue outturn indicator is the under-targeting of revenues, which undermines budget credibility and prevents greater resources from being available to direct to public resources. From a technical stand point, a government budget is credible when the actual outcomes are closely reflective of the initial budget.



At Outcome Point A: The EV is (K2500 *0.75) – (K1000*0.25) = K 1625

At Outcome point b: The EV is (1600 *0.75) – (K800 *0.25) =K1000

If the loan application is rejected there is neither a profit nor a loss

The bank should therefore give the new customer a high loan limit as this has the highest expected value of K1625.

SOLUTION FIVE

a)

The essential reason for government undertaking public expenditure is mainly due to two factors:

i) To address inefficiencies in the operation of markets and or/institutions in order to achieve economic objectives; and

ii) To achieve an equity objective such as protecting individuals from destitution or reducing inequality between regions within a country.

Market failure result in inefficiencies in the economy and public expenditure is made by government as an intervention to address these inefficiencies. Examples of market failure include public goods, externalities, merit goods and market power.

1) General Public Services

This covers domestic debt and external debt payments. It is a functional category that covers a significant amount of the non-discretionary budget.

In addition to these debt payments, this category includes the Local Government Equalization Fund which provides additional revenue to local governments and the constituency development fund (CDF).

2) Economic Affairs

This is aimed at the expansion and diversification of the economy. This includes expenditure on the development of road infrastructure with priority given to roads that support economic growth and regional trade and development. It also includes expenditure aimed at interventions in the agriculture sector. Examples include construction of dams, irrigation schemes using public private partnerships.

3) Education

The majority of the expenditure is on salaries for teaching staff in order to improve the pupil teacher ratio. This also includes expenditure on infrastructure projects in schools and universities and colleges.

Further areas of budgeted expenditure include the implementation of the loan scheme for university students to reduce the financial challenges in public universities and another allocation is towards a skills development fund to enhance vocational skills.

4) Health

Most expenditure in this category is on the salaries of health workers. Other expenditure is allocated to the procurement of drugs and medical supplies, medical infrastructure and equipment.

The Government's recent focus has been on improving primary care and promoting innovative health financing strategies to achieve universal health coverage for all citizens.

b) Reasons for prioritization of these areas of public expenditure are:

i) General Public Services.

This is non-discretionary expenditure and includes debt re-payments. The increase in the foreign grants and loans as a percentage of the budget from 11.5% of budget in 2015 to 27.5% of budget in 2017 has contributed to the increase in expenditure on General Public Services due to the increase in debt re-payments.

ii) Economic Affairs

Economic affairs expenditure is aimed at the expansion and diversification of the economy. Expenditure in this area is generally aimed at addressing market failures particularly in the delivery of essential infrastructure such as roads and electricity generation and supply.

This is in line with one of the pillars of the seventh national development plan and the Zambia plus economic recovery program.

iii) Education

Education is an example of a merit good that would be undersupplied by the market but also an equity objective as access to education is agreed to be a fundamental human right. The government has tried to improve the pupil teacher ratio in this regard.

iv) Health

This is also a merit good and an equity objective. It is a fundamental human right for all. Government has endeavored to improve health care provision in Zambia because it is a fundamental human right.

c) Objectives of Public Sector Financial Management.

The broad objectives of public financial management are to achieve overall fiscal discipline, allocation of resources to priority needs, and efficient and effective delivery of public services. These can be broken down in to the following five key objectives against which performance of the system can be measured:

1) Maintenance of aggregate fiscal discipline to ensure that aggregate levels of revenue collection and public spending are consistent with targets for the fiscal balance and do not generate unsustainable levels of public borrowing.
2) Allocative efficiency to ensure that public resources are allocated in accordance with agreed strategic priorities.
3) Operational efficiency to ensure maximum value for money in the delivery of services.
4) Accountability to avoid leakages and wastage in the use of resources through defined checks and balances.
5) Finally the system should follow due process and be seen to do so, by being transparent with information publicly accessible to all stakeholders.

END OF SUGGESTED SOLUTIONS