CA ZAMBIA PROGRAMME EXAMINATIONS

CA CERTIFICATE IN ACCOUNTANCY

CA 1.1: FINANCIAL ACCOUNTING

MONDAY 14 JUNE 2021

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

INSTRUCTIONS TO CANDIDATES

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

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

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

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

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

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

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

8. Present legible and tidy work.

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

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

SECTION A

Attempt all ten (10) multiple choice questions

QUESTION ONE

There are 10 multiple choice questions in this section. Attempt all of them by selecting your best answer from the options given.

1.1 The subscriptions receivable account of a Roto club of Lusaka had subscription in arrears on 1 January 2020 of K50 and subscriptions in advance of K75. During the year, K12,450 was received in subscriptions, including all of the arrears and K120 for the 2021.

What is the amount to be taken to the income and expenditure account for year ended 31 December, 2020?

A. K12,405
B. K12,305
C. K12,355
D. K12,450

(2 marks)

1.2 Rent paid on 1 October 2019 by Jumbo Ltd for the year to 30 September 2020 was K1,200 and rent paid on 1 October 2020 for the year to 30 September 2021 was K1,600. Rent expense, as shown in the statement of profit and loss for the year ended 31 December 2020 would be:

A. K1,200
B. K1,300
C. K2.200
D. K1,400

(2 marks)

1.3 Which one of the following does not apply to the preparation of financial statements?

A. They provide a summary of the outcome of financial transactions.
B. They are prepared mainly for external users of accounting information.
C. They are prepared to show the detailed costs of manufacturing and trading.
D. They are prepared annually to show annual results of the firm.

(2 marks)

1.4 The value of inventory as a result of a count on 5 January 2020 was K 845,600. During the five days from the end of the year 2019, the following transactions took place:

Sales	K 16,000
Purchases	K 18,000
Purchases returns	K 1,200

Given that the proportion of profit included in sales(Gross profit margin) is 20%,what was the value of inventory as at 31 December 2019?

A. K 841,600
B. K 844,800
C. K 849,600
D. K 846,700

(2 marks)

1.5 The following information relates to Trade Big Manufacturing Ltd:

30 September	2020	2019
	K	K
Inventory of raw materials	75,000	45,000
Work in progress inventories	60,000	70,000
Inventory of finished goods	100,000	90,000

	K
For the year ended 30 September 2020	
Purchases of raw materials	150,000
Manufacturing wages	50,000
Factory overheads	40,000

Calculate the prime cost of production in the manufacturing account for the year ended 30 September 2020.

A. K140,000
B. K150,000
C. K160,000
D. K170,000

(2 marks)

1.6 The International Accounting Standards Board (IASB) issued the framework for the preparations of financial statements. Which of the following is the main responsibility of the IASB?

A. It raises the standard of financial reporting.
B. It brings about global harmonisation of accounting standards.
C. Develops and issues high quality enforceable accounting standards.
D. Advise the implications of proposed standards for users and preparers of financial statements.

(2marks)

1.7 Cash is of great importance to any organisation. Which of the following is not an advantages of cash basis of accounting?

A. Financial statements are easier to prepare.
B. Financial statements are easier to understand.
C. Shows how an organisation has managed its finances.
D. Shows the profitability of the organisation.

(2 marks)

1.8 The accounting equation can change as a result of certain transactions. Which one of the following transactions would not affect the accounting equation?

A. Selling goods for more than their cost.
B. Purchasing a non-current asset on credit.
C. The owner withdrawing cash.
D. Receivables paying their accounts in full, in cash.

(2 marks)

1.9 The sales for a particular period of Trans-Africa Ltd, are K2 million and its receivables is 5% of sales for the period. The company wishes to have an allowance of 4% of receivables, which would make the allowance of 33% higher than the current allowance.

What figure would appear in the statement of profit or loss for the increase in the receivable allowance?

A. K900
B. K950
C. K992
D. K1050

(2 marks)

1.10 Lombe Nyangu Ltd. uses the LIFO cost formula when valuing its inventories. The following information regarding inventories movements during March 2020 is given:

1	March	Balance b/d	200 units at K1,600
10	March	Purchases	800 units for K8,000
14	March	Sales	400 units for K4,800
21	March	Purchases	800 units for K10,000
23	March	Sales	600 units for K9,000

What is the cost of inventories at the end of the month?

A. K8,000
B. K8,100
C. K9,000
D. K6,000

(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 questions.

QUESTION TWO

Twalumba Limited Company deals in building materials, it is a family owned business based in Southern Province. The Company has 40,000,000 ordinary shares of K1 each. The Financial Accountant, produced the following trial balance as at 30 June 2020:

	Dr K000	Cr K000
Long–term investments	10,000	
Revenue		172,451
Purchases	141,006	
Returns inwards	100	
Inventory as at 1 July 2019	4,890	
Distribution expenses	3,678	
Administration expenses	4,210	
General expenses	1,783	
Property at valuation	80,000	
Property accumulated depreciation as at 1 July 2019		21,500
Plant and equipment at cost	12,342	
Plant and equipment accumulated depreciation as at 1 July 2019		6,437
Motor vehicles at cost	562	
Motor vehicles accumulated depreciation as at 1 July 2019		40
Trade receivables	4,560	
Trade payables		5,105
Bank	102	
Ordinary issued K1 shares		35,000
Share premium		15,000
Revaluation reserve as at 1 July 2019		10,000
Retained earnings as at 1 July 2019	6,300	
4% Loan		4,000
	269,533	**269,533**

Additional information:

1. The long-term investments, owned since 2015, earn an annual fixed rate of interest of 10%.
2. Tax charge for the year ended 30 June 2020 is estimated at K3,900,000
3. Both Loan interest and investment income for the year has not yet been accounted for.
4. K3,000,000 of the loans are redeemable by 30 June 2035 and K1,000,000 by 30 June 2021.
5. An item of plant, which still remains in the books, was sold for K35,000 on 1 September 2019. This amount was credited to general expenses and debited to cash account. The original cost of the plant was K60,000 and its net book value at 1 July 2019 was K40,000.
6. Depreciation for the year is to be provided as follows:
   - Property 5% per annum on valuation.
   - Plant and equipment 20% per annum straight line assuming no residual value
   - Motor vehicles 15% reducing balance.

No depreciation is to be provided for the year in which an asset is sold.

7. Dividends paid during the year of K500,000 have been credited to cash and debited to administration expenses. Further the company proposed ordinary dividends amounting to K6,543, 210.
8. Purchase of property, plant and equipment during the year ended 30 June 2020 totalled K120,000. This amount has been correctly dealt with in Twalumba Company's accounts for the year ended 30 June 2020.
9. Inventory as at 30 June 2020 was valued at cost K5,000,000, while the net realisable value was K4,760,000.
10. Trade receivables totalling K1,000,000 are to be written off.

Required:

(a) Prepare the Statement of profit or loss for the year ended 30 June 2020 for Twalumba Company. (10 marks)

(b) Prepare the Statement of Financial Position for Twalumba Company as at 30 June 2020. (10 marks)

[Total: 20 Marks]

QUESTION THREE

When two (2) or more individuals come together to form a Partnership, it is advisable to have a correctly drafted Partnership Agreement carefully detailing the terms of the business relationship. A partnership agreement is a contract between partners in a partnership which sets out the terms and conditions of the relationship between the partners.

Mr. B. Mapalo, a sole trader based in Luapula, has asked you to prepare the receivable and payable control accounts and ensure that the closing balances match with the list of balances. Currently, the closing balances as at 31 March 2020 are as follows:

	K
Receivables Control Account	126,845
Payables Control Account	103,240
Receivables list of balances	123,589
Payables list of balances	104,476

On investigation, the following have been discovered:

1. A contra entry of K3,250 has not been included in either control account.
2. Bad debt of K1,680 has been written off in the list of balances but has not been included in the receivables control account.
3. The sales day book has been overstated by K890 and this has not been reflected in the control account.
4. Purchase returns to Natasha, a supplier of K256 have not been reflected in the control account.
5. An invoice amounting to K981 for Twalumba, a customer has been entered in the sales day book as K891.

6. A balance due to Bukata, a supplier amounting to K1,248 was not included in the list of balances.
7. Payment received from Chikondi, a customer for K2,864 was posted to a supplier account Chitemwiko mistakenly. The payment was correctly accounted for in the control account.
8. Goods purchased from a supplier Buseko amounting to K3,126 have been omitted from the relevant control account.
9. Bad debt recovered of K300 relating to Chimwemwe has not been updated in the list of balances but has been included in the control account.

Required:

(a) Identify and explain five (5) errors which do not affect the suspense account.

(5 marks)

(b) Identify and explain five (5) key issues that should be covered in a partnership agreement when setting up a partnership. (5 marks)

(c) Based on the information provided above prepare the Receivables and Payables Control Accounts for the year-ended 31 March 2020. (6 marks)

(d) Prepare a statement reconciling the list of balances with the totals for revised control accounts for the year-ended 31 March 2020. (4 marks)

[Total: 20 Marks]

QUESTION FOUR

Miss Fitt owns a wholesale fruit and vegetable shop. You are responsible for preparing her annual Financial Statements from records consisting of a summary of the bank account and a file of unpaid suppliers and outstanding receivables. The following information has been produced from the business' records.

(a) Summary of the bank account for the year ended 31 December 2019.

	K		K
1 Jan balance b/d	19,000	Payment to suppliers	70,000
Cash from trade receivables	96,000	Purchase of Motor van(E429)	33,000
Sale of private Cart	25,000	Rent and rates	2,600
Sale of van (ABM 313)	12,000	Salaries & Wages	15,100
		Motor vehicle expenses	3,350
		Postage & stationery	1,300
		Drawings	7,200
		Repairs & renewals	650
		Insurance	800
		31 Dec. 2019 balance c/d	18,000
	152,000		152,000

1 Jan. 2019 balance b/f 18,000

(b) Assets and Liabilities other than balance at bank;

	1 January 2019	31 December 2019
	K	K
Trade payables	4,000	2,500
Trade receivables	7,320	9,500
Rent & rates accrued	200	260
Motor vans:		
ABM 313 at cost	20,000	-
Accumulated Dep.	18,000	-
E429 KBM at cost	-	33,000
Accumulated Dep.	-	
to be determined		
Inventory	5,000	6,000
Insurance prepaid	1,60	2,00

(c) All receipts are banked and all payments are made from the business bank account;

(d) A trade debt of K3,000 owing by John Blunt and included in the trade receivables at 31 December 2019 is to be written off as an irrecoverable debt.

(e) Miss Fitt provides depreciation at the rate of 15% on the cost of motor vans held at the end of each financial year. No depreciation is provided in the year of sale or disposal of a motor van.

(f) Discounts received during the year ended 31 December 2019 from trade payables amounted to K1,100.

Required:

(i) Prepare Miss Fitt's Statement of profit or loss for the year ended 31 December 2019. (11 marks)

(ii) Prepare Miss Fitt's statement of financial position as at 31 December 2019. (9 marks)

[Total: 20 Marks]

QUESTION FIVE

Munene Development Company prospered during the economic expansion. Business was so good that the company never bothered with few internal controls. A recent decline in the local product market has caused Munene to experience a shortage of cash; therefore stringent measures to monitor cash flow. The bank statement has just arrived from Central Bank. You may assume that any discrepancies between the statements relate to recording errors in the accounts of Munene and not the bank.

Bank Reconciliation for March 2020

		K	K
Ending balance per bank Statement			20,263
Add: Deposits in transit			2,505
Deduct: Outstanding cheques			
#	3110	1,750	
#	3106	1,908	(3,658)
Correct cash balance			19,110

The Cash Account of Munene Company at April 30, 2020 is as follows:

C A S H

		K			K
April 1	Balance	19,110	April 3	CHK 3113	8,910
2		41,740	3	3114	1,470
8		4,070		3115	19,300
10		5,590		3116	6,640
16		21,870		3117	14,720
22		18,540		3118	10,000
29		10,600		3119	6,320
30		3,370		3120	16,750
				3121	1,000
				3122	24,130
		124,890			124,890
April 30 Balance		15,650			

Munene Company receives the following Bank Statement on April 30, 2020:

Bank Statement for April 30. 2020

			K		K
Beginning balance					20,263
Deposits and other credits:					
April	1		3,260	EFT	
	4		41,740		
	9		2,505		
	9		4,070		
	12		5,590		
	17		21,870		
	22		13,680	BC	
	23		18,540		111,255
Cheques and other debits:					
April	7	CHQ 3113	8,910		
	13		13,900		
	13	3106	1,908		
	14		9,030	US	
	15	3114	1,470		
	18	3116	6,640		
	21		2,190	EFT	
	26	3117	14,720		
	30	3118	10,000		
	30		2,000	SC	
					70,768
					60,750

Explanation: BC – Bank collection, EFT – Electronic funds transfer
NSF – Non-sufficient fund check, SC – Service charge

Additional information

(a) The EFT deposit was a receipt of monthly rent. The EFT debit was a monthly insurance payment.

(b) The Unauthorized signature cheque was received from Shibwela Farms.

(c) The K13,680 Bank collection of a note receivable on April 22 included K1,850 interest revenue.

(d) The correct amount of cheque number 3115, a payment on account, is K13,900; Munene's accountant mistakenly recorded the cheque as K19,300.

Required:

(i) Update the cashbook with additional information from the bank statement where appropriate. (10 marks)

(ii) Prepare a reconciliation statement reconciling the bank statement balance to the updated cash book balance in (i) above. (10 marks)

[Total: 20 Marks]

QUESTION SIX

Financial accounting is mainly a method of reporting the financial performance and financial position of a business. Fundamental accounting concepts are the broad basic assumptions which underlie the periodic financial accounts of business enterprises. They are ground rules of accounting that should be followed in preparation of all accounts and financial statements. Despite the best efforts of bookkeepers and accountants, errors can sometimes occur in the financial records. When a company is set up for the first time it issues shares, which are paid for by investors, who then become shareholders of the company.

Required:

(a) Explain the following errors and give an example of each error.

(i) Compensating errors (2 marks)

(ii) Error of commission (2 marks)

(b) Distinguish between non-current and current assets. (2 marks)

(c) Explain the following accounting principles.

(i) Going concern (2 marks)

(ii) Accruals (2 marks)

(d) Explain the differences between preference shares and ordinary shares. (2 marks)

(e) Define, using numerical examples, each of the following terms used by an enterprise when issuing ordinary shares:

(i) Nominal issue (2 marks)

(ii) Premium issue (2 marks)

(iii) Rights issue (2 marks)

(iv) Bonus issue (2 marks)

[Total: 20 Marks]

END OF PAPER

CA 1.1: FINANCIAL ACCOUNTING

SUGGESTED SOLUTIONS

SOLUTION ONE

1.1 C

1.2 B

1.3 D

1.4 A

1.5 D

1.6 C

1.7 D

1.8 D

1.9 C

1.10 B

SOLUTION TWO

(a) Statement of profit or loss for Twalumba Company for the year ending 30 June 2020

	K000	K000
Revenue		172,451
Less returns inwards		(100)
Turnover		172, 351
Opening inventory	4,890	
Purchases	141,006	
145,896		
Less closing inventory	(4,760)	(141,136)
Gross profit		**31,215**
Other income (k10, 000 x 10%)		1,000
Distribution expenses	3,678	
Administration expenses (4,210 - 500)	3,710	
General expenses (1,783 + 35)	1,818	
Depreciation property (80,000x 5%)	4,000	
Bad debts	1,000	
Depreciation plant and equipment (12,342 -60) x2 0%	2,456.4	
Depreciation motor vehicles (562 - 40) x 15%	78.3	
Loan interest (4,000 x 4%)	160	
Loss on sale (40 - 35)	5	(16,905.7)
Net profit before tax		15,309.3
Tax		(3,900)
Profit after tax		11,409.3

(b) Statement of Financial Position for Twalumba company as at 30 June 2020

	K000 Cost		K000 Accum Dep	K000 NBV
Non-current assets				
Long –term investments				10,000
Property at valuation	80,000	21,500 + 4,000	= 25,500	54,500.0
Plant and equipment 12,342 – 60 =	12,282	6,437 - 20 + 2,456.4	= 8,873.4	3,408.6
Motor vehicles	562	40 + 78.3	= 118.3	443.7
				68,352.3
Current assets				
Interest receivable			1, 000	
Inventory			4,760	
Trade receivables		(4,560 -1,000)	3,560	
Bank			102	9,422
Total assets				**77,774.3**
Equity and Liabilities				
Equity				
Ordinary K1 shares				35,000
Share premium				15,000
Revaluation reserve				10,000
Retained reserves	11,409.3 -6,300 - 500			4,609.3

		64,609.3
Non-current liabilities		
4% loans redeemable 2035		3,000
Current liabilities		
Loans redeemable 2021	1,000	
Trade payables	5,105	
Loan interest accrued	160	
Tax	3,900	10,165
Total equity and liabilities		**77,774.3**

Proposed ordinary dividends should only be disclosed in the notes as per IAS 37.

SOLUTION THREE

(a) Errors which do not affect the suspense account:

i. **Complete omission** – a transaction is not recorded at all.
ii. **Error of commission** – an item is entered to the correct side of the wrong account (there is a debit and a credit here, so the records balance)
iii. **Error of principle** – an item is posted to the correct side of the wrong type of account, as when cash paid for plant repairs (expense) is debited to plant account (asset). Errors of principle are really a special case of errors of commission, and once again there is a debit and a credit.
iv. **Error of original entry** – an incorrect figure is entered in the records and then posted to the correct account.
v. **Reversal of entries** – the amount is correct, the accounts used are correct, but the account that should have been debited is credited and vice versa.

(b) Items that should be included in a partnership agreement include the following:

i. **Capital:** The partnership agreement should state how much each partner is putting into and leaving in the partnership.
ii. **Profit-sharing Ratio:** The partnership agreement should include how any profits are to be split between the various partners.
iii. **Interest on Capital and Drawings:** The agreement should disclose the interest rate that partners are entitled to, based on the amount of capital invested in the partnership, or the interest to be paid to the partnership based on drawings from the partnership. If no interest on capital or drawings is being paid/received, this should be included in the partnership agreement.
iv. **Partners Salaries:** The agreement should state what, if any, and when salaries are to be paid to partners.
v. **Drawings:** The partnership agreement should include details of the amount of drawings allowed by the partnership to partners.
vi. **Goodwill:** The partnership agreement should state whether the business will be valued and goodwill allowed to be brought into the partnership accounts or not.
vii. **Admittance/Amalgamation/Dissolution of Partnership:** The partnership agreement should include details on these three aspects of the partnership.

(c)

Receivables Control Account

	K		K
Balance	126,845		
Sales Day Book Error (981-891)	90	Contras	3,250
		Bad Debt Written Off	1,680
		Sales Day Book	890
		Bal c/d	121,115
	126,935		**126,935**
Bal b/d	121,115		

Payables Control Account

	K		K
		Balance	103,240
Contras	3,250	Buseko (Purchases)	3,126
Purchases Return-Natasha	256		
Balance C/d	102,860		
	106,366		**106,366**
		Bal B/d	**102,860**

(d) List of Individual Receivable Balances

	K
Original Balance	123,589
Sales Day Book Error (981-891)	90
Receipt- Chikondi	(2,864)
Bad debt Recovered	300
Closing Adjusted Balance	**121,115**

List of Individual Payable Balances

	K
Original Balance	104,476
Amasam Omitted Balance	1,248
Receipt- Chikondi	(2,864)
Closing Adjusted Balance	**102,860**

SOLUTION FOUR

STATEMENT OF PROFIT OR LOSS for the year ended 31 December 2019

a)

	K	K
Revenue (9,500+96,000-7,320)		98,180
Opening inventory	5,000	
Purchases (2,500+70,000+1,100-4,000)	69,600	
	74,600	
Less closing inventory	(6,000)	68,600
Gross profit		29,580
Discount received		1,100
Profit on sale of motor vehicle [12,000-(20,000-18,000]		10,000
		40,680
Rent & rates (2,600+260-200)	2,660	
Wages & salaries	15,100	
Motor vehicle expenses	3,350	
Postage & Stationery	1,300	
Repairs & renewals	650	
Insurance (160+800-200)	760	
Irrecoverable debt	3,000	
Depreciation of van (15% x 33,000)	4,950	31,770
Profit for the year		8,910

		Total
Working capital at 1 January 2019		19,000
Bank balance		
Trade Receivables		7,320
Motor van (20,000 – 18,000)		2,000
Inventory		5,000
Prepayment		160
		33,480
Liabilities		
Trade payables	4,000	
Accruals	200	(4,200)
		29,280

b) Statement of Financial position as at 31 December 2019

	K	K
Assets		
Non-current assets		
Motor Van cost	33,000	
Depreciation	(4,950)	28,050
Current assets		
Inventory	6,000	
Trade receivables (9,500 – 3,000)	6,500	
Prepayment	200	
Cash at bank	18,000	30,700
Total assets		58,750
Capital and liabilities		
Capital Account		
Balance at 1 January 2019	29,280	
Additional Capital: proceeds of yacht	25,000	
Profit for the year	8,910	
Less drawings	(7,200)	55,990
Current liabilities		
Trade payables	2,500	
Accrual	260	2,760
		58,750

SOLUTION FIVE

i) CASH BOOK

April 30	Balance	K15,650	April 14		K9,030
1,	EFT	3,260	21	EFT	2,190
22	BC	11,830	30	SC	2,000
22	Interest	1,850	14	CHK 3115	13,900
30	Reversal CHK 3115	19,300	30	Balance c/d	24,770
		K51,890			K51,890

ii) Bank Reconciliation
April 30, 2020

Balance at Bank		K60,750	
Add: Deposit of April 29 in transit		10,600	
" " April 30 in transit			3,370
		K74,720	
LESS: Outstanding checks issued on:			
# 3119	K6,320		
# 3120	16,750		
# 3121	1,000		
# 3122	24,130		
# 3110	1,750	(49,950)	
		K24,770	

SOLUTION SIX

(a) **(i) Compensating errors**

These are errors that cancel out each other. For example under stating coincidentally sales and purchases by say K10,000. The two errors would cancel out each other.

(ii) Error of commission

This occurs when double entry is completed correctly but in the wrong personal account. For instance, a sale on credit to Musonda being debited to Hamusonda's account instead of Musonda's account.

(b) **Non-current assets** are those assets that are acquired for use within the business for more than one year, e.g. motor vehicle, computer, building etc. **Current assets** on the other hand are those assets expected to be used within one year, e.g. inventory, trade receivable, cash etc.

(c) **(i) Going concern**

This concept assumes that an entity will continue in its operational existence for the Foreseeable future. The foreseeable future is normally the next twelve months.

(ii) Accruals concept

Under this concept, a transaction or event is recognised in the financial statements in the period it occurs rather than when cash is paid or received.

(d) **Differences between Preference shares and Ordinary shares Preference shares:**

- Shares which confer certain preferential rights to their holder.
- Right to a final dividend over ordinary shares.
- Priority right to ordinary shareholders to a return of their capital if the company goes into liquidation.
- Do not carry a right to vote.

Ordinary shares:

- Carry no right to a fixed dividend but are entitled to all profits left after payment of any preference dividend.
- Normally carry voting rights
- Should company be wound up, any surplus not distributed is shared between ordinary shareholders.

(e) **Terms used by an enterprise when issuing ordinary shares:**

- **Nominal issue**

  This is an issue at **par** where the issuer is asking the buyer to pay in cash the **nominal value** of the share. For example, if the **par/nominal value is K1** and the buyer purchases 100 shares he pays K100.

- **Premium issue**

  Here the purchaser is being asked to pay a **higher price than the nominal value** per share. For example, if K1 nominal value shares are issued at K1.50 (or at a premium of K0.50) then the buyer will pay K150 for 100 shares with K50 being the premium paid.

- **Rights issue**

  This is a method of raising **fresh capital from the existing shareholders**. The shares under a rights issue are issued at **less than their current market value** which encourages the shareholder to purchase the rights. For example, an enterprise with an issued share capital of 1 million K1 shares may raise additional capital under a rights issue by making 1 in 10 rights at a price of K2 which is below the current market value.

- **Bonus issue**

  This is normally made when an enterprise has **substantial undistributed Distributable** reserves. A bonus issue **capitalizes these reserves** into shares But **no cash is paid** by the shareholder. For example, a 2 for 1 bonus issue of K1 shares were issued share capital is 1 million shares will capitalize K2m reserves and increase the share capital to K3m.

Note: exact wordings NOT required.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

CA CERTIFICATE IN ACCOUNTANCY

CA 1.2: BUSINESS STATISTICS

WEDNESDAY 16 JUNE 2021

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

INSTRUCTIONS TO CANDIDATES

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

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

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

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

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

6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.
7. All workings must be done in the answer booklet.

8. Present legible and tidy work.

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

10. A mathematical/statistical formulae book MUST be provided. **Request for one if not given by the Invigilators.**

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

SECTION A

Attempt all the ten sub-questions in this Section.

QUESTION ONE (**MULTIPLE CHOICE**)

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 The time t (in seconds) taken by an athlete to run 400 meters on ten successive days were:

53.2, 55.7, 54.2, 52.7, 53.6, 56.8, 54.0, 53.7, 59.3, 53.8

The median time of the athlete is?

A. 53.8

B. 54

C. 53.9

D. 53.75 (2 marks)

1.2 A box contains 8 red balls, 9 green balls and 7 blue balls. The probability that the red ball is selected, is:

A. 0.1250
B. 0.1667
C. 0.3333
D. 0.3750 (2 marks)

1.3 On the scatter diagram of regression analysis, the dependent variable is typically presented on:

A. The horizontal axis
B. The vertical axis
C. The regression line itself
D. Both the vertical and horizontal axis (2 marks)

1.4 A numerical value used as a summary for a sample such as sample mean, is known as a

A. Sample parameter
B. Population parameter
C. Population mean
D. Sample statistics

(2 marks)

1.5 In standard normal distribution, the value of median is:

A. 0
B. 1
C. 2
D. Not fixed (2 marks)

1.6 The following data give the numbers of times 10 persons used their credit cards during the past 3 months: 9, 6, 28, 14, 2, 18, 7, 3, 16, 6. Calculate the standard deviation of this data.

A. 7.20

B. 8.08

C. 8.70

D. 7.07 (2 marks)

1.7 The events A and B are independent and are such that $P(A) = x$, $P(B) = x + 0.2$ and $P(A \cap B) = 0.15$. Find the value of x.

A. -0.5

B. 0.3

C. 0.25

D. 0.4

(2 marks)

1.8 Which is the odd one from the list of statistical data summaries below?

A. Standard deviation
B. Range
C. variance
D. median

(2 marks)

1.9 If Z is a standard normal variate, then $P(-1.64 \leq Z \leq 1.64)$ is equal to

A. 0.99
B. 0.95
C. 0.98
D. 0.90

(2 marks)

1.10 If a value is missing in a time series we can do one of the following:

A. Just copy the previous value
B. Estimate it as an average between two neighboring values
C. Take the overall mean as the best estimate of it
D. Ignore it

(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.

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

(a) The time, X minutes, taken by KASTA fast to install a satellite dish may be assumed to be a normal random variable with mean 120 and standard deviation 25.

Required:

(i) Determine $P(X < 145)$. (3 marks)

(ii) Determine, to one decimal place the time exceeded by 5% of installations.

(4 marks)

(b) The time, Y minutes, taken by MUMA to install a satellite dish may be assumed to be a normal random variable, but with $P(Y < 165) = 0.16011$ and $P(Y > 200) = 0.02$.

Required:

Determine to the nearest minute, the values for the mean and standard deviation Y.

(6 marks)

(c) The pie chart shows information about the money Mrs Mumba spent on petrol (90°), on clothes (45°), on food (201.6°) and on other items (23.4°).

Required:

(i) What fraction of money did she spend on petrol? (1 mark)

(ii) Mrs Mumba spent K1 150 on petrol at the super store.
In total, how much money did she spend? (2 marks)

(iii) How much did she spend on each items? (4 marks)

[Total: 20 Marks]

QUESTION THREE

(a) The Directorate of Town Planning has formed a committee to investigate on the potential implementation of an alternative public transport system. Among other things, the committee is interested in learning about the commuting behaviour of residents in a town, The table below displays the commuting time (in minutes) using a car from home to work for a randomly selected sample of 400 individuals from the town.

Commuting time	Individuals
5 – 10	20
10 – 15	40
15 – 20	60
20 – 25	80
25 – 30	160
30 – 35	40

Required:

Determine:

(i) the mean, (5 marks)

(ii) the standard deviation (4 marks)

(iii) the median (4 marks)

(iv) the mode (4 marks)

(b) From experience, a financial analyst has found that the present value of a risky investment can be approximated by the normal distribution with mean K1000 and standard deviation K200.

Required:

What is the probability that the present value of the investment is:

Less than K 900? (3 marks)

[Total: 20 Marks]

QUESTION FOUR

(a) Suppose stock A has had a mean price of K131.60 per share with a standard deviation of K37.60 and stock B has had a mean price of K211.4 per share with standard deviation of K60.20. Which stock is more volatile? (4 marks)

(b) Chola obtains cash from an ATM (Cash machine). She suspects that the rate at which she spends cash is affected by the amount of cash withdraw at the previous visit to an ATM. She records, for each visit to an ATM, the amount, x, (in kwacha) withdrawn, and the number of hours, y, until her next visit to an ATM.

Withdrawal	1	2	3	4	5	6	7	8	9	10
x	45	15	105	115	125	155	25	95	85	135
y	57	63	196	331	95	271	49	197	215	287

Required:

(i) Draw a scatter diagram of the data. (3 marks)

(ii) Calculate the least square line of y on x and draw it on your scatter diagram. (3 marks)

(iii) Interpret, in context the slope of the least square line. (2 marks)

(iv) Compute the correlation coefficient, r. (4 marks)

(c) From the following data, determine the average owner occupancy rate (percentage) for the three (3) cities.

City	Owner occupancy (Percentage)	Number of housing units (thousands)
X	45.5	1550
Y	65.2	120
Z	72.4	310

(4 marks)

[Total: 20 Marks]

QUESTION FIVE

(a) The study of climate change involves assessment of rain patterns and average daily temperature over a period of years. The information can be analysed using Time series analysis.

Required:

State the four (4) components of a time series? (4 marks)

(b) A survey was conducted to assess the mode of transport people in a township use. The results are shown in the table below:

Mode of transport	male	Female
Walking	10	8
Bike	7	5
Bus	12	15
Taxi	6	10
Private car	10	5

(i) Construct a bar chart for the above data. (3 marks)

(iii) Calculate the percentage of people who use bus as the mode of transport.

(3 marks)

(c) An infrastructure developer is starting on three (3) new projects: project A, project B and project C. The probabilities of completing on time these projects are P(A) = 0.88, P(B) = 0.8

and P(C) = 0.75. Assume that the completion times for the three projects are independent events. What is the probability that:

(i) all three projects will be completed on time? (3 marks)

(ii) at exactly one project will be completed on time? (2 marks)

(d) The data below is the weight distribution of stones in an area:

Weight (KG)	**Frequency (f)**
10 < 20	3
20 < 30	4
30 < 40	2
40 < 50	5

Required:

Calculate the mean weight of the stones. (5 marks)

[Total: 20 Marks]

QUESTION SIX

(a) It has been proved using historical records that one out of every four tax returns will contain errors and are classified as faulty. Given a sample of 10:

(i) Calculate the probability that none are faulty (3 marks)

(ii) Calculate the probability that at least two are faulty (3 marks)

(iii) Calculate the average of tax returns containing errors out of the sample of 10.

. (3 marks)

(b) Below are grades obtained by a sample of X=10 students in a mathematical analysis test.

65	70	40	80	90
55	85	90	30	45

Required:

(i) Calculate the range of the data in the table above. (2 marks)

(ii) Calculate the mean grade (3 marks)

(iii) Calculate the standard deviation of the above data. (4 marks)

(iv) Find the median of the data above (2 marks)

[Total: 20 Marks]

END OF PAPER

CA1.2: BUSINESS STATICS

SUGGESTED SOLUTIONS

SECTION A

SOLUTION ONE

1.1 C

1.2 C

1.3 B

1.4 D

1.5 A

1.6 B

1.7 B

1.8 D

1.9 D

1.10 B

SECTION B

<u>SOLUTION TWO</u> (COMPULSORY)

(a) The mean and standard deviation for the distribution are as follows

$\mu = 120 \quad , \quad \sigma = 25$

(i) $P(X < 145) = P\left(Z < \frac{145-120}{25}\right) = P(Z < 1) = 0.5 + 0.3413 = 0.8413$

(ii) $Z = \frac{X-\mu}{\sigma}; 1.65 = \frac{X-120}{25}; (1.65)(25) = X - 120, X = 161.25$

(b) $Z = \frac{Y-\mu}{\sigma}; -0.99 = \frac{165-\mu}{\sigma}$ equation one for $P(Y < 165) = 0.1611$ and $2.06 = \frac{200-\mu}{\sigma}$, second equation for $P(Y > 200) = 0.02$. we have two equations in two unknowns $\mu \; and \; \sigma$.
Solving the two systems of equations $165 - \mu = -0.99\sigma$ and $200 - \mu = 2.06\sigma$ gives $\mu = 176.36 \; and \; \sigma = 11.4754.$**]**

(c) (i) the required fraction is $\frac{90}{360} = \frac{1}{4}$
(ii) let x be the required amount $\frac{1150}{x} = \frac{90}{360}; 90x = 360(1150), x = \frac{360(1150)}{90} = 4600.$
Hence K4 600.

(iii)

Category	Slice of the pie	Amount
Petrol	25%	K1 150
Clothes	12.5%	K575
Food	56%	K2 576
Other items	6.5%	K299

SOLUTION THREE

a)

i.

Commuting time	Mid-point x	Individuals F	xf	f(x-$\bar{x}$)^2	Cumulative Frequency
5 – 10	7.5	20	150	4805	20
10 – 15	12.5	40	500	4410	60
15 – 20	17.5	60	1050	1815	120
20 – 25	22.5	80	1800	20	200
25 – 30	27.5	160	4400	3240	360
30 – 35	32.5	40	1300	3610	400
Total		400	9200	17900	

Mean = $\frac{\sum xf}{\sum f} = \frac{9200}{400} = 23$

ii. standard deviation **=** $\sqrt{\frac{\sum f(x-\bar{x})^2}{f-1}} = \sqrt{\frac{17900}{400-1}} = 6.7$

iii. the median

$$L_k + w/f_k\left(\frac{f}{2} - cf_{k-1}\right)$$
$$= 20 + \frac{5}{80}\left(\frac{400}{2} - 120\right)$$
$$= 20 + 5$$
$$= 25$$

Type equation here.

iv. the mode

$$l_k + w\left(\frac{f_k - f_{k-1}}{(f_k - f_{k-1}) + (f_k - f_{k+1})}\right)$$
$$25 + 5\left(\frac{160 - 80}{(160 - 80) + (160 - 40)}\right)$$
$$25 + 2 = 27$$

b. normal distribution

ii.

$$Z = \frac{X-1000}{200}$$

$$P\left[\frac{X-1000}{200} < \frac{900-1000}{200}\right]$$
$$= P[Z < -0.5]$$
$$= 0.3085$$

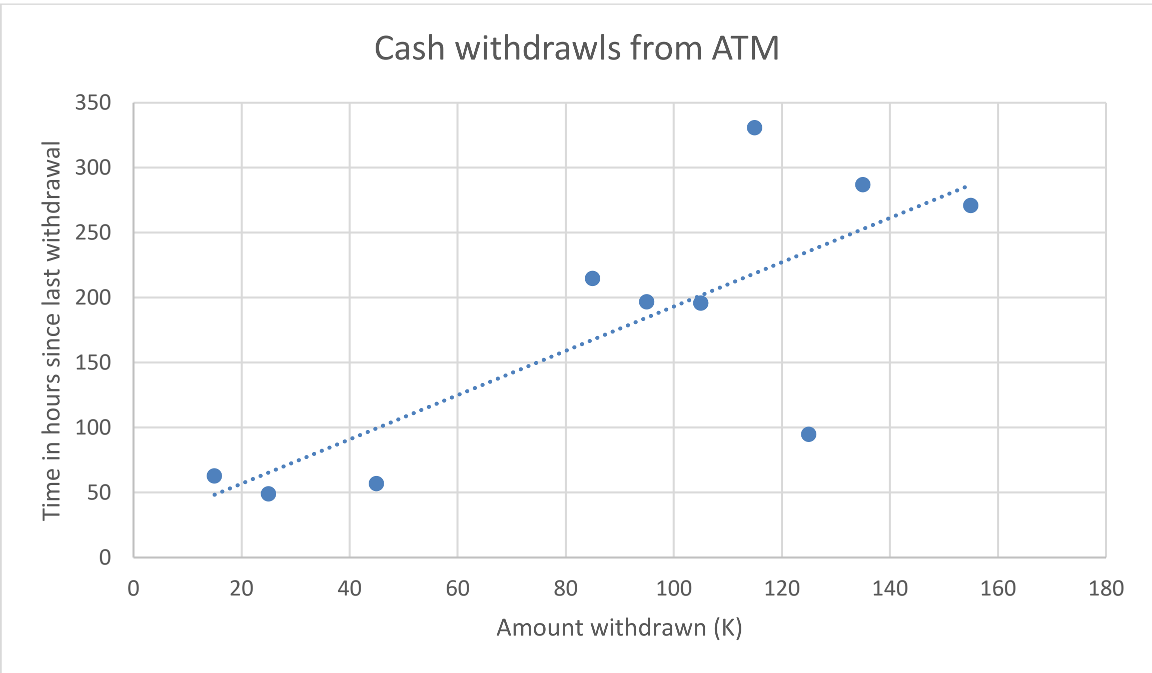
SOLUTION FOUR

(a)

	Stock A	Stock B
Mean (μ)	K131.60	K211.40
Standard deviation (σ)	K 37.60	K 60.20
Coefficient of variation $CV = \frac{\mu}{\sigma} \times 100$	$\frac{37.60}{131.60} \times 100 = 28.57\%$	$\frac{60.20}{211.40} \times 100 = 28.48\%$

Stock A coefficient of variation is slightly larger than that of stock B. Hence Stock A is more volatile than Stock B.

(b) (i)



(ii)

$$\sum x^2 = 101\ 250, \quad \sum x = 900, \quad \sum y^2 = 407465, \sum xy = 192\ 995, \quad \sum y = 1\ 761$$

$$a = 22.744, \quad b = 1.704$$

The required least square line is $\hat{y} = 22.744 + 1.704x$

(iii)

$b = 1.074$ Estimated number of hours per kwacha spent

(iv)

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

$$= \frac{10(192995) - (900)(1761)}{\sqrt{[10(101250) - 900^2][10(407465) - 1761^2]}}$$

$$\boldsymbol{r = 0.78}$$

I

The average occupancy $\bar{x} = \frac{\sum xf}{\sum f} = \frac{45.5(1550)+65.2(120)+72.4\ (310)}{1550+120+310}$

$$= \frac{70525 + 7824 + 22444}{1980}$$

$$= \frac{100793}{1980} = 50.9065556 \approx 50.91$$

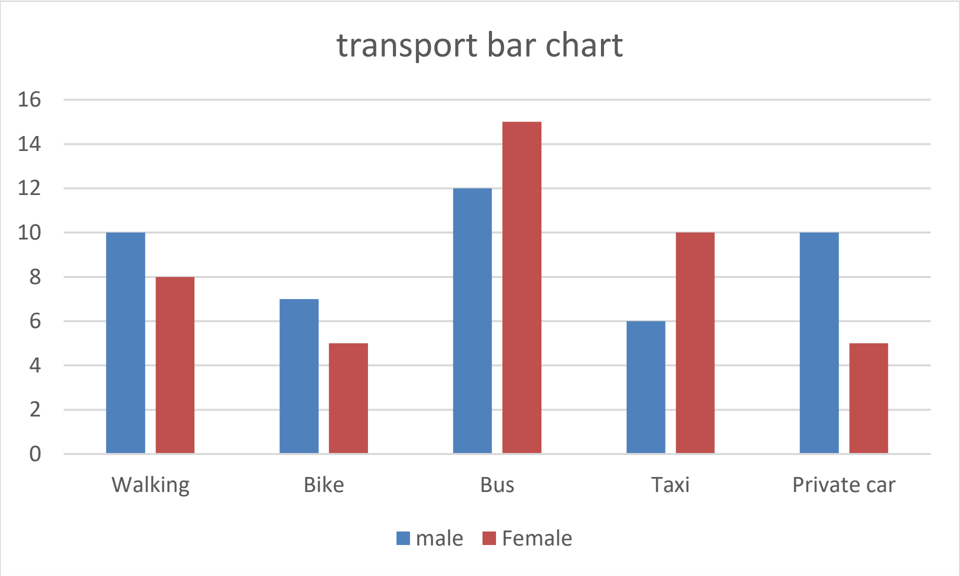
SOLUTION FIVE

a. Components of time series are

- Trend
- Seasonal variation
- Cyclical variation
- Irregular variation

b.

i.



ii. Percentage will be sum of all bu users/ total sample size

$$\frac{\mathbf{27}}{\mathbf{88}} \times \mathbf{100} = \mathbf{30.6\%}$$

C. P(A) = 0.88, P(B) = 0.8 and P(C) = 0.75

i. all three projects will be completed on time

$= P(A)P(B)P(C) = 0.88 \times 0.8 \times 0.75 = 0.528$

ii) at least one project will be completed on time

$$\boldsymbol{P(A)P(\bar{B})P(\bar{C}) + P(\bar{A})P(B)P(\bar{C}) + P(\bar{A})P(\bar{B})P(C)}$$

$$\mathbf{0.88 \times 0.2 \times 0.25 + 0.12 \times 0.8 \times 0.25 + 0.12 \times 0.2 \times 0.75}$$

$$\mathbf{= 0.044 + 0.024 + 0.018 = 0.086}$$

(d)

$$\bar{X} = \frac{\sum Xf}{\sum f}$$

X	F	Fx
15	3	45
25	4	100
35	2	70
45	5	225
120	14	440

$$\bar{X} = \frac{\sum Xf}{\sum f} = \frac{440}{14} = 31.43Kg$$

SOLUTION SIX

a. .

i.) let X is the number of faulty tax returns,

X follows a binomial distribution.

$$probability\ of\ success\ \pi = \frac{1}{4} = 0.25$$

$$probability\ of\ failure = 1 - 0.25 = 0.75$$

$$n = 5$$

$$P(x) = nCx\ \pi^x (1-\pi)^{n-x}$$

$$P(X = 0) = 10C0\ \times\ 0.25^0 \times 0.75^{10}$$
$$= 0.00098$$

ii.) $P(x) = nCx\ \pi^x (1-\pi)^{n-x}$

$$P(X \geq 2) = 1 - P(X < 2)$$
$$= 1 - (P(0) + P(1))$$
$$= 1 - (10C0\ \times\ 0.25^0 \times 0.75^{10} +\ 10C1\ \times\ 0.25^1 \times 0.75^9)$$
$$= 1 - (0.00098 + 0.1877)$$
$$= 0.81132$$

iii.) Average = $n\pi = 10 \times 0.25 = 2.5$

b.

i. The range is 90-30=70

Scores (x)	x^2
65	4225
55	3025
70	4900
85	7225
40	1600
90	8100
80	6400
30	900
90	8100
45	2025

650	46500

ii) Average $= \frac{\sum f}{f} = \frac{\mathbf{650}}{\mathbf{10}} = \mathbf{65}$

iv.) Standard deviation

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

$$s = \sqrt{\frac{46500 - 10(65)^2}{10-1}}$$

$$s = \sqrt{\frac{4250}{9}}$$

V. Median

30, 40,45, 55, 65, 70, 80, 85, 90, 90

Median = $\frac{65+70}{2}$

$= 67.5$

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

CA CERTIFICATE IN ACCOUNTANCY

CA 1.3: BUSINESS ECONOMICS

TUESDAY 15 JUNE 2021

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

INSTRUCTIONS TO CANDIDATES

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

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

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

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

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

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

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

8. Present legible and tidy work.

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

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

SECTION A – (COMPULSORY)

Attempt all Ten (10) multiple choice questions.

<u>QUESTION ONE</u>

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

1.1 An increase in the price of a good will reduce the quantity of it being purchased because…………………………..

A. Supply curves are upward sloping
B. The higher price means that real incomes have risen
C. Consumers will substitute the goods for the one whose price has risen
D. Consumers substitute the goods for the one whose price has fallen

(2 marks)

1.2 If the price of a good declines from K450 to K350, and as a result, the quantity demanded rises from 1200 to 1500, find the price elasticity of demand for the product using the mid-point method.

A. 1.78
B. 0.89
C. 1.13
D. 3.43

(2 marks)

1.3 Which of the following is an example of a negative externality?

A. An increase in the value of land you own when nearby development is completed
B. The costs paid by the company to build an automated factory
C. Decreased property values in a neighborhood where several houses are burglarized
D. The higher price you pay when you buy a heavily advertised product

(2 marks)

1.4 Money is NOT considered to be a factor of production because……………

A. Money is not productive
B. Money is a free gift of nature
C. The terms of trade can be determined using barter system
D. Idle money balances do not earn interest income

(2 marks)

1.5 Which of the following will lead to an increase in the excess reserves of commercial banks?

A. The Bank of Zambia sells bonds to the public
B. The Bank of Zambia sells bonds to the Commercial banks
C. The Bank of Zambia buys bonds from commercial banks
D. The Bank of Zambia increases the discount rate

(2 marks)

1.6 Suppose the Zambian economy is at full employment with high inflation rate. Which combination of government policies is most likely to reduce the inflation rate?

A. Buy government securities in the open market and increase taxes
B. Buy government securities in the open market and decrease taxes
C. Sell government securities in the open market and increase government spending
D. Sell government securities in the open market and decrease government spending

(2 marks)

1.7 Which one of the following best describes the primary use of national Income accounting statistics?

A. To analyze the environmental costs of economic growth
B. To assess the economic efficiency of specific industries in the economy
C. To measure the changes in the value of goods and services produced in an economy
D. To determine whether there is a fair and equitable distribution of income in an economy

(2 marks)

1.8 Which of the following statements about Oligopoly is FALSE?

A. Oligopolistic firms recognize their interdependence
B. Prices in oligopoly are predicted to fluctuate widely and frequently
C. A few firms play an important role in the sale of an identical or differentiated product
D. There is no single predicted pattern of action and reaction for oligopolist firm because one firm's behavior is a function of what its rivals do.

(2 marks)

1.9 Economic systems differ according to which of the following characteristics?

A. Ownership of resources and coordinating of economic activity
B. Quality of output produced and who receives the output
C. Who produces the output and what technology is used to produce it
D. The system of government and the quantity of natural resources available

(2 marks)

1.10 Which one (1) of the following are the same at all levels of output under perfect competition.

A. Marginal Cost and Marginal Revenue
B. Price and Marginal Revenue
C. Price and Marginal Cost
D. All of the above

(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)

Supply and demand are the driving forces behind the market economies globally. Supply and demand analysis is a tool that business managers can use to visualise the 'Big picture'. Many companies fail because their managers get bogged down in the day-to-day decisions of the business without having a clear picture of market trends and changes that take place on the horizon' (The Economist, accessed 24 January, 2020).

Required:

(a) Tiyeseko Limited is a small Zambian firm that has specialised in the production and selling of a maize meal product called 'chibwantu'. Using demand and supply analysis, graphically explain the effect on equilibrium price and quantity on each of the following events:

(i) An increase in the electricity tariffs (4 marks)

(ii) An imposition of an excise duty (4 marks)

(iii) Discovery of low cost technology used in chibwantu production (4 marks)

(iv) Government approval on the nutritional value of chibwantu (4 marks)

(b) Explain any two (2) reasons why demand for a product like table salt is perfectly inelastic. (4 marks)

[Total 20 Marks]

<u>QUESTION THREE</u>

Apart from understanding costs of production, production managers should have knowledge of production efficiency. The following is a single input for a small scale Maize farmer.

Units of land	Units of labour	Total Product	Average product	Marginal Product
	(N)	(TP in Tons)	(AP in Tons)	(MP in tons)
20	0	0		
20	1	16		
20	2	44		
20	3	78		
20	4	113		
20	5	145		
20	6	171		
20	7	190		
20	8	200		
20	9	200		

Required:

(a) Calculate and complete the column for Average product (AP) and Marginal Product (MP) of labour. (10 marks)

(b) Indicate where the highest Average Product is with the corresponding units of labour

(2 marks)

(c) Explain what happens once Marginal product has reached its maximum. (2 marks)

(d) Using the data above, explain the Law of Diminishing Returns. (3 marks)

(e) Explain why the Marginal Cost (MC), the Average Variable Cost (AVC) and the Average Total Cost (ATC) curves are U-shaped? (3 marks)

[Total 20 Marks]

QUESTION FOUR

Money serves as a medium of exchange, a measure of value and a store of value. These functions of money are related to the definition of money in the context of flow of funds. However, when there is too much money in circulation, the above functions cannot be performed by money satisfactorily. Central banks and other economic advisors and users, pay close attention to monetary aggregates namely narrow money and broad money to achieve monetary policy objectives. Every modern monetary economy has a central bank. Zambia's central bank is called the Bank of Zambia whose mission is 'to achieve and maintain price and financial system stability to foster sustainable economic development of Zambia'.

Required:

(a) Explain any three (3) reasons why central banks pay a close attention to monetary aggregates. (6 marks)

(b) Explain any three (3) functions of the Bank of Zambia as provided in the Bank of Zambia Act 2006 and the Banking and Financial Services Act 1994. (6 marks)

(c) Explain how the Bank of Zambia uses each of the following monetary policy tools to reduce liquidity or money supply in the Zambian economy:

(i) Open Market Operations (3 marks)

(ii) Required Reserve Ratio policy (3 marks)

(iii) Discount Rate policy (2 marks)

[Total: 20 Marks]

QUESTION FIVE

The primary objective of a private limited company is to maximise profits. To do this, a firm must consider what quantity to produce given different costs and revenues. However, the firm's revenue depends on the market structure in which the firm operates. The common market structures that a firm may operate in include; perfect competition, monopoly, oligopoly and monopolistic competition.

Required:

(a) Explain any three (3) characteristics of a monopolistic firm. (6 marks)

(b) Using graphs, explain the short run and long run positions of a monopolistic firm.

(10 marks)

(c) Explain why a monopolistic firm may be considered to be wasteful. (4 marks)

[Total: 20 Marks]

QUESTION SIX

The concept of Production Possibility Frontier is very important in Economics in the use of scarce resources in business as an economic model as it illustrates the problems of scarcity, choice and the opportunity cost of society's economic decisions.

The following table shows a combination of maize and Soy beans that can be produced by Green farm in Mazabuka. Assume that maize and Soya beans are substitutes in production. (Let maize be on the x-axis).

Maize (Kgs)	Soy beans (Kgs)
0	1,500
2,000	1,475
4,000	1,400
6,000	1,200
8,000	900
10,000	0

Required:

(a) Graph the production possibility curve for this farm (with Soy beans on the y-axis) (4 marks)

(b) Can this farm produce a combination of 5,000 Kgs of maize and 500 Kgs of Soy beans? What does this combination suggest about the use of this farm? (4 marks)

(c) Can this farm produce a combination of 8,000 Kgs of maize and 1,200 Kgs of Soy beans? (4 marks)

(d) What is the opportunity cost of expanding Soy beans production from 900 Kgs to 1,200 kgs per year, assuming the land is fully utilized? (4 marks)

(e) What happens to the production possibility curve if the land of this farm is increased?

(4 marks)

[Total: 20 Marks]

END OF PAPER

CA1.3: BUSINESS ECONOMICS:

SUGGESTED SOLUTIONS

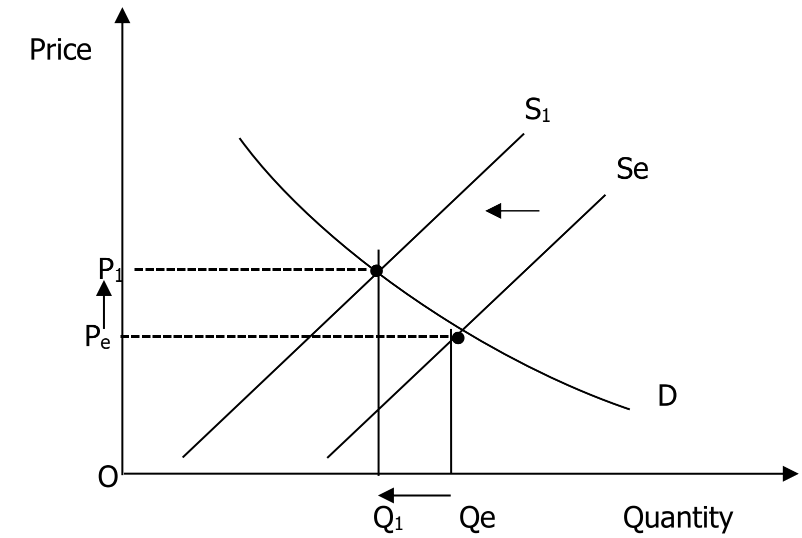
SOLUTION ONE

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

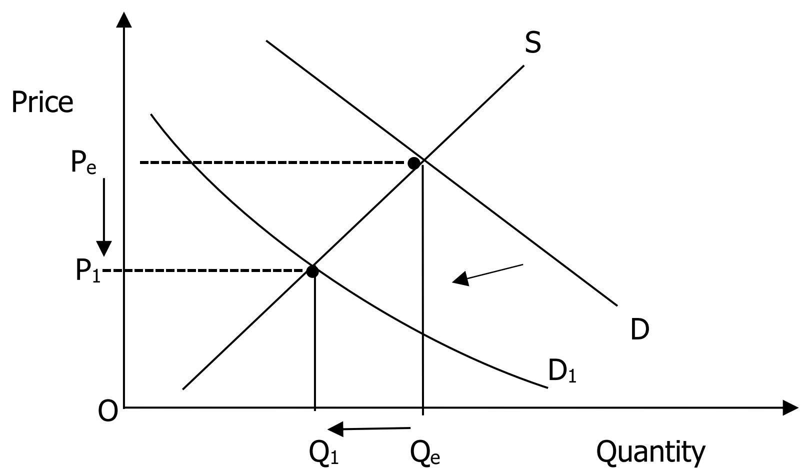
SOLUTION TWO

(a) In the diagram below, the market is initially in equilibrium at (price, output) combination (P_e,Q_e).

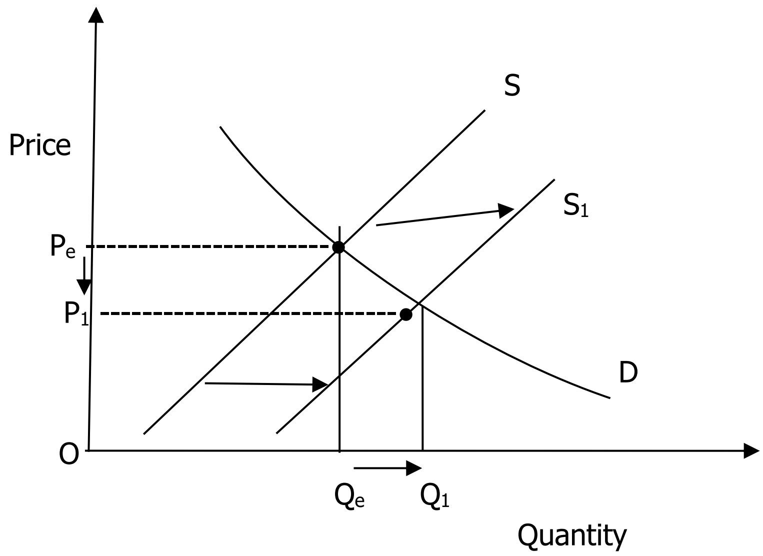
(i) The increase in electricity tariffs will cause the supply curve to shift to the left leading to a new equilibrium with the higher price and lower output combination (P_1, Q_1). This is due to increase in the costs of production.



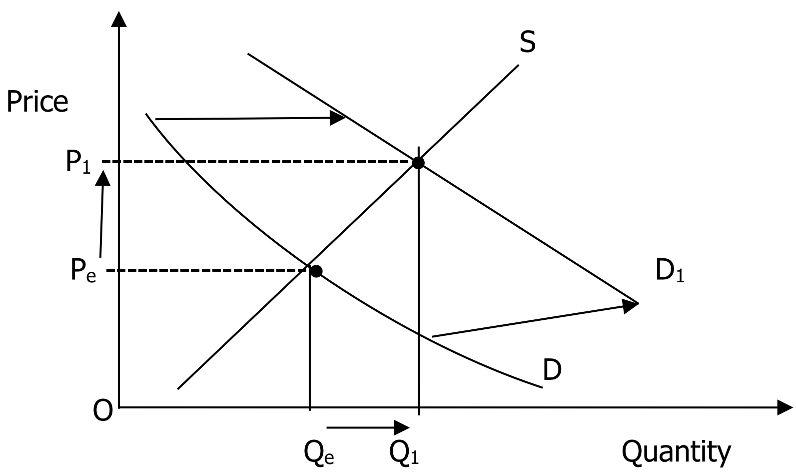
(ii) An excise duty levied will shift the demand curve for chibwantu to the left as it becomes more expensive for buyers. New equilibrium with the lower (price, output) combination (P_1, Q_1)



(iii) The discovery of low cost technology will reduce the costs of producing chibwantu thereby causing the supply curve to shift to the right. New equilibrium is the lower price and higher output combination (P_1, Q_1).



(iv) The government approval of of the nutritional value of chibwantu will encourage its consumption thereby causing the demand curve to shift to the right; more being demanded at each old price. New equilibrium with the higher (price, output) combination (P_1, Q_1)



(b) Demand for table salt is inelastic because:

- There are no good substitutes for salt
- Households spend a very small portion of their total income on salt

Thus, even if the price were to rise substantially, households would reduce their purchases of salt very little.

SOLUTION THREE

(a) The complete table is as shown below:

Units of land	Units of labour	Total Product	Average product	Marginal Product
	(N)	(TP in Tons)	(AP in Tons)	(MP in tons)
20	0	0	**-**	**-**
20	1	16	**16.0**	**16.00**
20	2	44	**22.0**	**28.00**
20	3	78	**26.0**	**34.00**
20	4	113	**28.25**	**35.00**
20	5	145	**29.00**	**32.00**
20	6	171	**28.5**	**26.00**
20	7	190	**27.14**	**19.00**
20	8	200	**25.00**	**10.00**
20	9	200	**22.22**	**00.00**

(b) The highest Average Product is **29** tons reached when **5** units of labour are employed

(c) Once the maximum Marginal Product is reached, it starts to decline.

(d) The Law of Diminishing Returns states that as more of a variable factor are combined with the fixed factor in the production process, then the Marginal Product of the variable factor must eventually decline.

(e) As more variable factors are combined with e fixed factors, at first there will be increasing returns, but eventually diminishing returns will set in. As a result, the MC, AVC, and AC curves first fall but eventually rise, giving them their U shapes.

SOLUTION FOUR

(a) The following are the reasons why central banks pay a close attention to monetary aggregates:

- It is a predictor of likely aggregate demand. This is because if firms and households keep their wealth in money instead of paper assets or other precious assets, it means they are expecting to need it to spend soon.
- It monitors the credit creating activity of banks. If the stock money is rising it suggests that banks are creating more credit. Moderate increases are regarded as signs of a healthy economy but rapid increases are feared because they may lead to rapid price inflation or bank instability.
- An indicator of potential inflation. If the amount of money increases faster than the value of what it can buy (i.e. aggregate supply) the consequence will be a rise in the level of prices.

(b) The following are the functions of the Bank of Zambia:

- To ensure appropriate monetary policy formulation and implementation
- To act as a fiscal agent of the government
- To license, regulate and supervise commercial banks and financial service institutions registered under the Act to ensure a safe and sound financial system
- To manage the banking, currency and payment systems operations of the Bank of Zambia to ensure the provision of efficient and effective service to commercial banks, government and other users.

(c) To reduce money supply, the Bank of Zambia uses the following monetary tools:

(i) Open Market Operations (OMO): This is the buying or selling of government securities or eligible bills by the central bank. To reduce money supply, the central bank sells securities. When banks buy these securities, their capacity to lend and hence create money is reduced. This reduces the money in circulation as money held by the central bank is not counted as part of money supply.

(ii) Required reserve ratio policy: The required reserve ratio is a percentage of the total deposits that every deposit accepting institution must keep with the central bank in order to meet its legal requirement. To reduce money supply, the central bank increase/raises the required reserve ratio. This reduces liquidity and the capacity of banks to lend money.

(iii) Discount Rate policy: This is the interest rate that the central bank charges to commercial banks as a lender of the last resort. To reduce money supply, the central bank increases/raises the discount rate. This makes it costly for banks to borrow. This reduces their lending capacity and in turn money supply.

SOLUTION FIVE

(a) The following are the characteristics of a monopolistically competitive industry:

- **There are a large number of sellers**. From this characteristic of monopolistic competition, it can be eluded that each firm has a comparatively small percentage of the total market, so each has limited control over market price. Additionally, firms are independent and collusion is impossible because of large number of firms.

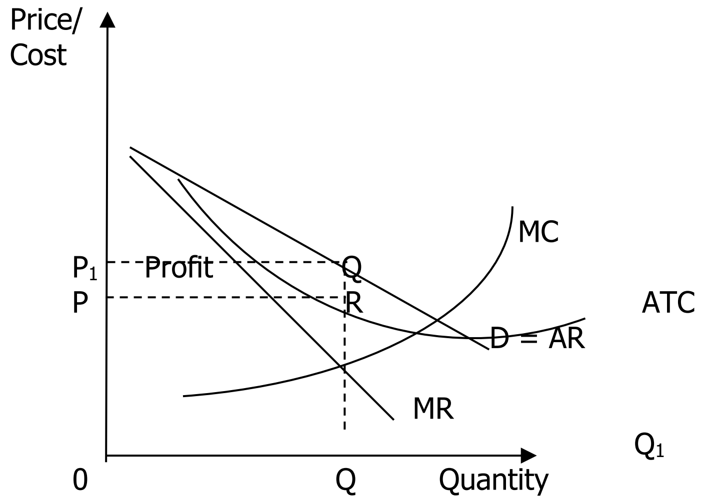
- **The product is differentiated**. While under perfect competition the product is standardized: Monopolistically competitive producers turn out variations of a particular product. Because of product differentiation economic rivalry typically takes the form of non-price competition-competition in terms of product quality, services to consumers, location and accessibility, and advertising. Note that in most cases product differentiation is perceived in the mind of the customer who may for example treat coca cola sold at different places as different products because of accessibility difference.

- **Freedom of entry to, and exist from the industry.** Entry into monopolistically competition industries is relatively easy. The fact that monopolistically competitive producers are typically small, sized firms both absolutely and relatively, suggests that economies of scale and capital requirements are few. However, unlike perfect competition, added financial barriers may result from the need to develop a product different from one's rivals and the obligation to advertise it. Some existing firms may hold patents on their products and copyrights on their brand names and trademarks, enhancing the difficulty and cost of successfully initiating them. Similarly, exist from monopolistically competitive industries is relatively easy. If existing firms are suffering economic losses, there is nothing to hold them, and can exit freely.

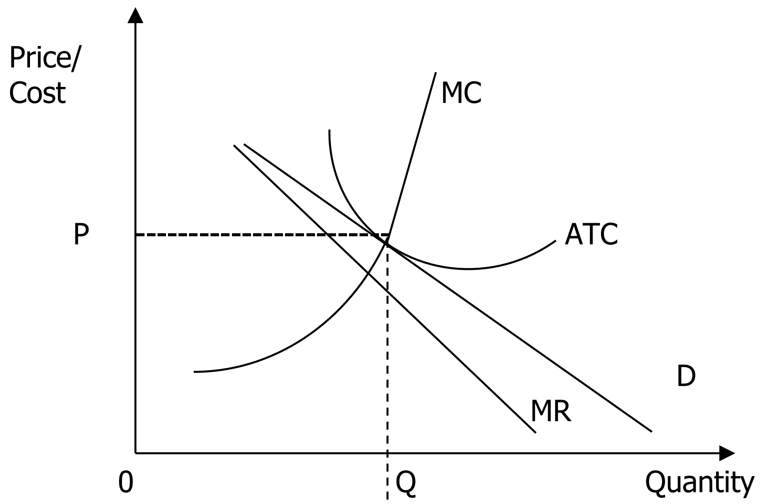
- **Downward sloping demand curve**

(B) The firm will maximize its profits in the short run by producing that output designed by the equality of marginal cost and marginal revenue (that is, MC = MR). Note that the average revenue curve or demand curve crosses the ATC curve.

Profits are shown by the rectangle P_1QRP



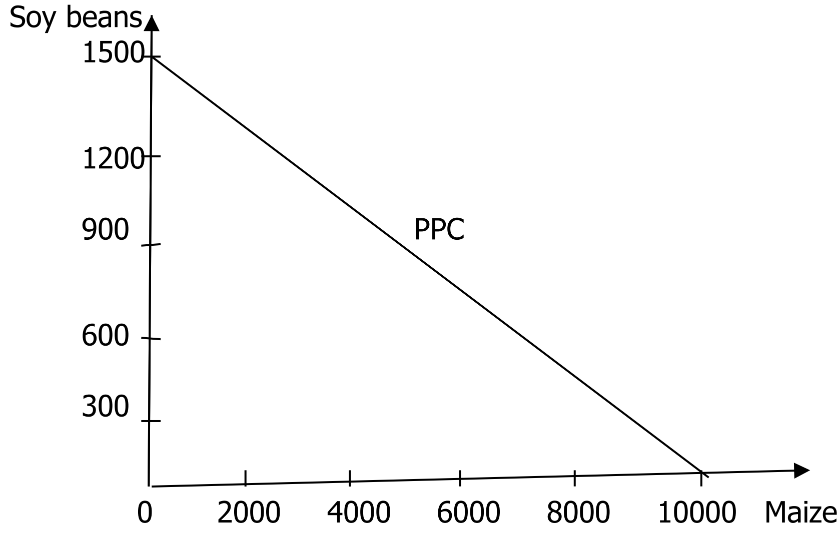
In the long run a monopolistically competitive firm will earn only a normal profit. This is because of the freedom of entry into and exit from, the monopolistically competitive industry. Economic profits attract new firms (rival) and as the number of suppliers increase the demand curve of each seller shifts leftwards and becomes more elastic, and this in turn causes economic profits to disappear. The opposite is true when existing firms in the industry suffer short terms losses, some will leave in the long run. Thus, in the long run, MR =MC = ATC.



(b)

- Like a monopolist, a monopolistically competitive firm fails the allocative efficiency test. The firm charges a price higher that exceeds its marginal cost. This means that the value to the consumers of the product is greater than the cost of producing it.
- Further the quantity of the product available to the customers is always restricted in order to maximize profits at MR = MC and does not produce where average costs are at a minimum.

SOLUTION SIX

(a)


(b) Yes because it is inside the production possibilities curve. It implies that the farm is not fully utilizing its available resources

(c) No. This is because it is outside the production possibilities curve; it requires more resources to produce than what the farm currently has.

(d) The opportunity cost is the second best alternative forgone. To increase Soy beans production from 900 Kgs to 1200 Kgs, maize production will reduce by 2000 Kgs, that is from 8000 Kgs to 6000 Kgs.

(e) If land increases, there will be an outward shift in the production possibilities curve, assuming other variables are constant. More quantities of both maize and soy beans will be produced, all other things being equal.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

CA CERTIFICATE IN ACCOUNTANCY

CA 1.4: COMMERCIAL AND CORPORATE LAW

FRIDAY 18 JUNE 2021

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

INSTRUCTIONS TO CANDIDATES

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

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

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

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

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

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

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

8. Present legible and tidy work.

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

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

SECTION A – (COMPULSORY)

Attempt all Ten (10) multiple choice questions.

QUESTION ONE

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

1.1 Which one of the following is an unincorporated organisation?

A. General partnership

B. Limited liability partnership

C. Public limited company

D. Private limited company

(2 marks)

1.2 After six months in employment an employee is entitled to receive which of the following?

A. A written contract

B. A written statement of particulars

C. A written works handbook

D. A written personnel manual

(2 marks)

1.3 What is meant by the term "specific goods"?

A. Specific goods are goods that are identified and agreed upon at the time a contract of sale is made.

B. Specific goods are goods that have been specifically made to fulfil the buyer's order.

C. Specific goods are goods that have a specific (rather than a general) use.

D. Specific goods are goods that the seller has had to order specifically for the buyer.

(2 marks)

1.4 The maximum number of persons who are legally allowed to operate in a partnership is:

A. 2
B. 20
C. C. There is no limit
D. 100

(2 marks)

1.5 Which one of the following statements about limited liability partnerships (LLPs) is incorrect?

A. An LLP has a legal personality separate from that of its members.
B. The liability of each partner in an LLP is limited.
C. Members of an LLP are taxed as partners.
D. A limited company can convert to an LLP.

(2 marks)

1.6 Sparkle Ltd is a private limited company limited by shares. It has one director. How many directors does the law require it to maintain?

A. One provided it is a different person from the director.
B. Five.
C. Two.
D. One which can be the same person as the director.

(2 marks)

1.7 What case laid down the fundamental test for determining duty of care?

A. Bourhill v Young
B. Donoghue v Stevenson
C. Heaven v Pender
D. Yeun Kun Yeu v Atty-Gen of Hong Kong

(2 marks)

1.8 What is the doctrine of *stare decisis*?

A. A doctrine of statutory interpretation
B. A doctrine of precedent
C. A doctrine of legislative powers
D. A doctrine of Parliamentary sovereignty

(2 marks)

1.9 Regarding the appointment of a receiver, which one of the following statements is **NOT** true?

A. A receiver may be a natural person or a body corporate.

B. A charge-holder can appoint a receiver if the instrument that created the charge states so.

C. The court can appoint a receiver upon an application from a creditor.

D. An undischarged bankrupt cannot normally act as a receiver.

(2 marks)

1.10 Which of the following promises will not constitute valid consideration at common law?

A. C promises to pay the ambulance service ZMW 500 to be on standby with 4 ambulances at the musical festival he is organising. The ambulance service would normally provide 5 ambulances free of charge at special events of that size anyway.

B. A promise by B to pay A ZMW 500 if he will stand in for C and give a character statement in support of B in court (if the judge agrees).

C. B promises not to sue on a contract he has with C if A pays B ZMW 500 as a full and final settlement.

D. A promises to give B a discount of ZMW 500 on the agreed contract price of ZMW 5000 if B gives the money to A the next day. The contractual date for payment is one month later.

(2 marks)

[Total: 20 Marks]

SECTION B

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

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

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

Mr. Ambition and MM are partners in a business that sells hardware and software. The business proves to be extremely successful, and they opened up a number of branches in the local area with the Head office being along Chacha road. In order to limit their liability, they instruct their advocate to incorporate the business, calling their new company 'the Zambazamba Ltd'. Mr. Ambition decides to take on several projects using the company profile before the issuance of certificate of incorporation and share capital. MM also offered a number of consoles and, prior to incorporation, enters into an agreement with Mambala Hardware Ltd to purchase 40 consoles. MM signed the agreement on behalf of 'Zambazamba Ltd and Mr. Ambition as Director.' The certificate of incorporation is issued and, at the first board meeting of the new company, MM and Mr. Ambition ratify both agreements. Shortly after, Mambala Hardware Suppliers Ltd refuse to deliver the consoles due to the fact that the company was non-existent during the time of contracting. Mr. Ambition is concerned that Zambazamba Ltd will also refuse to deliver the goods.

Required:

(a) You have been retained to explain to the parties on whether the contracts above are binding or not. (10 marks)

(b) In the event that the company decides to alter share capital, explain the procedure for the same. (10 marks)

[Total: 20 Marks]

<u>QUESTION THREE</u>

(a) A reduction of share capital diminishes creditor's security. Explain at least any three (3) ways through which a company may reduce capital. (6 marks)

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

(c) A common mistake occurs where even though there is an agreement between the parties, Both are equally mistaken as to the fundamental point.

Such a contract is said to be void. Under common mistake there are two main instances, instances of res extincta and res sua.

Required:

Explain the difference between res extincta and res sua. (10 marks)

[TOTAL: 20 Marks]

QUESTION FOUR

In this global village, the use of technology by companies to advertise their products cannot be underestimated. Caleb saw an advert on ZNS TV for quails and decided to place an order for them. He called the manager to reserve them at K10 as per advert, upon arrival the following day, he found that the cost was actually K35. He is annoyed by this development and intends to sue the company for breach of contract and mileage costs.

Required:

(a) Advise Caleb on the nature of the dispute at hand and the prospect of his success. (10 marks)

(b) Explain any five (5) ways in which an offer can be terminated. (10 marks)

[Total: 20 Marks]

QUESTION FIVE

(a) Daka Shonga a renowned Lusaka business man just attended a seminar on corporate law, of his interest in this workshop was the discussion on directors, limited liability companies and the manner in which a company can increase its share capital. He has been running his unregistered businesses in the country and now is desirous of being called the managing director of his company and also benefit from his workshop experiences. He has come to your office after learning from a colleague that you are a good corporate executive.

Required:

(i) Explain to him the limitations for appointment as a director. (5 marks)

(ii) Explain to Mr. Daka on what he needs to do to increase the share capital of his company. (6 marks)

(iii) Explain to Mr. Daka the concept of limited liability and the circumstances under which the veil of incorporation may be removed. (9 marks)

[Total: 20 Marks]

QUESTION SIX

(a) Distinguish civil law from criminal law (6 marks)

(b) Explain the Golden rule of statutory interpretation (4 marks)

Citing relevant examples, explain the 2 contracts which can bind a minor. (10 marks)

[Total: 20 Marks]

END OF PAPER

CA 1.4: COMMERCIAL AND CORPORATE LAW

SUGGESTED SOLUTIONS

<u>SOLUTION ONE</u>

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

SOLUTION TWO

(a) The above contracts are actually valid. The position of the law is that once pre-incorporation contracts are ratified , they are binding at law. The position is that the promoter stands in a fiduciary relationship with the company he floats. He is neither an agent nor a trustee but the old Kelner v Baxter, [1866], there is no trustee as there is no trust in existence. Erlanger v New Sombrero Phosphate Co.] The promoter may not directly or indirectly make any profit at the expense of the company without the knowledge of the company. If he does so, he will be compelled to account for it. i.e. the company is entitled to any profit that the promoter makes during formation. Promoters should never be allowed to derive gain from the sale of their own property to the company they float unless all material facts are disclosed (no conflict of interest). Where the promoter contracts to sell his own property to the company without disclosing fully, then the company can either repudiate the sale or affirm the contract and recover the profit made by the promoter. [Erlanger v New Sombrero Phosphate Co. [1878] Note: it is not the making of a profit that the law seeks to forbid but any non-disclosure of this profit - see Salomon v Salomon - the profit was disclosed. The law only requires that the promoter make a full disclosure.

The liability of the promoter is imposed by both the Common Law and the Companies Act. It is important to note that the rules under which a promoter will be liable for any secret profit made and for failure to disclose are identical to the rules of the Common Law which impose liability on agents and trustees. The Companies Act makes reference to the liability of a promoter in numerous sections, e.g. S.129 (1) - liability of promoter for misstatements or omissions in the prospectus issued to the public.

(b) A company may, unless its articles provide otherwise, by special resolution alter its share capital as stated in the certificate of share capital by;

- Increasing its share capital by issuing new shares of such an amount as it considers expedient
- Consolidate and divide all of its share capital into shares of larger amounts than its existing shares
- Convert all or any of its paid up shares into stock and re-converting that stock into paid up shares
- Subdividing shares
- Cancelling non allotted shares
- Lodge with the registrar within 30 days' notice of such alteration

SOLUTION THREE

(a) The ways through which a company may reduce share capital are: through the company's purchase of its own shares; assisting purchase of own shares; issuing shares at a discount and returning share capital to shareholders.

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

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

(c) *Res extincta* is a situation where the parties make a contract relating to a subject matter which, unknown to them both, does not exist, or which he has ceased to exist. **Coutirier v Hastie. [1852]**. While *res sua* is where a person buys what already belongs to him. **Cochrane v Willis.**

SOLUTION FOUR

(a) An invitation to treat is at play here and Caleb will not succeed as there was no contract formed herein. By definition, It is inviting people into making an offer. An advertisement or a promotion, display of goods, tenders and auctions are the example of invitation to treat. "Displays of goods with price tags are also usually invitations to treat". This was fortified Fisher V Bell [1961] 1 Q.B 394). Displays and advertisement do not constitute an offer but an invitation to treat. The Difference between the two terms is that an offer is a definite promise to be bound on specific terms, whereas an invitation to treat is only an indication that someone is prepared to receive offers with the view of forming a binding contract

(b) Offers may be terminated in any one of the following ways:

i) Revocation of the offer by the offeror; the offeror can withdraw the offer only if there has been no acceptance
ii) Counteroffer by offeree; a counter offer terminates the initial offer by bringing in new terms of the offer.
iii) Rejection of offer by offeree; the offeree has the right to reject or refuse the offer in itself.
iv) Lapse of time; the offer can be given time within which to accept the offer. Once that offer lapses, the offer cannot be accepted
v) Death: death of the party terminates an offer. However, it is vital to bote who has died i.e. offeror or offeree
vi) disability of either party; where there is disability that makes the performance of the offer difficult
vii) When performance of the contract becomes illegal after the offer is made.

SOLUTION FIVE

(a)

(i) Section 92 of the Companies Act provides for limitations for appointment as a director and these are ;

- If one is under the age of 18 years
- If one is undischarged bankrupt
- If one is disqualified from being a director
- If one is of unsound mind
- If one does not satisfy the qualifications provided for in the company articles.

1*5 marks for any correct answer given=

ii) Mr. Daka may increase his company share capital by doing the following;

- Issuing new shares
- Members paying up issued shares
- Contribution of share premium into the company by any member

iii) Concept of limited liability;

Limited liability is a legal status where a person's financial liability is limited to a fixed amount of money commonly known as the value of one's investment. The member of the company is only liable to the extent of the unpaid shares. Once a company is incorporated, such a company becomes a separate legal entity having capacity to sue and to be sued in its own capacity. When a company is liable, members are not liable, the company owns itself and is liable by itself

Circumstances under which the veil of incorporation may be lifted;

- When a company is involved in fraudulent activities
- Improper conduct-The veil will be lifted to find the interest of the members.
- Tax evasion- if a company is involved in tax evasion, the veil of incorporation will be lifted.

SOLUTION SIX

(a) Distinction between criminal and civil law mainly is determined through two things. Firstly, it is the manner liabilities arise in each and, the other is through the accountability of the offending person or party.

Criminal law liabilities arise as a result of the breaking a particular penal law and it is against the state. In criminal law the punishment of the offender is the main objective. In criminal law the state as accusers bear the burden of proving the guilt of the offender. The standard of proof in criminal law is beyond all reasonable doubt.

Conversely, in civil matters the issue is between individuals. The aggrieved party bears the duty of proving what they allege. The standard of proof in civil matters is on a balance of probabilities. The main objective in civil matters is to compensate the aggrieved party for the loss suffered.

(b) Golden rule of statutory interpretation arise when the literal meaning of an Act would bring about an absurdity. Hence, to avoid the absurdity the court uses the golden rule of interpretation. This rule was applied in Re Sigworth (1935).

(c) The law of contract does not recognize minors as parties to a contract. However, there are instances when exceptions would allow a minor to be party to a contract. The two are instances when a minor would be bound by a contract are:

(i) Contract for the purchase of necessities for the benefit of the minor where the good are essential for the minor. In such a contract which is entirely for the benefit of the minor, the minor is bound.

(ii) the other instance when a minor may be bound by a contract is where, after turning 18 years, they have not done anything to void the contract then such a contract would not be voidable.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

CA CERTIFICATE IN ACCOUNTANCY

CA 1.5: MANAGEMENT THEORY AND PRACTICE

MONDAY 14 JUNE 2021

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

INSTRUCTIONS TO CANDIDATES

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

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

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

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

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

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

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

8. Present legible and tidy work.

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

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

SECTION A

QUESTION ONE

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

Each of the following questions has only one (1) correct answer. Write the letter of the correct answer you have chosen in your answer booklet. Each question is allocated two (2) marks.

1.1 A Sole proprietor business is free from regulation by**:**

A. Zambian Contract Act
B. Government
C. Private Indian
D. Zambian partnership Law

(2 marks)

1.2 Which of the following is NOT a characteristic of bureaucracy identified by Weber?

A. Specialization and division of labor
B. Selection and promotion based on seniority
C. Centralized decision making guided by strict rules and procedures
D. Separation of person and position (authority rests in position, not person)

(2 marks)

1.3 The maximum number of persons who are legally allowed to operate in a partnership is:

A. 20
B. There is no legal limit
C. 2
D. 100

(2 marks)

1.4 A limited company should always have ……………………………………

A. Salesmen and accountants
B. Certificate of incorporation
C. Certificate of Tax imports and exports
D. Certificate of Land title

(2 marks)

1.5 Which of one of the following theorists advocated for better working conditions of employees?

A. Elton Mayo
B. Henri Fayol
C. Fredrick Taylor
D. ZCTU president

(2 marks)

1.6 In organizations, the flow of communication sometimes slows down because there are too many:

A. Horizontal functions
B. Departments
C. Hierarchical levels
D. Senior Managers

(2 marks)

1.7 A director of a limited company may not be liable for wrongful trading if he or she

A. introduced into the balance sheet an asset based on a valuation of its brands sufficient to meet any shortfall
B. brought in some expected sales from next year into the current year
C. increased the valuation of its inventories to cover any potential shortfall
D. took every step to minimize the potential loss to creditors

(2 marks)

1.8 Which one of the following is an example of hygiene factors?

A. Interpersonal relations
B. A sense of achievement
C. Growth in job
D. Responsibility

(2 marks)

1.9 Which of the following clearing defines an internal stakeholder?

A. A person who has common shares in the company
B. A person who was has the same business
C. The government
D. Banks and other financial systems

(2 marks)

1.10 Who argued that individuals have personal goals that they want to satisfy and that these can be satisfied

A. David McClellard
B. Locke and Latham
C. Victor Vroom
D. Frederick Herzberg

(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 - (COMPULSORY QUESTION)

Mali and Chitundu have decided to put their resources together and open up restaurant so that they can serve the community and be able to develop their families. Mali is very excited because she says some problems which she experienced when she worked alone will not be there because she believes in the abilities of her old friend Chitundu.

Required:

(a) What are the benefits of their coming together in business in this manner? (12 marks)

(b) What form should Mali and Chitundu sign to make their business legal? (5 marks)

(c) There is unlimited liability in this business explain. (3 marks)

[Total: 20 Marks]

QUESTION THREE

Alliances and cooperatives are encouraged as a way of helping individuals and organizations to do more than they could individually.

(a) Define an alliance. (2 marks)

(b) Describe the main (8) features of a cooperative. (16 marks)

(c) Define a co-operative. (2 marks)

[Total: 20 Marks]

QUESTION FOUR

The Zambian government has embarked on the 'Go Local Campaign'. During the address of the parliament the Zambian President Dr. Chagwa Lungu called all Zambians to embrace the system of buying locally made products. He mentioned that the COVID-19 must give the citizens a realization of how the economy can be affected when the boarders are closed……

Required:

(a) Define globalization and list four (4) effects of globalization on firms. (10 marks)

(b) State five effects of COVID-19 on the firms both local and global (10 marks)

[Total: 20 Marks]

QUESTION FIVE

(a) Goal setting theory says that people's goals and intentions have an important influence on their behavior. Explain any five characteristics suggested by Locke and Latham that should be in goal setting. (15 marks)

(b) Explain the meaning of this statement about motivation-it is a mental process where by an individual decides how much effort to put into their work. (5 marks)

[Total: 20 Marks]

QUESTION SIX

Working in an organization should not make an employee lose or forget about their personal development needs. It is important that a personal development plan is developed which will link the development needs of the individual to the needs of the organization.

Required:

(a) State five (5) purposes of the personal development plan? (10 marks)

(b) One way of motivating employees is by putting in place a well-structured career development program. Suggest three other ways of motivating employees?(6 marks)

(c) List four (4) characteristics of a career development program? (4 marks)

[Total: 20 Marks]

END OF PAPER

CA 1.5: MANAGEMENT THEORY AND PRACTICE

SUGGESTED SOLUTIONS

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

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

SECTION B

(COMPULSORY QUESTION)

SOLUTION TWO

a) The following are the benefits of their coming together:

- Partnership is easy to set up
- Tasks of management can be shared between partners
- The partners are able to combine their skills knowledge and business contacts.
- Because there are several owners, it should be possible to raise more capital than a sole proprietorship
- There is a better continuity of a business
- A partnership does not require to publish its accounts annually

b) The document is partnership agreement (a partnership Deed).

c) There is unlimited liability in this business explain.

- It means that partners are personally liable for the unpaid debts of the business and are personally liable for debts of the partnership and their personal assets may be at risk.

SOLUTION THREE

a. An alliance is establishment of two or more persons for specific developments or investments and ceases when the development or an investment ceases or can be on an ongoing basis.

b. The following are the main features of a cooperative.
   - Members join by buying shares.
   - Rules are set for all its accounts.
   - They are democratic organizations.
   - The aim is to make profit.
   - They are open organizations and voluntary.
   - Member participates in business.
   - They provide information to members.
   - They interact and cooperate with other business.

c. A cooperative is a business enterprise that is owned collectively by its members and managed for their joint social and economic benefits.

SOLUTION FOUR

a) The following are the effects of globalization on the firms:

i. Relocation- firms need to relocate their operations to reduce costs avoid tariffs and quotas or take advantage of areas of industrial excellence.
ii. Markets new markets may emerge as closed markets such as china opened up or nations become more developed tastes and preference may change.
iii. Competition. Reduced trade barriers and advances in communications greatly increases the competition
iv. Alliances he opportunities for forming alliances or merging / acquiring other firms will also increase for some reasons
v. Economic divisions countries with advanced technology will become more wealth becoming more rich while the poor ones become poorer.

b) The following are the different suggestion for effects of Covid-19

i. Loss of business
ii. Workers die- loss of man power
iii. Retrenchments
iv. Shortage of raw materials
v. Price increase

SOLUTION FIVE

a) The following are the characteristics suggested by Locke and Lathan:
   i. Clarity of goals- employees are motivated by clear goals and appropriate feedback
   ii. Complex goals –specific and difficult goals lead to better performance than simpler or vague goals
   iii. Challenging goals –the more challenging the goal the higher the performance
   iv. Feedback- this is information about actual performance
   v. Involvement- involve the employees in the process to secure commitment
   vi. In order for goals to motivate they should adhere to the following clarity, challenge. Commitment, feedback and task complexity

b) It means that what motivate people will be different from person to person depending on their beliefs and understanding and their psychological status from person to person and the personal decision to do so

SOLUTION SIX

a. The following is the purpose of a personal development plan:
   i. Recognize the experience and knowledge that they have acquired, and monitor their progress the plan should record evidence of achievements, training courses attended and career development
   ii. Take responsibility for their own learning and development
   iii. Define their needs for further training and development in consultation with their boss
   iv. Understand their personal weaknesses, and think about how to improve
   v. Provide evidence of their strengths, so that they can discuss their achievements with their boss.

b. The following can be done:
   i. Providing career progression and development
   ii. High pay
   iii. Workshops
   iv. Training

c. The following are characteristics of a career development program.
   i. It must be clear and transparent. it must be clear to the individuals
   ii. How they might expect to develop their career with the organization
   iii. What path the progress of their career will take
   iv. How far they might expect their career to develop and over what period of time.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

CA CERTIFICATE IN ACCOUNTANCY

CA 1.6: BUSINESS COMMUNICATION

WEDNESDAY 16 JUNE 2021

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

INSTRUCTIONS TO CANDIDATES

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

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

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

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

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

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

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

8. Present legible and tidy work.

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

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

SECTION A – (Compulsory)

Attempt all ten (10) multiple choice questions

QUESTION ONE

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

1.1 RAM cache is:

A. A small amount of fast memory between main memory and the processor
B. Memory reserved for use by the operating system
C. The computer's main random access memory for storing programs and data
D. Memory used by the VDU for storing the screen image.

(2 marks)

1.2 What does the term 'right alignment' mean in Ms Word?

A. It refers to how the text is laid out on the screen
B. It refers to how big the text is
C. It refers to how the spelling checker works
D. It refers to text formatting

(2 marks)

1.3 A suitable method of input for processing credit card applications would be:-

A. Magnetic Ink Character Recognition (MICR)
B. Optical Mark Recognition (OMR)
C. Optical Character Recognition (OCR)
D. Hand-held computer

(2 marks)

1.4 What is the name given to a piece of software for primarily office design and letters.

A. Software
B. Notebook
C. word
D. File server

(2 marks)

1.5 What do you understand by the concept ‘access rights’ ?

A. Read, write and alter
B. Collection of important information in an organization
C. The flow of data and information in an organization
D. Provision of data and information in the memory

(2 marks)

1.6 Which one of the following is **NOT** a physical barrier to communication?

A. Noise
B. Time
C. Status
D. Distance

(2 marks)

1.7 State one (1) factor you need to consider when writing a report.

A. Everything you can remember including the perceptions of any witnesses
B. Both factual and subjective information
C. Anything you think may be relevant
D. All the accurate and factual information

(2 marks)

1.8 Which of the following statement best defines teleconferencing

A. A method in use to connect a small group to a large number of people so that they can talk together.
B. A method in use to connect a large group to a small number of people so that they can talk together.
C. A method in use to connect a large group of people for a meeting.
D. A method in use to connect a small group of people for a meeting.

(2 marks)

1.9 Which of the following statements defines the term conciseness?

A. One should use fewer words to talk about a lot of things
B. Communication must contain all the facts required by the audience
C. One should emphasize on one or very few points at a time
D. One should give accurate information all the time

(2 marks)

1.10 Which of the following charts is useful for showing the relative sizes of the component elements of a total value or amount?

A. Pie chart
B. Line graph
C. Bar chart
D. Gantt chart

(2 marks)

[Total: 20 Marks]

SECTION B

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

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

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

There are several applications and many people have different preferences when it comes to browsing and office use of these packages.

Required:

Explain the differences between each of the items below. You can use examples where necessary.

(a) Custom software and off-the-shelf packages (4 marks)

(b) Application packages and operating systems (4 marks)

(c) Physical security and encryption (4 marks)

(d) Completeness and validity (4 marks)

(e) Data bases and Spreadsheets (4 marks)

[Total: 20 Marks]

<u>QUESTION THREE</u>

Senior Management requires a certain type of information. Information originates from different sources.

In many search engines, you can use symbols and/or what are known as Boolean Operators that help the search engine to understand what it should and should not look for.

Required:

(a) Explain the following symbols:-

(i) Plus sign (+) (2 marks)

(ii) Minus sign (-) (2 marks)

(iii) Quotation marks (") (2 marks)

(b) Tabs are used to space text across the page. There are four (4) types of Tabs, each representing a different type of alignment. List and explain them. (8 marks)

(c) Explain how an Accounting Information System is useful in a business firm. (6 marks)

[Total: 20 Marks]

QUESTION FOUR

Integration of IS systems and the development of a single Information System is the most important feature for the survival and future growth prospects of the organisation.

The current situation, where the company supports up to six (6) different IS systems are deemed appalling by the CEO. Most CEOs believe that the organisation should investigate the possibility of implementing modern technology to overcome some of the business problems inherent in the current.

The internet has transformed traditional business operations into a hypercompetitive electronic marketplace.

Destruction of data can be more costly than the destruction of hardware. A proper fire safety plan is an essential feature of security procedures.

Required:

(a) Compare and contrast the **brick-and-mortar strategy** and the **click-and-mortar strategy.** (10 marks)

(b) List any five (5) techniques that can be used to acquire information. (5 marks)

(c) Explain what the Fire safety risk management can includes or take into consideration? (5 marks)

[Total: 20 Marks]

QUESTION FIVE

In your department (Loan Recovery Department) all the employees have not been paid their salaries for the last two (2) months. They are now planning to hold a demonstration demanding their money. As their supervisor, you want to call for a meeting so that you can address their concerns.

Required:

(a) Write a notice using the memo format, inviting all the members in your department for a meeting. Ensure all the necessary details are provided. (10 marks)

(b) Briefly explain two (2) roles of a notice in an organization. (4 marks)

(c) State three (3) differences between a notice and a memo. (6 marks)

[Total 20 Marks]

QUESTION SIX

Your organization has been making losses because the Zambian Kwacha (ZMW) has been very volatile and keeps depreciating against major world currencies almost on a daily basis. You wish to request your trading partners overseas to start quoting prices in Zambian Kwacha (ZMW) so that you avoid making more losses due to the depreciation of Kwacha. In your request you have decided to use a line graph indicating how the Kwacha has depreciated against world major currencies in the last six (6) months. The figure below indicates the kwacha against major world currencies.

	Month					
	Jul	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
USD/ ZMW	14	13	13	15	16	17
GBP/ ZMW	21	20	19	20	19	19
EUR/ ZMW	24	23	25	23	20	25
CNY/ ZMW	9	10	11	11	10	10

Required:

(a) Using information from the table above, draw a multiple line graph that visually represents the Zambian Kwacha against world major currencies. (8 marks)

(b) Explain the two (2) major differences between a line graph and a bar chart.

(4 marks)

(c) State four (4) advantages of using diagrams to convey messages. (8 marks)

[Total: 20 Marks]

END OF PAPER

CA 1.6: BUSINESS COMMUNICATION

SUGGESTED SOLUTIONS

SOLUTION ONE

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

SOLUTION TWO

(a) - Custom software is the applications created for a particular need. Developers create software based on the user's requirements and specifications.

- Off the shelf packages are predefined software applications created to solve a certain type of problems, e.g. MS Office.

(b) - Application packages are used to solve a particular problem. For example, Ms Word is used to type different types of business letters.

- Operating systems are the basic systems on which application packages run. They control installations and the running of many applications, e.g. Windows 10.

(c) - Physical Security is the safety measures put around computer systems, such as bars and door locks.

- Encryption is the scrambling of data which is in transmission. This data is at risk of access by hackers who may use it for various illegalities, therefore the data is scrambled (encrypted) during transmission and decrypted only when it reaches the output.

(d) - Completeness checks are controls created to ensure records are processed from initiation to completion.

- Validity checks are controls created to ensure only valid data is input or processed.

(e) - Databases are packages which ensure data is stored in an organized and managed pool. This enables easy and quick access.
-Spreadsheets are packages which manipulate data using functions and formulas and create different visual aids such as charts.

SOLUTION THREE

The following symbols:-

(i) **Plus sign (+)** - if you put the + directly in front of a word with no space, this tells the search engine that the word must be present in all pages that are found.

(ii) **Minus sign (-) –** it works in the opposite way to +. If you put a minus sign directly in front of a word the search engine will ignore any documents that contain that word.

(iii) **Quotation marks (") –** to find only pages that contain the word being searched for, you enclose them in quotation marks.

(a) There are four types of Tabs, each representing a different type of alignment. These are as follows:

- **Left Tab** – text jumps to the tab stop and then shows to the right of the tab Stop.
- **Centre Tab** – text centered on this tab stop.
- **Right Tab** – text jumps to the tab stop and then will show to the left of the tab stop.
- **Decimal Tab** – text jumps to the tab stop and then will show to the left of the tab and decimal places are aligned consistently.

(b) How an Accounting Information System is useful in a business firm

- AIS gives accurate data to the managers before making any significant decisions that will either make or break their business.
- AIS is useful in a business firm for the following:-
  - ✓ Collecting and processing of data
  - ✓ Providing important reports to management
  - ✓ Accuracy, complete and timely processing of data done with proper authorization
  - ✓ Security – access to the system and its data is collected and limited only to those authorized.

SOLUTION FOUR

(a) Brick-and-mortar strategy

- Operates solely in the traditional physical markets, shop or business office
- It can operate even with internet or ecommerce
- It focuses on one distinct way of doing business
- It makes customers have a feel or physical touch of product or good being bought
- Always assisted by someone who will explain or illustrate the product to customer or demonstrate on how to use or operate it.

Click-and –mortar strategy

- Operates in the physical location but have added the ecommerce or use of the internet to the business activities
- Transactions occur in both physical and virtual environments
- It fully maximizes commercial opportunities in both domains
- Design and development of complex computing systems are required to support strategy
- Different skills are necessary to support the strategy to be used effectively

(b) Five (5) techniques to acquire information when developing a system

- Interviews
- Questionnaires
- Observation
- Sampling
- Record review

(c) Fire safety includes:

- Site preparation e.g. appropriate building materials, fire doors
- Detection e.g. smoke detectors
- Extinguishing e.g. fire extinguisher, ceiling sprinkler
- Training for staff in observing fire safety procedures, no flammable fluids & no smoking in computer room
- Weather may be a threat, wind, rain and storm can all cause substantial damage to buildings
- Lightning & electrical storms pose an additional threat with power supply, causing power failures one way of the combating this is by the use of Uninterrupted Power

Supply (UPS). This will protect equipment from fluctuations in the supply. Power failure can be protected against by the use of a generator

SOLUTION FIVE

(a)

Mooba Financial Lending Institution

Memorandum

Date : Any date during examination time

To : All staff loan Recovery department

From : The supervisor –Loan recovery

Subjec: Notice for a meeting

Following the delayed payment of salaries and the looming demonstration by all staff members in the Loan Recovery Department, all staff members of the department are requested to attend the meeting that will be held on Friday (any date during exam time) in the boardroom at 14:00hrs.

Take this information as official notification. Your valuable contribution will be appreciated. You are therefore encouraged to attend the meeting.

Signed:

Sender's name

(b)

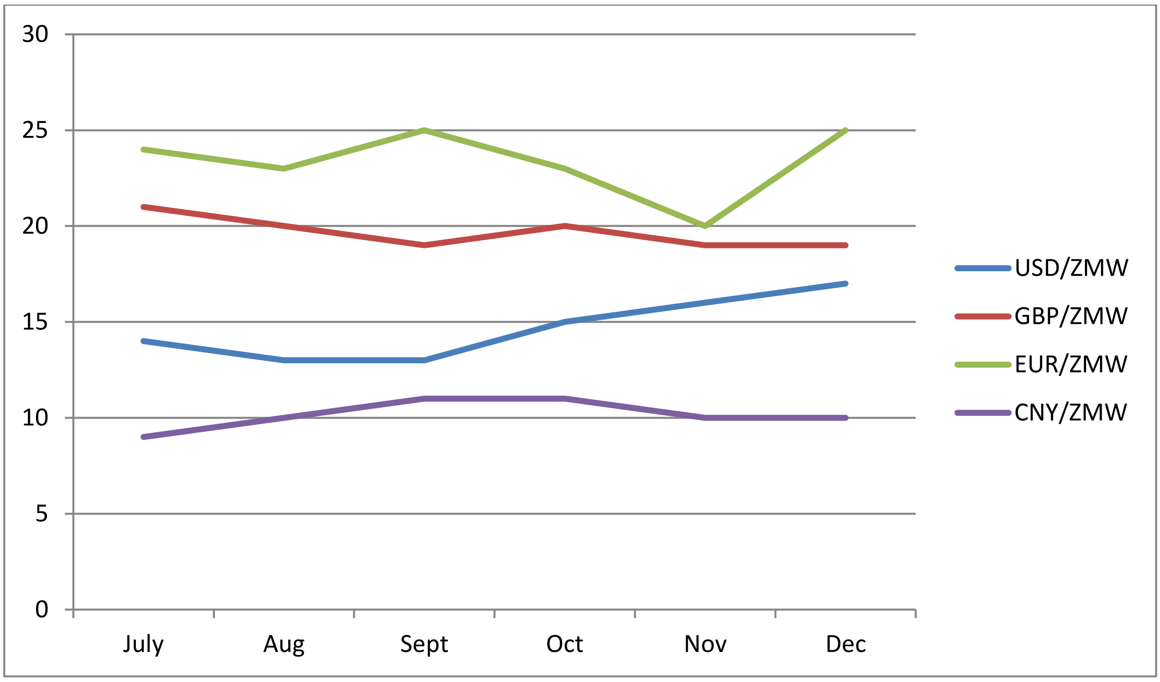
- To announce an upcoming event or meeting.
- To inform target the audience what the event or meeting is all about.
- To inform the target audience when and where the event or meeting will be held.

(c)

- A memo is a circular meant for a specified group of people while notices are meant for open/unrestricted audiences
- A memo informs a person or group of people on something while a notice announces and may request people to take note of/or participate in an upcoming event, occasion or meeting.
- A notice tells people what they should be aware of or expect while a memo gives a record of instructions or results that can be used later.
- A Memo may require feedback, while a notice may not.

SOLUTION SIX

(a)



(b)

- Bar chart use rectangular blocks to represent data whereas line graphs use lines or connected dots.
- Line graphs are useful for showing the relationship between 2 variables whereas bar charts are useful for showing or comparing magnitudes or sizes of item.

(c)

- They can convey large amounts of data
- They add interest and appeal to a document
- They are easier to understand
- Illiterate people can get the message

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

CA APPLICATION ADVANCED DIPLOMA IN ACCOUNTANCY

CA 2.1: FINANCIAL REPORTING

MONDAY 14 JUNE 2021

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

INSTRUCTIONS TO CANDIDATES

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

2. This paper is divided into TWO (2) sections:

   Section A: ONE (1) **Compulsory** scenario question.
   Section B: FOUR (4) Optional scenario questions. Attempt any THREE (3) questions.

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

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

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

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

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

8. Present legible and tidy work.

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

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

SECTION A

This question is compulsory and must be attempted.

QUESTION ONE – (COMPULSORY)

On 1 January 2020, Patricia Plc (Patricia) acquired 80% of the equity share capital of Stephanie Plc (Stephanie). The consideration was satisfied by a share exchange of two shares in Patricia for every three acquired shares in Stephanie. At the date of acquisition, shares in Patricia and Stephanie had a market value of K6.00 and K5.00 each respectively. Patricia will also pay cash consideration of 55 ngwee on 1 January 2021 for each acquired share in Stephanie. Patricia has a cost of capital of 10% per annum. None of the consideration has been recorded by Patricia.

On 1 July 2020, Patricia acquired 30% of Mwenya Plc's (Mwenya), equity for cash consideration amounting to K8.5 million which was settled immediately. The holding in Mwenya gives Patricia significant influence over Mwenya's financial and operating policies. Mwenya Plc has made a profit of K2.4 million during the year to 30 September 2020 and a gain on revaluation of its properties reported in other comprehensive income of K1.2 million.

Below are the summarized draft financial statements of both companies.

Statements of profit or loss and other comprehensive income for the year ended 30 September 2020

	Patricia	Stephanie
	K'000	**K'000**
Revenue (notes (iii) and (iv)	125,200	60,000
Cost of sales	(91,600)	(48,000)
Gross profit	33,600	12,000
Distribution costs	(4,000)	(2,400)
Administrative expenses	(7,000)	(3,600)
Operating profit	22,600	6,000
Investment Income (vii)	12,000	
Finance costs	(400)	-
Profit before tax	34,200	6,000
Income tax expense	(6,200)	(2,000)
Profit for the year	28,000	4,000
Other comprehensive income:		
Gain on revaluation of property (note(i))	3,000	-
Total comprehensive income	31,000	4,000

Statements of financial position as at 30 September 2020

Assets		K'000	K'000
Non-current assets			
Property, plant and equipment	(note(i)	37,400	27,800
Investments (note(ii))		10,500	-
		47,900	27,800
Current assets			
Inventory (note (iii))		8,600	2,400
Trade receivables (note (v))		9,400	5,000
Bank (note(v))		-	600
		18,000	8,000
Total assets		65,900	35,800
Equity and liabilities			
Equity			
Equity shares of K1 each		20,000	18,000
Revaluation surplus (note (i))		4,000	-
Retained earnings		21,100	7,000
		45,100	25,000
Non-current liabilities			
10% loan notes (note (ii))		5,000	2,000
Current liabilities			
Trade payables (note (v))		6,800	7,200
Bank		3,400	-
Current tax payable		5,600	1,600
		15,800	8,800
Total equity and liabilities		65,900	35,800

The following information is relevant:

(i) At the date of acquisition, the fair values of Stephanie's assets and liabilities were equal to their carrying amounts with the exception of Stephanie's property which had a fair value of K8 million above its carrying amount. The property had a remaining useful economic life on 1 January 2020 of 40 years. Depreciation charge on the property is included in cost of sales. Stephanie has not incorporated the fair value property increase into its entity financial statements.

The policy of the Patricia group is to revalue all properties to fair value at each year end. On 30 September 2020, the increase in Patricia's property has already been recorded; however, a further increase of K1.2 million in the value of Stephanie's property since its value at acquisition and 30 September 2020 has not been recorded.

(ii) On 30 September 2020, Patricia acquired an investment in Stephanie's 10% loan notes at a cost of K2 million. This amount has been included within investments in Patricia's non current assets.

(iii) Sales from Stephanie to Patricia throughout the year ended 30 September 2020 had consistently been K600,000 per month. Stephanie made a mark-up on cost of 25% on all these sales. Of the total inventory bought from Stephanie in the post acquisition period, K1.2 million (at cost to Patricia) is still in Patricia's closing inventory at 30 September 2020.

(iv) Sales from Stephanie to Mwenya from 1 July 2020 to 30 September 2020 amounted to K800,000. Stephanie made a mark-up on cost of 25% on all these sales. Mwenya still owns all the inventory it acquired from Stephanie as at 30 September 2020

(v) Stephanie had a trade receivable balance owing from Patricia of K2.4 million as at 30 September 2020. This differed from the equivalent trade payable of Patricia due to a payment by Patricia of K800,000 made in September 2020 which did not clear in Stephanie's bank account until 4 October 2020. Patricia's policy for in transit items timing differences is to adjust the financial statements of the receipient group member.

(vi) Stephanie had a trade receivable balance owing from Mwenya of K200,000 as at 30 September 2020. This amount was the same as that reported by Mwenya as payable to Stephanie.

(vii) Stephanie and Mwenya paid dividends amounting to K6 million and K4 million during September 2020 respectively. Patricia has reported dividends received from its investees within investment income in its statement of profit or loss and other comprehensive income.

(viii) Patricia's policy is to value the non-controlling interest at its share of the fair value of the identifiable net assets of the subsidiary at the date of acquisition (proportionate goodwill method).

(ix) Due to recent adverse publicity concerning one of Stephanie's major product lines, the goodwill which was recognized on the acquisition of Stephanie has been impaired by K1 million as at 30 September 2020. Goodwill impairment should be treated as an administrative expense.

(x) Assume, except where indicated otherwise, that all items of income and expenditure accrue evenly throughout the year.

Required:

(a) Prepare the consolidated statement of profit or loss and other comprehensive income for the Patricia Group for the year ended 30 September 2020. (15 marks)

(b) Prepare the consolidated statement of financial position for Patricia Group as at 30 September 2020. (20 marks)

(c) Patricia is in the process of accounting for the acquisition of another subsidiary, Mumbi Plc (Mumbi), and has identified a number of issues when reviewing the fair values of Mumbi's assets.

One of the issues relates to a legal suit in which Mumbi has been sued by one of its customers for allegedly supplying faulty goods and the customer is claiming damages amounting to K4 million. Mumbi's legal team has advised that, based on precedence, it is very unlikely that the court will award damages to the customer. The fair value of the contingent liability in respect of the claim has been assessed by the directors of Patricia at K1.1 million, based on the very low probability that the customer succeeds. Mumbi has correctly applied IAS 37 Provisions, Contingent Liabilities and Contingent Assets in preparing its financial statements by treating the suit as a contingency.

Required:

State whether (and if so, at what value) the two items should be recognized in the consolidated statement of financial position of Patricia on the acquisition of Mumbi.

(5 marks)

[Total 40 Marks]

SECTION B

There are FOUR (4) questions in this section. Attempt any THREE (3) questions.

QUESTION TWO

The following trial balance relates to Lindaboni as at 31 March 2020:

	K'000	K'000
Investment property	10,000	
Equity shares of K1 each		30,000
Retained earnings – 1 April 2019		8,200
Share premium		5,000
8% loan notes		15,000
Plant and equipment at cost	77,000	
Right-of-use asset	8, 000	
Accumulated depreciation plant and equipment – 1 April 2019		19,000
FVTPL Investments– value at 1 April 2019	6,000	
Inventory at 31 March 2020	11,700	
Trade receivables	10,800	
Bank		1,900
Deferred tax		2,700
Trade payables		8,400
Environmental provision		4,000
Lease liabilities		4,200
Revenue		232,000
Cost of sales	188,300	
Administrative expenses	10,000	
Distribution costs	5,400	
Loan note interest paid	1,200	
Bank interest	300	
Dividends paid	3,900	
Investment income		500
Current tax		400
VAT payable		1,300
	332,600	**332,600**

The following notes are also relevant:

(i) The equity shares and share premium balances in the trial balance above include a fully subscribed 1 for 5 rights issue at K1.60 per share which was made by Lindaboni on 1 October 2019. The market value of Lindaboni's shares was K2.50 on 1 October 2019.

(ii) One of Lindaboni's customers had sued the company before 31 March 2020 for supplying damaged goods. The customer is demanding K4 million for compensation resulting from negligence. The lawyers of Lindaboni have advised that the company is likely to pay K2 million only once judgement is passed by the courts of law.

(iii) The right-of-use asset was acquired on 1 April 2019 under a five-year lease with an initial deposit of K2.3 million and annual payments of K1.5 million on 31 March each year. The present value of the annual payments under the lease at 1 April 2019 was K5.7 million, the lease has an implicit rate of interest of 10%, and the right-of-use plant has been correctly capitalised. The lease liability in the trial balance above represents the initial liability less the first annual payment. The plant had a remaining useful economic life of 8 years at 1 April 2019.

(iv) Included in Plant and equipment is an item of plant which was acquired on 1 April 2019 for cash amounting to K14 million. However, the installation of the plant has caused environmental damage which will have to be rectified when it is dismantled at the end of its five year life. The present value (discounting at 8%) on 1 April 2019 of the rectification is K4 million. The environmental provision has been correctly accounted for, however, no finance cost has yet been charged on the provision.

Depreciation is yet to be charged on plant and equipment. Plant is depreciated at 20% per annum on cost.

(v) The FVTPL investments have a fair value of K6.5 m at 31 March 2021 (after the sale below). They are carried at their fair value as at 1 April 2019. Investment income in the trial balance above includes the profit on the sale of the investment and dividends received during the year.

(vi) A provision for current tax for the year ended 31 March 2020 of K3.5 million is required. The balance on current tax in the trial balance above represents the under/over provision of the tax liability for the year ended 31 March 2019. At 31 March 2020, the tax base of Lindaboni's net assets was K12 million less than their carrying amounts. The income tax rate of Lindaboni is 25%. Any deferred tax adjustment should be reported in the statement of profit or loss.

(vii) One of the owned Plant and equipment was revalued upwards by K2 million for the first time on 31 March 2020. The effects of the revaluation have not yet been reflected in the books on Lindaboni.

(viii) The fair value of investment property at 31 March 2020 was K20 million. Lindaboni uses the IAS 40 Fair Value Model to account for investment properties.

Required:

(a) Prepare the statement of profit or loss and other comprehensive income for Lindaboni for the year ended 31 March 2020. (8 marks)

(b) Prepare the statement of changes in equity for Lindaboni for the year ended 31 March 2020. (4 marks)

(c) Prepare the statement of financial position for Lindaboni as at 31 March 2020. (8 marks)

[Total: 20 Marks]

QUESTION THREE

The following information relates to the draft financial statements of Mizyu Plc.

SUMMARISED STATEMENT OF FINANCIAL POSITION AS AT 31 DECEMBER:

	2021	2020
	K'000	K'000
ASSETS		
Non-current assets		
Property plant and equipment (note (i))	65,200	48,200
Financial asset: equity investments (note (ii))	9,000	14,000
	74,200	62,200
Current assets		
Inventory	20,400	14,400
Trade receivables	7,000	7,400
Bank	-	2,800
	27,400	24,600
Total assets	101,600	86,800
EQUITY AND LIABILITIES		
Equity		
Equity shares of K1 each (note (note iii)	28,000	16,000
Share premium (note (iii))	-	4,000
Revaluation reserve (note (iii))	4,000	7,200
Retained earnings	26,000	20,200
	58,000	47,400
Non-current liabilities:		
Lease obligations	14,000	13,800
Deferred tax	2,600	1,800
Current liabilities:		
Tax	2,000	2,400
Bank overdraft	5,800	-
Provision for product warranties (note (iv))	3,200	8,000
Lease obligation	9,600	4,200
Trade payables	6,400	9,200
Total liabilities	43,600	39,400
Total equity and liabilities	101,600	86,800

SUMMARISED STATEMENT OF PROFIT OR LOSS FOR THE YEAR ENDED 31 DECEMBER:

	2021	2020
	K'000	K'000
Revenue	117,000	82,000
Cost of sales	(93,000)	(60,000)
Gross profit	24,000	22,000
Operating expenses	(17,400)	(9,000)
Investment income (note (ii))	2,200	1,400
Finance cost	(1,000)	(400)
Profit before tax	7,800	14,000
Income tax expense	(1,000)	(3,600)
Profit for the year	6,800	10,400

The following additional information is available:

(i) Property, plant and equipment:

Mizyu has a policy of presenting Right of Use Assets within Property, plant and Equipment. During year ended 31 December 2021, additions to Right of Use Assets amounted to K13.4 million. A property with a carrying amount of K8 million was disposed during the year to 31 December at a price of K16.2 million. Depreciation charge for the year on property, plant and equipment, including amortization of Right of Use Assets amounted K5 million.

(ii) Dividends received from equity financial assets during the year to 31 December 2021 amounted to K400,000. In addition to dividend income, the line for investment income includes gains/losses on remeasurement and on disposal of equity financial assets. Equity financial assets with a carrying amount of K6 million were sold during the year to 31 December 2021. There was no additions to equity financial assets.

(iii) On 1 July 2021 there was a bonus issue of shares that was funded from the share premium and some of the revaluation reserve. This was followed on 30 September 2021 by an issue of shares for cash at par. There were no revaluations of PPE or transfers to retained earnings from the revaluation reserve during the period.

(iv) Product warranty costs are presented within cost of sales.

Required:

Prepare Mizyu Plc's statement of cash flows for the year ended 31 December 2021, in accordance with IAS 7 Statement of cash flows, using the indirect method.

[Total: 20 Marks]

QUESTION FOUR

(a) Twalumba Ltd manufactures and distributes security equipment in Southern province and Lusaka province. Twalumba prepares financial statements to 31 August each year.

On 31 August 2021, the tax liability account in the books of Twalumba Ltd shows a debit balance of K17,500 after full settlement of the current tax for the year to 31 August 2020. The estimated liability for 2021 is K84,500 and no entry has yet been made to record this.

Required:

Explain how the above scenario will affect the financial statements for the year ended 31 August 2021. (3 marks)

(b) Bonilinda acquired a new property (land and buildings) in Kawambwa, on 1 January 2018 for K40 million (including K15 million in respect of the land). The asset was revalued on 31 December 2019 to K43 million (including K16.6 million in respect of the land). The buildings element will be depreciated over a 50-year useful life with a residual value of nil. The useful life and residual value did not subsequently need revision. On 31 December 2020 the property was revalued downwards to a fair value of K35 million as a result of the recession (including K14 million in respect of the land).

The company makes annual transfer from revaluation surplus to retained earnings in respect of excess depreciation, as allowed by IAS 16 Property, Plant and Equipment.

Required:

Calculate the amounts that must be reported in the profit or loss and other comprehensive income in respect of the building for the years ended 31 December 2019 and 31 December 2020. (6 marks)

(c) On 1 August 2020, Lindani Ltd entered into an agreement to acquire a motor vehicle through a lease. The terms of the agreement were that the vehicle would be leased for five (5) years. The lease required a payment of an initial deposit of K19,972 at the inception of the lease and five (5) annual payments of K6,500 in advance, commencing on 1 August 2020. The present value of all lease payments including amounts paid on 1 August 2020 were K48,000 at inception. The interest rate implicit in the lease is 8%.

Required:

Compute amounts that must be reported in financial statements for the year ended 31 July 2021, showing the jourmal entries in respect of the lease and financial statements extracts for the year to ended 31 July 2021. (7 marks)

(d) Twatasha Ltd operates in the media and publications industry and reports under IFRS. The financial statements of Twatasha for the year ended 31 December 2020 are still in draft form. The audit is on-going, and the company intends to authorise the financial statements in April 2021.

Twatasha rents a distribution warehouse in Mwansabombwe, located beside the Luapula River. On 3 January 2021, the River burst its banks due to heavy rainfall and K650,000 of Twatasha's inventory was destroyed by the flood and the bridge was washed away. The inventory was not insured and Twatasha will not receive any compensation for the loss. The company is not sure how to account for this event. The destroyed inventory is included in the inventory figure that is disclosed on Twatasha's draft statement of financial position at 31 December 2020.

Required:

Explain with justification, the appropriate accounting treatment of the above transaction.

(4 marks)

[Total: 20 Marks]

QUESTION FIVE

(a) Mudongo Plc is in the process of drafting financial statements for the year ended 31 December 2020. The company's principle activity is printing of various items including magazines, newspapers and academic manuals etc. During the current year, the number of academic manuals printed declined, probably due to closure of schools, colleges and universities as a result of the COVID 19 (Corona Virus Disease 2019) pandemic. The Directors of Mudongo decided at the board meeting held on 10 December 2020 to stop operating the academic manuals printing division and to sell off related machines as they were specialized.

On 12 December 2020, all academic manuals division staff was notified as well as suppliers of specialized materials through an announcement in the press that was facilitated by Mudongo Plc.'s management.

The Directors wish to show the results of the academic printing division as a discontinued operation for the year ended 31 December 2020.

The following are extracts from Mudongo Plc.'s statement of profit or loss results:

	Magazines Printing	**Newspaper Printing**	**Academic manuals Printing**
	K'000	K'000	K'000
Revenue	240,000	450,000	320,000
Cost of sales	(80,000)	(330,000)	(250,000)
Gross profit	60,000	120,000	70,000
Expenses	(12,000)	(25,000)	(85,000)
Net profit	48,000	95,000	(15,000)

Required:

(i) In accordance with IFRS 5 Noncurrent assets and Discontinued operations, explain the conditions for classifying an asset as 'Held for sale' and discontinued operation in the statement of financial position for the year. (4 marks)

(ii) Evaluate the appropriateness of the directors' wish to show the academic manuals printing division as a discontinued operation at 31 December 2020. (8 marks)

(b) The International Financial Reporting Standards (IFRSs) are developed through an international consultation process called 'the due process', which involves interested individuals and organizations from around the world.

Required:
Describe the IFRS foundation's standard setting process. (8 marks)

[Total: 20 Marks]

END OF PAPER

CA 2.1: FINANCIAL REPORTING

SUGGESTED SOLUTION

SOLUTION ONE

(a)

Consolidated statement of profit or loss and other comprehensive income for the Patricia Group for the year ended 30 September 2020

		K'000	K'000
Revenue	(125200+60000X9/12-600X9)		164,800
Cost of sales	(W1)		(122,590)
Gross profit			42,210
Distribution costs	(4000+2400X9/12)	(5,800)	
Administrative expenses	(7000+3600X9/12+1000)	(10,700)	(16,500)
Operating profit			25,710
Investment income	(12000-80%X6000-30%X4000)		6,000
Finance costs	(400+10%X7200[W1 part (b)]X9/12)		(940)
Share of associate's profit	(2400x3/12-800X25/125)X30%		132
Profit before tax			30,902
Income tax expense	(6200+2000X9/12)		(7,700)
Profit for the year			23,202
Other comprehensive income:			
Revaluation of properties	(3000+1200)		4,200
Share of associate's OCI	1200X3/12X30%		90
Other comprehensive income for the year			4,290
Total comprehensive for the year			27,492
Profit for the year attributable to:			
NCI	(W2)		2,922
Owners of the parent	(W)		20,280
			23,202
Total comprehensive income for the year attributable to:			
NCI	(W2)		3,162
Owners of the parent	(balance)		24,330
			27,492

Workings to the CSPLOCI:

W1.	Cost of sales		K'000
	Given: Patricia		91,600
	Stephanie	9/12X48000	36,000
	Adjustments:		
	Intra group purchases	600X9	(5,400)
	Unrealised profits	25/125X1200	240
	Fair value depreciation	8000/40X9/12	150
			122,590

W2.	Profit and total comprehensive income attributable to NCI		
			K'000
	NCI's share of:		
	- Profit for the 9 months before adjustments (9/12X4000)X20%		3,000
	- Adjustments:		
	FV depreciation	20%X150	(30)
	Unrealised profits made by Stephanie	20%X240	(48)
	Profit for the year attributable to NCI		2,922
	NCI's share of stephani's OCI 1200X20%		240
	Total CI attributable to NCI		3,162

(b)

Patricia Group consolidated statement of financial position for as at 30 September 2020:

		K'000	K'000
Assets			
Non current			
Property plant and equipment	(37400+27800+8000+1200-8000/40X9/12)		74,250
Goodwill	(W1)		57,800
Investment in associate	(8500+132[P/L]+1200X3/12*30%)		8,722
			140,772
Current			
Inventory	(8600+2400-1200X25/125)	10,760	
Trade receivables	(9400+5000-2400)	12,000	
Bank	(600+800)	1,400	24,160
Total assets			164,932
Equity and liabilities			
Equity shares K1 each	(20000+2/3X80%X18000/1)		29,600
Share premium reserve	(2/3X80%X18000/1X[6-1])		48,000
Revaluation reserve	(4000+80%X1200+90[OCI])		5,050

Retained earnings (W2)			21,780
Equity attributable to owners of parent			104,430
NCI (W3)			24,762
Total Equity			129,192
Non current liabilities			
10% loan notes	(5000+2000-2000)		5,000
Current liabilities			
Trade payables	(6800+7200-[2400-800])	12,400	
Bank		3,400	
Current tax	(5600+1600)	7,200	
Deferred consideration	(7200[W1]+10%X7200X9/12)	7,740	30,740
Total equity and liabilities			164,932

Workings to part (b)

W1. Goodwill on acquisition of Stephanie:

		K'000	K'000
Cost of acquisition:			
Issue of shares	2/23X80%X18000/1X6		57,600
Deferred cash	0.55X80%X18000X1.1^-1		7,200
			64,800
NCI at acquisition	80%X30000(equity at acquisition)		24,000
Less equity at acquisition:			
Equity shares		18,000	
Pre acquisition reserves:			
Retained earnings	(7000-9/12X4000)	4,000	
Fv gain on property		8,000	(30,000)
Goodwill at acquisition			58,800
Less impairment loss			(1,000)
Balance at 30.9.20			57,800

W2. Group retained earnings

		K'000
Patricia retained earnings		21,100
Share of post acq. Ret. Earnings of:		
Stephanie	80%(7000-4000)	2,400
Mwenya	30%X2400X3/12	180
Adjustments:		
FV depreciation	150(see W1 part (a))X80%	(120)
URP in inventory:		
Subsidiary	240see W1 part (a))X80%	(192)
Associate	30%X800X25/125	(48)

Goodwill impairment loss		(1,000)
Finance cost on deferred consideration	10%X7200X9/12	(540)
		21,780

W3. Non-Controlling Interests

		K'000
NCI at acquisition	(see goodwill in W1)	24,000
Share of post acq.:		
Retained earnings	20%(7000-4000)	600
Revaluation reserve	20%X1200	240
FV depreciation	150(see W1 part (a))X20%	(30)
URP in inventory made by Subsidiary	240see W1 part (a))X20%	(48)
		24,762

(c)

IFRS 3 Business Combinations requires that all business combinations must be accounted for using the Acquisition Accounting Method. Acquisition accounting requires that the acquirer in a combination must recognize the identifiable assets and liabilities acquired with the acquire entity at their fair values. Any difference between the aggregate of the cost of acquisition and the value of non-controlling on their initial measurement, and the fair value of identifiable net assets acquired must be recognized as consolidation goodwill.

In general, any asset or liability acquired with an entity whose fair value can reliably measure by the directors must be treated as an identifiable asset or liability of the acquired entity and hence recognized as part of the identifiable net assets acquired.

With regard to the contingent liability on acquisition of Mumbi, it must be emphasized in the first instance that the IAS 37 recognition criteria is different from that in IFRS 3. The contingent liability was not recognized by Mumbi in its separate financial statements because according to IAS 37, it is not probable that economic benefits will be transferred. In respect of IFRS 3, it is only enough that the directors can reliably measure the fair value of the contingency for it to be recognized.

The contingency will therefore be recognized as being among the identifiable net assets of Mumbi on its acquisition by Patricia. It will initially be measured at its fair value on date of acquisition of K1.1 million. This will give rise to a fair value loss on liabilities (increasing liabilities) and hence a reduction in the fair value of net assets acquired. The overall effect will be to increase the goodwill on acquisition and a potential increase on post acquisition profits from Mumbi. Any changes in the contingent liability subsequently will be reported in profit or loss.

SOLUTION TWO

(a) Lindaboni – Statement of profit or loss for the year ended 31 March 2020

	K'000
Revenue	232,000
Cost of sales (w (i))	(205,300)
Gross profit	26,700
Distribution costs	(5,400)
Administrative expenses	(10,000)
Finance costs (w (ii))	(2,390)
Provision for compensation	(2,000)
Investment income (w (iii))	11,000
Profit before tax	17,910
Income tax expense (3,500 – 400 + 300 (w (iv))	(3,400)
Profit for the year	14,510
Other comprehensive income	
Revaluation gain	2,000
Total comprehensive income	**16,510**

(b) Lindaboni – Statement of changes in equity for the year ended 31 March 2020

	Share Capital	Share premium	Retained earnings	Reval Reser.	Total equity
	K'000	K'000	K'000	K000	K'000
Balance at 1 April 2019	25,000	2,000	8,200	0	35,600
Rights issue (see below)	5,000	3,000			8,000
Dividends paid			(3,900)		(3,900)
Profit for the year			14,510		2, 000
16,110					
Balance at 31 March 2020	30,000	5,000	18,810	2,000	55,810

Prior to the 1 for 5 rights issue there were 25 million (30,000 x 5/6) shares in issue. Therefore the rights issue was 5 million shares atK1·60 each (K8 million), giving additional share capital of K5 million and share premium of K3 million (5 million x 60ngwees).

(c) Lindaboni – Statement of financial position as at 31 March 2020

Assets	K'000	K'000
Non-current assets		
Investment property		20,000
Property, plant and equipment (77,000 – 19,000 – 15,400 +2,000)		44,600
Right –of –use plant (8,000 -1, 600)		6,400
Investments through profit or loss	6,500	
	77,500	

Current assets		
Inventory	11,700	
Trade receivables	10,800	22,500
Total assets		**100,000**
Equity and liabilities		
Equity (see (b) above)		
Equity shares ofK1 each		30,000
Share premium		5,000
Retained earnings		18,810
Revaluation gain		2,000
		55,810
Non-current liabilities		
8% loan notes	15,000	
Deferred tax (w (iv))	3,000	
Environmental provision (4,000 + 320 (w (ii)))	4,320	
Lease liability (w (v))	3,747	26,067
Current liabilities		
Trade payables	8,400	
VAT payable		1,300
Lease liability (4,770 – 3,747 (w (v)))	1,023	
Provision for compensation		2,000
Bank overdraft	1,900	
Current tax payable	3,500	18,123
Total equity and liabilities		**100,000**

Workings (figures in brackets in K'000)

(i)	**K'000**
Cost of sales (per question)	188,300
Depreciation of plant and equipment (85,000 (77,000 + 8, 000) x 20%)	17,000
	205,300

(ii) Finance costs		
8% loan notes		1,200
lease Liabilities (w (v))	570	
Bank interest	300	
Environmental provision (4,000 x 8%)	320	
	2,390	

(iii) **Investment income**	
Dividends received (500 – 200 profit on sale) BF	300
Profit on sale	200
Gains on fair value on equity investment (6,500 – 6,000)	500
Fair value gain on investment property (20,000 -10, 000)	10,000

	11,000

(iv) Deferred tax

Provision required as at 31 March 2020 (12,000 x 25%)	3,000
Balance at 1 April 2019	(2,700)
Charge to profit or loss	300

(v) Lease Liability

	5,700
Interest at 10% to 31 March 2020	570
Less first annual payment	(1,500)
Liability at 31 March 2020	4,770
Interest at 10% to 31 March 2021	477
Less second annual payment	(1,500)
Liability at 31 March 2021	3,747

Interest charge K570, 000
Non-current Liability K3, 747, 000
Current liability (K4, 770,000 – K3, 747, 000)= k1, 023, 000

(vi) Elimination of suspense account

	K'000
Cash cost of loan note redemption (20,000 x 25%)	5,000
	5,000

SOLUTION THREE

Mizyu plc's statement of cash flows for the year ended 31 December 2021.

		K'000	K'000
Profit before tax			7,800
Finance cost			1,000
Investment income			(2,200)
Gain on disposal of PPE	(16200-8000)		(8,200)
Depreciation			5,000
Increase/decrease in:			
Inventory	(20400-14400)		(6,000)
Trade receivables	(7000-7400)		400
Warranty provisions	(3200-8000)		(4,800)
Trade payables	(6400-9200)		(2,800)
Operating cash flow			(9,800)
Income tax paid	(W1)		(600)
Dividends paid	(W2)		(1,000)
Interest paid	(W)		(1,000)
Net cash flow from operating activities			(12,400)
Net cash flow from investing activities:			
Purchase of PPE	(W4)	(16,600)	
Disposal of PPE		16,200	
Disposal of financial assets	(6000+800[W5])	6,800	
Dividends received		400	
			6,800
Net cash flow from financing activities:			
Issue of shares	(W)	4,800	
Redemption of lease liabilities	(W)	(7,800)	(3,000)
Cash flow changes in cash and cash equivalents			(8,600)
Non cash flow changes in cash and cash equivalents			-
Total changes in cash and cash equivalents			(8,600)
opening cash and cash equivalents			2,800
Closing cash and cash equivalents			5,800

Workings to the SOC:

W1. Income tax paid

Income Tax liabilities a/c		K'000	K'000
Bal b/d;	current tax		2,400
deferred tax		1,800	
Tax charge for the priod:			
- In P/L			1,000
- In OCI			-
			5,200

Tax paid	(balancing amount)		(600)
Bal c/d:	current tax	2,000	
	deferred tax	2,600	4,600

W2. Dividends paid

Retained earnings a/c	K'000
Bal b/d	20,200
Profit for the year	6,800
	27,000
Dividends paid (balance)	(1,000)
Bal c/d	26,000

W3. Interest paid

Interest liabilities a/c	K,000
Bal b/d	0
Finance costs in SPL	1,000
	1,000
Interest paid (balance)	(1,000)
Bal c/d	0

W4. Cash paid to acquire PPE

PPE a/c	K'000
Bal b/d	48,200
Depreciation charge for the year	(5,000)
Non cash additions through ROUA	13,400
Disposals	(8,000)
	48,600
Additions for cash (balance)	16,600
Bal c/d	65,200

W5. Gain/loss on disposal of financial assets

	K'000
Total investment income in SPL	2,200
Less: Dividends received	(400)
Remeasurement gain/loss [9000-(14000-6000)]	(1000)
Gain on disposal of financial assets	800

W6. Issue of shares

			K'000
Share capital a/c			
Bal b/d			16,000
Bonus issue:	share premium reserve		4,000
	Revaluation reserve (7200-4000)		3,200
			23,200
Issue for cash	(balance)		4,800
Bal c/d			28,000

W7. Redemption of lease liabilities

Lease liabilities a/c			K'000
Bal b/d:	current		4,200
	non current		13,800
Additions to ROUA			13,400
			31,400
Cash paid to redeem lease liabilities (balance)			(7,800)
Bal c/d:	current	9,600	
	Non current	14,000	23,600

SOLUTION FOUR

a)

- A debit balance on the tax account (K17, 500) represents under provision of tax for the previous year (2020). This must be added to the income tax charge for the current year.
- This means we must add the under provision to the estimated tax liability for 2021 and treat as income tax expense for 2021. Thus, K102, 000 (K17, 500+ K84, 500) to be recorded as income tax expense for 2021.
- The estimated tax liability of K84, 500 must be reported as current liability in the statement of financial position.

b) **Revaluation of Property plant and equipment**

	Land	Buildings	Total
	K'000	**K'000**	**K'000**
Cost 1 January 2018	15000	25000	40,000
Accumulated Depreciation -1-1-18-31-12-19 (25,000/20yrs x 2 years)	**0**	**(1,000)**	**(1,000)**
Carrying amount 31-12-19	15,000	22,400	39,000
Revaluation gain (balance)	**1,600**	**2,400**	**4,000**
Revaluation amount 31-12-19	16,600	26,400	43,000
Depreciation charge (26,400 /48)		**(550)**	**(550)**
	16,600	25,850	42,450
Revaluation loss (balance)	(2,600)	(4,850)	(7,450)
Revaluation amount 31-12-20	14,000	21,000	35,000

Transfer (excess depreciation) 24,000/48yrs =50
Bonilinda
Statement of Profit or Loss and other Comprehensive income Extract for the years 31st December:

	2020	2019
	K'000	**K'000**
Expenses		
Depreciation Charge	550	500 (25,000/20)
Revaluation loss (7,450-3,950)	3,500	0

Revaluation Surplus	0	4,000
Transfer (2400/48)		(50)
	(3,950)	3,950

Alternative presentation

	Land K'000	Buildings K'000	Rev'n surplus K'000	OCI K'000	P/L K'000
1 January 2018	15,000	25,000			
Dep'n 2018 (25,000/50)		(500)			(500)
Dep'n 2019 (25,000/50)		(500)			(500)
	15,000	24,000			
Rev'n (balance)	1,600	2,400	4,000	4,000	
31 December 2019	16,600	26,400			
Dep'n 2020 (26,400/48)		(550)			(550)
Transfer (2,400/48)			(50)		
	16,600	25,850	3,950		

Other Comprehensive Income					
Rev'n (balance)	(2,600)	(4,850)	(3,950)	(3,950)	(3,500)
31 December 2020	14,000	21,000	-		
2019				**4,000**	**(500)**
2020				**(3,950)**	**(4,050)**

(C)

Workings

Initial recognition & measurement:

The Right of use (ROU) asset is recognized at: K48, 000

The lease obligation is initially recognized at K48, 000 – 19,972 – 6,500) K21,528

Journal:

Dr ROU asset	K48,000	
Cr Lease obligation		K21,528
Cr Cash (upfront payments: 19,972 + 6,500)		K26,472

Subsequent measurement:

Finance cost for year ended 31 July 2021 (21,528 * 8%)	K1,722	
Depreciation of ROU asset (48,000 / 5 years)		K9,600

Journal:

Dr Profit or loss (finance costs)	K1,722	
Cr Lease obligation		K1,722
Dr Profit or loss (depreciation)	K9,600	
Cr Leasehold asset accumulated depreciation)		K9,600
Closing balance on lease obligation	(21,528 + 1,722)	K23,250

Presented as current liability (full payment as it is in advance, due 1 August 2021) K6,500

Presented as non-current liability K16,750

Extracts from financial statements for year ended 31 July 2021:

Statement of Profit or Loss for year ended 31 July 2021:

	K
Operating costs (depreciation)	9,600
Finance costs	1,722

Statement of Financial Position as at 31 July 2021:

		K
Non-current assets:		
ROU	(48,000 – 9,600)	38,400
Non-current liabilities:		
Lease obligation		16,750
Current liabilities:		
Lease obligation		6,500

(d)

- IAS 10 (Events after the Reporting Period) is the applicable accounting standard. IAS 10 outlines that an "event after the reporting period" is an event which occurs between the end of the reporting period and the date that the financial statements are approved.

- The standard differentiates between adjusting and non-adjusting events. Adjusting events provide further evidence on a condition that existed at the reporting date. Adjusting events must be adjusted in the financial statements.

- Non-adjusting events are events that are indicative of conditions that arose after the reporting date. No adjustments are made for non-adjusting events. The flood occurred on the 3rd January 2021. The condition (the flood and damage to the inventory) did not exist at the reporting date of 31st December 2020. Therefore, the event is a non-adjusting event and Twatasha does not have to adjust the 2020 financial statements for the K650,000 inventory loss.

- However, IAS 10, states that if the event is material then the reporting entity must disclose the nature of the event and an estimate of its financial effect. Therefore, as the inventory loss is material, Twatasha would have to make a disclosure describing the nature of the event (a flood affecting a distribution warehouse) and an estimate of the financial effect of the event (K650,000 damage to inventory) in its 2020 financial statements.

SOLUTION FIVE

a) (i) NCAs held for sale 'refers to NCAs of an entity whose carrying amount will be recovered principally through a sale transaction rather than through continuing use.

For this classification to apply, the following conditions must apply:

- The asset must be available for immediate sale
- The sale must be highly probable
- The sale is expected to be completed within one year from the date of classification as 'held for sale'.
- There must be an active program to locate the buyer
- It is unlikely that significant changes to the plan will be made or that the plan will be withdrawn.

(ii) a discontinued operation is a component of an entity that has either been disposed off or is classified as held for sale.
The decision of the directors appears appropriate as the academic manuals printing division is a separate major line of business with distinct incomes and expenses. It has specific resources attributable to the division, e.g staff. Further, the division was closed before the year end and so its income stream is not expected in future years. The interested parties were notified and an announcement made of plans to close prior to closure. To report more reliably to different users of Mudongo Plc.'s performance, the results of academic manuals printing division need to be shown separately below the profit after tax for the year from continuing operations as follows:

Mudongo Plc.'s statement of profit or loss for the year ended 31 December 2020

Profit from continuing operations:

	K'000
Revenue (240,000+ 450,000)	690,000
Cost of sales (180,000+330,000)	(510,000)
Gross profit	180,000
Operating expenses	(37,000)
Operating profit	143,000
Finance costs	(38,000)
Profit before tax	105,000
Income tax	(24,000)
Profit for the year from continuing operations	81,000
Discontinued operation:	
Loss in the period from discont'd operation (W1)	(15,000)
Profit for the year	66,000

Working

1. Loss from discontinued operation

Revenue	320,000
Cost of sales	(250,000)
Gross profit	70,000
Operating expenses	(85,000)
Operating loss	(15,000)

b) 'The 'due process' comprises six stages that are monitored by trustees of IFRS foundation to ensure compliance at various stages. These include:

i) Setting the agenda

By developing high quality IFRSs, the IASB seeks to address a demand for better quality information that is of value to users of financial reports. Therefore, any proposed agenda item must address user needs. This means IASB to consider:

- Relevance and reliability of proposed agenda item
- Existing guidance available
- Quality of proposed IFRS
- Resource constraint

In addition, agenda item is discussed with other standard setters like the IFRS advisory Committee and IFRS Interpretations committee. The IASB approval of agenda items is by simple majority.

ii) Planning the project

IASB decides whether to conduct project alone or with other standard setters. When considering whether to add an item to its active agenda or not, the IASB assesses the issue against criteria such as clarifying, correcting, well defined and sufficiently narrow in scope and completed on a timely basis. The IASB then establishes a working group and project team would be selected. Project manager draws up project plan under supervision of directors of the technical staff.

iii) Developing and publishing the discussion paper

This is not mandatory step though. It includes comprehensive over view of the issue, possible approaches in addressing the issue, preliminary views of its authors or the IASB. It then avails an invitation to comment. Later, project team analyses and summarizes the comment letters for IASB consideration. If IASB decides to explore the issues further, it may seek additional comment and suggestions by conducting field visits, or by arranging public hearings or round table meetings.

iv) Developing and publishing the exposure draft

This is a mandatory step. An exposure draft is IASB's vehicle for consulting the public. It sets out specific proposal in form of proposed IFRS or amendment to it. IASB considers issues on basis of staff research, recommendations and comments received from exposure draft. Draft requires minimum 9 votes once balloted for it to be published for public comment. It requires comment period of 120 days. This period may be reduced to 30 days in times of urgency of the matter. After comment period, the IASB reviews the comment letters received and the results of other consultations. Further comments and suggestions may be solicited through field visits or arranged public hearing. IASB continually consults Advisory Council and maintains contact with it.

v) Developing and publishing the standard

This is done during IASB meetings, when the IASB considers the comments received on the exposure draft.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

CA APPLICATION ADVANCED DIPLOMA IN ACCOUNTANCY

CA 2.2: MANAGEMENT ACCOUNTING

TUESDAY 15 JUNE 2021

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

INSTRUCTIONS TO CANDIDATES

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

2. This paper is divided into TWO (2) sections:

   Section A: One (1) Compulsory scenario question.
   Section B: Four (4) Optional scenario Questions. Attempt any Three (3) questions.

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

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

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

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

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

8. Present legible and tidy work.

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

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

SECTION A

This Question is compulsory and MUST be attempted.

<u>QUESTION ONE</u> – (COMPULSORY)

National Storage Ltd (NSL), was established five (5) years ago and manufactures plastic storage boxes in a range of sizes, supplying large homeware retailers throughout Zedland. To date, a simple traditional absorption costing system has been used to allocate overheads to products. Total production overheads are divided by total machine hours to obtain a rate per machine hour which is then applied to products. Selling prices are calculated by adding a markup of 60% to the product cost.

However, recently NSL, has streamlined its production process so that manufacturing overheads represent the most significant portion of product cost. In an attempt to recognise this situation the management accountant is trying to convince the managing director of NSL to switch to activity based costing (ABC) for overhead allocation. Information relating to the company's most recent financial period and for two of its most popular storage products is shown below.

Budgeted cost information:

Direct wages	K306,250
Purchasing department costs	K106,200
Machine set up costs	K95,500
Quality control costs	K108,400
Machine depreciation	K62,500

Budgeted activity information:

Machine hours	73,125
Labour hours	24,500
Number of inspections	338,750
Number of machine set ups	119,375
Number of purchase orders raised	531,000

Product information:

	Medium 'storeganiser' box	*Large 'storeganiser' box*
Direct materials	K1.05	K1.62
Labour time	2 minutes	2 minutes
Machine time	6 minutes	8 minutes
Number of machine set ups	1	1
Number of purchase orders	2	3
Number of inspections	1	2

During a recent management meeting , the Chief Operations Officer (COO) commented that " NSL spends time and energy developing its strategy but don't seem to realise the importance of preparing budgets". You have been asked to draft a clear and concise note that will be circulated to the management team on the subject of budgeting.

Required:

(a) Calculate the total product cost and selling price for each of the two storage products noted using:
  (i) The costing approach currently used by NSL; (7 marks)
  (ii) Activity based costing (ABC). (11 marks)

(b) Compare and discuss your answers in (a) (i) and (ii) above. (4 marks)

(c) Outline two (2) reasons why NSL may decide NOT to adopt ABC. (3 marks)

(d) (i) Explain the main purposes of budgeting (7 marks)
  (ii) Outline the functional budgets that are typically prepared for a manufacturing company. (8 marks)

[Total: 40 Marks]

SECTION B

There are FOUR (4) questions in this section. Attempt any THREE (3) questions.

QUESTION TWO

Kabompo Ltd (K Ltd) manufactures three products M , N and O. The standard costs per unit and resource requirements for each of these products are detailed below.

Products	**M**	**N**	**O**
	K	K	K
Direct Material:			
• Type A	8	12	7
• Type B	2.68	2.74	1.8
Direct Labour:			
• Grade 1	10.92	15.96	6.72
• Grade 2	9.0	18.0	2.0
Selling price per unit	80	100	40
Sales units	15,600	7,600	16,000

Period fixed costs are K600,000. Grade 1 labour is paid K8.4 per hour and is in short supply. It is expected that only 36,880 hours are available for this grade of labour to meet sales demand.

Required:

(a) Determine the most profitable mix of products M, N and O. (12 marks)

(b) K Ltd has prepared the following budget for the forthcoming period.

Selling price per unit	K5.8
Marginal production cost per unit	K1.7
Fixed production costs	K215,250
Fixed selling distribution and admin costs	K99,075
Total budgeted sales units	95,000 units
Sales commission	2.5% of selling price

Required:

(i) Calculate the margin of safety in units and percentage. (2 marks)

(ii) The sales director pronounced that an increase in the selling price by K0.325 would not affect the number of units sold as long as the sales commission is increased to 4% of the selling price.

Calculate the breakeven point in units (to the nearest whole number) if these changes are implemented. (2 marks)

(c) A process costing system is used in those industries where masses of similar products or services are produced.

Required:

Explain the accounting treatment of normal and abnormal losses. (4 marks)

[Total: 20 Marks]

QUESTION THREE

The following data is an extract from the 2020 management reports of Ndala Ltd, a manufacturing company that makes a single product.

	K per unit
Selling price	50.00
Direct materials cost	12.00
Direct wages cost	4.00
Variable overhead cost	2.50

Fixed production overheads are budgeted at K480,000 per annum. Normal production levels are expected to be 300,000 units per annum.

Budgeted selling and distribution costs are as follows:

Variable	K2.50 per unit sold
Fixed	K90,000 per annum

The following information is applicable for the first six months of 2020:

Period	January to March	April to June
Sales (units)	55,000	70,000
Production (units)	65,000	85,000

There is no opening inventory on 1 January 2020.

Required:

(a) Prepare profit statements for each of the two quarters using:

(i) Marginal costing (6 marks)

(ii) Absorption costing (7 marks)

(b) Prepare a profit reconciliation statement for the quarter ending March 2020. (2 marks)

(c) State and explain briefly the benefits of using absorption costing as a basis of management reporting. (5 marks)

[Total 20 Marks]

QUESTION FOUR

Basatu Investments is a small scale manufacturer based in Kafue. The company has recently decided to adopt a standard costing system in an effort to modernize its operations. The company manufactures two products using the same type of material and labour and for which the following standard information is applicable:

	Keper	Liner
Details of costs/Revenue		
Selling price/per unit	K150	K170
Direct material cost per unit	K45	K54
Direct labour cost per unit	K15	K16
Variable overheads per unit	K10	K10
Budgeted production and sales per year	2,500 units	1,500 units

Additional information:

1. Direct labour hours are expected to be 3 hours and 4 hours per unit for the Keper and Liner, respectively.
2. Direct material usage per unit was expected to be 5kg for the Keper and 6kg for Liner.
3. Fixed production overheads per year are estimated at K75 000.

For the year 2020, the following actual results were reported by Basatu Investments.

	Keper	Liner
Sales	1,800 units	1,600 units
Production	2,400 units	1,600 units
Material usage	18,000 kg	8,500 kg
Material cost	K198,000	K68,000
Labour hours paid	8,000 hours	6,400 hours
Labour cost	K32,000	K19,200

Idle time	5%	0%
Variable overhead cost	K25,000	K16,000

Fixed overhead expenditure was reported at K70,000 for the year.

Required:

Calculate the following variances:

(a) Material price variance for each product. (3 marks)
(b) Material usage variance for each product. (3 marks)
(c) Labour rate variance for product Liner. (2 marks)
(d) Labour efficiency variance for product Keper. (2 marks)
(e) Variable overhead expenditure variance for each product. (2 marks)
(f) Variable overhead efficiency variance for product Keper. (2 marks)
(g) Fixed overhead expenditure variance. (1 marks)
(h) Fixed overhead volume variance. (2 marks)
(i) Sales value for each product if sales price variances of K9,000 (A) and K16,000 (F) were reported for the Keper and Liner, respectively. (3 marks)

[Total: 20 Marks]

QUESTION FIVE

The Ministry of Local Government (MoLG) is one of the key Ministries of the central government in a country in Southern Africa. The MoLG has a management team that is responsible for all the operations of the Ministry in line with the Government agenda and direction. MoLG is responsible for the management of all municipalities, issuance of business licenses, collection of levies including waste management in the country. However, MoLG depends on funding from Central Government as there are no systems to enable the Ministry collect revenue. Therefore, MoLG currently manages the Municipalities and other operations as a service.

MoLG's management accounting is basic with a fixed budget prepared at the beginning of the year based on the previous year adjusted for inflation. The management reporting is based on financial performance in line with the income and expenditure. Usually the MoLG reports zero variance with the actual expenditure equal to budget.

During the current year, the country faced financial challenges resulting in the central Government making budget cuts and providing an economic funding mechanism targeting Ministries and businesses that demonstrate ability to generate revenue, make profit and pay dividends to the central Government. In his speech, the Minister of Finance and National Economic Affairs pointed out that Ministries like MoLG that wait for funding from central government while they own many facilities that can be used to generate revenue will need to demonstrate a business case to get funding. The culture of sitting back waiting for money to spend without innovation and paying suppliers exactly what was budgeted must be reconsidered. Doing the same activities every year at an incremental basis with no income generation to fund such activities shall not be tolerated.

Following the speech by the Minister of Finance and National Economic Affairs, management of MoLG called for an urgent meeting to address a number of matters.

Required:

(a) Explain the weaknesses in the income and costs management approach at MoLG (6 marks)

(b) Explain some changes that management of the MoLG should consider in its approach to management accounting and reporting. (6 marks)

(c) Comment on the statement raised by the Finance and National Economic Affairs Minister of 'paying suppliers the exact amount as budgeted. (4 marks)

(d) State two (2) preventative costs and two replacement costs in labor turnover. (4 marks)

[Total: 20 Marks]

END OF PAPER

SUGGESTED SOLUTIONS

SOLUTION ONE

(a) Total product cost of the two storage products based on

(i) Current costing approach

Product cost and selling price

	Medium 'store organiser'	Large 'store organiser'
	K	K
Direct materials	1.050	1.620
Direct labour (2 mins x K12.50 per hour)	0.417	0.417
Production overhead (6 mins & 8 mins x K5.10)	0.510	0.680
Total product cost	1.977	2.717
Add 60% mark-up on cost	1.186	1.630
Selling price	3.163	4.347

(W1) *Calculation of overhead absorption rate*
Overhead absorption rate per machine hour = Total production overheads ÷ Total machine hours
OAR = K 372,600 / 73,125 machine hours = K 5.10

(W2) *Calculation of direct labour rate per hour*
Direct labour rate per hour = Direct wages / Labour hours
Direct labour rate per hour = K 306,250 / 24,500 = K 12.50

(ii) Activity based costing
Product cost and selling price

	Medium 'store organiser'	Large 'store organiser'
	K	K
Direct materials	1.050	1.620
Direct labour	0.417	0.417
Overheads (W4)	1.605	2.153
Total product cost	3.07	4.19
Add 60% mark-up on cost	1.84	2.51
Selling price	4.91	6.70

(W3) *Calculation of cost per driver*

Activity	Cost driver	Cost	Total drivers	Cost per driver
		K		K
Purchasing costs	Purchase orders raised	106,200	531,000	0.20 /order
Machine set up costs	No of machine set ups	95,500	119,375	0.80/set up
Quality control costs	No of inspections	108,400	338,750	0.32/inspection
Machine depreciation	Machine hours	62,500	73,125	0.85/machine hr

(W4) *Calculation of total overhead cost for each storage product*

	Medium 'store organiser'	Large 'store organiser'
	K	K
Purchasing costs	0.400	0.600
Machine set up costs	0.800	0.800
Quality control costs	0.320	0.640
Machine depreciation	0.085	0.113
Total overhead cost	1.605	2.153

(b) Compare and briefly discuss the answers in (a) (i) and (ii) above

	Medium 'store organiser'	Large 'store organiser'
	K	K
Product cost using current method	1.98	2.72
Product cost using ABC	3.07	4.19
Difference	(1.09)	(1.47)

The current method of allocating overheads under costs both products by K1.09 and K1.47 respectively.
This means that when pricing the products the company is using inaccurate costs and applying a mark-up based on these costs and so will not achieve the desired profit on each product.

	Medium 'store organiser'	Large 'store organiser'
	K	K
Selling price using current method	3.16	4.35
Selling price using ABC	4.91	6.70
Difference	(1.75)	(2.35)

The use of different costing systems results in quite different prices. The prices based on ABC are much higher than the prices obtained from the current absorption costing system. This may have implications for product competitiveness and customer demand. Are the products competitive compared to offerings from other companies? Will customers purchase the product at the revised prices?

(c) Outline TWO reasons why NSL may decide NOT to adopt ABC
Any TWO of the following:

- ABC requires greater understanding of costs and cost drivers which may be time consuming to attain.
- It may not be possible to allocate all overhead costs to specific activities.
- There may be common costs i.e. costs that relate to many cost pools so that it is difficult to allocate them to specific functions.

(i) Main purposes of budgeting
A budget is a quantitative expression of a plan of action prepared in advance of the period to which it relates. Budgets set out the costs and revenues that are expected to be incurred or earned in future periods.

The main purposes of budgeting are as follows:

(i) Planning: Planning for the future in line with the objectives of the organisation.
(ii) Co-ordination: there is better co-ordination of the various functions of the business as managers examine the operations of their departments relative to other departments.
(iii) Communication: the budgeting process requires that all levels of the organisation are informed of long range plans, providing and receiving feedback throughout the budgeting process.
(iv) Motivation: a budget, if it is realistic and prepared with the participation of managers, provides a standard of performance that managers will strive to achieve. However, if a budget is set by higher level managers and imposed on lower level managers it may be resisted and cause dissatisfaction and demotivation.
(v) Control: a budget assists managers in controlling the activities for which they are responsible by allowing them to compare actual performance with expected or budgeted performance. Any significant differences may then be investigated and inefficiencies highlighted for remedial action.
(vi) Performance evaluation: a manager's performance may be evaluated by reference to how well budgeted results are achieved. Budgets thus allow managers to gauge how well they are meeting targets that they have been involved in setting.
(vii) Authorisation – budgets act as a form of authorisation of expenditure.

(ii) The budgets that would be prepared for a manufacturing company
In a manufacturing environment it is likely that the following budgets would be prepared:

(i) Sales budget: this is the starting point as it is based on what the company expects to sell in the year ahead. It is prepared showing sales in units and in value terms.
(ii) Production budget: this budget is prepared in unit terms only and aims to ensure that production is sufficient to cover sales and planned inventory levels for the year ahead.
(iii) Direct materials usage budget: this budget is based on the production budget and shows the materials required to meet budgeted production levels. It is expressed in units and cost terms.
(iv) Direct materials purchase budget: this budget shows the quantity of materials that must be purchased to meet budgeted production levels and planned materials inventory levels. It shows material quantities and costs.
(v) Direct labour budget: this budget is based on the production budget and shows the labour hours required to achieve production levels and also the budgeted cost of that labour.
(vi) Factory overhead budget: comprises fixed and variable factory overheads. Budgeted fixed factory overheads for the year ahead are included as are variable factory overheads based on production levels.
(vii) Selling, distribution and administration budgets: these are prepared by the managers of the respective departments and show the budgeted overhead costs for the year ahead.

(viii) Master budget: when all of the other budgets have been prepared they are then summarised into a Statement of Income and Statement of Financial Position, which gives an overview of the expected performance for the year ahead.

SOLUTION TWO

a) 1. Confirmation of Limiting Factor

Product	Grade 1 Labour hours Per unit	Sales Units	Total hours
M	1.3 hrs	15,600	20,280
N	1.9 hrs	7,600	14,440
O	0.8 hrs	16,000	12,800
	Total hours required		47,520
	Total hours available		36,880
	Shortfall		13,120

There will be a shortfall of 13,120 Grade 1 labour hours. It follows that Grade 1 labour is a limiting factor.

2. Computation of Contribution per LF & Ranking

	M	N	
	K	K	K
Selling prices	80	100	40
Direct Material			
• Type A	(8)	(12)	(7)
• Type B	(2.68)	(2.74)	(1.8)
Direct Labour			
• Grade 1	(10.92)	(15.96)	(6.72)
• Grade 2	(9.0)	(18.0)	(2.0)
Contribution per unit	49.4	51.30	22.48
Direct labour hrs per unit	1.3 hrs	1.9 hrs	0.8hrs
Contribution per Limiting Factor	K38	K27	K28.1
Ranking	1st	3rd	2nd

3. **Optimum Production**

Ranking	Product	Sales Demand (units)	hrs unit	Total hours
1st	M	15,600	1.3 hrs	20,280
2nd	O	16,000	0.8 hrs	12,800

3rd	N	2,000	1.9 hrs	3,800
				36,880

4. **Optimum Profit Plan**

Product	Sales Demand	Contribution per unit	Total Contribution
M	15,600	K49.40	K770,640
N	2,000	K51.30	K102,600
O	16,000	K22.48	K359,680
		Total contribution	K1,232,920
		Less: Fixed costs	(K600,000)
		Net profit	K632,920

b) I) Margin of Safety (MOS)

MOS = Budgeted sales units – breakeven sales units

MOS = $\left(\frac{Budgeted\ Sales - B.E\ Sales}{Budgeted\ sales}\right)$x 100%

B.E.P units = $\frac{Total\ Fixed\ Costs}{Contribution\ per\ unit}$

	K
Selling price	5.8
Marginal Cost	(1.7)
Sales Commission (2.5% x K5.8)	(0.145)
Contribution per unit	3.955

B.E.P = $\frac{K215,250 + K99,075}{K3.955/unit}$

= $\frac{K314,325}{K3.955/units}$

= 79,475 units

MOS (units) = 95,000 – 79,475 = 15,525 units

MOS(%) = $\left(\frac{95,000 - 79,475}{95,000}\right) x100\%$

= 16.3%

ii) Revised Contribution

• Selling price (K5.8 + K0.325)	K6.125	
• Marginal cost		(K1.70)
• Sales Commission (4% x K6.125)		(K0.245)
Revised contribution		K4.18

B.E.P (units) = $\frac{K314,325}{K4.18/units}$ =75,197 units

(c) Accounting treatment of Normal and Abnormal losses.

Normal losses are inherent in the production process and cannot be eliminated: their cost should be borne by good production. This is achieved by dividing the costs incurred for a period by the expected output rather than the actual output. Abnormal losses are avoidable, and the cost of these losses should not be assigned to products but recorded separately as an abnormal loss and written off as a period cost in the profit statement. Scrap losses (if any) resulting from the losses should be allocated to the appropriate process account (for normal losses) and the abnormal loss account (for abnormal losses).

SOLUTION THREE

(a) Profit statements

(i) Marginal costing

	Quarter 1		Quarter 2	
	K'000	K'000	K'000	K'000
Sales		2,750		3,500
Cost of sales:				
Opening inventory			185	
Production	1,202.5		1,572.5	
Closing inventory	(185)			
			(462.5)	
Variable cost of production		(1,017.5)		(1295)
Variable selling and distribution costs		(137.5)		(1,470)
Contribution		1,595		2,030
Less fixed costs		(142.5)		(142.5)
Profit		1452.5		1,887.5

(ii) Absorption costing

	Quarter 1		Quarter 2	
	K'000	K'000	K'000	K'000
Sales		2,750		3,500
Cost of sales:				
Opening inventory	-		201	
Production (20.10 per unit)	1,306.5		1,708.5	
Closing inventory	(201)		(502.5)	
Cost of production		1,105.5	1,407	
(over)/under absorption adj		16.0	(24.0)	
Total cost of production		1,121.5		1,382
Gross profit		1,628.5		2,117
Variable selling and distribution costs		(137.5)		(175)
Fixed selling and distribution costs		(22.5)		(22.5)
Profit (loss) for the quarter		1,468.5		1,919.5

(b) Reconciliation statement between marginal and absorption costing

	K'000
Profit under marginal costing	1,452.50
Production overheads absorbed into closing inventory(1.6/unit)	16.00
Profit under absorption costing	1,468.50

(c) Benefits of using absorption costing

-Absorption costing avoids fictitious losses being reported by allowing for the under or over- absorption adjustments.

-Absorption costing does not underestimate the importance of fixed costs.

-Absorption costing enables internal profit measurement to be consistent with external reporting.

-Absorption costing recognizes the fact that fixed costs are essential to production.

SOLUTION FOUR

(a)

Material price variance:

Keper: Standard cost (2,400 units × K45) = K108,000
Actual cost = K198,000
K90,000 (A)

Liner: Standard cost (1,600 units × K54) = K86,400
Actual cost =K 68,000
K18,400 (F)

(b)

Materials usage variance:

Keper: Standard usage (2,400 units × 5kg) = 12,000kg
Actual usage = 18,000kg
6,000kg(A)
× K9.00 = **K54,000 (A)**

Liner: Standard usage (1,600 units × 6kg) = 9,600 kg
Actual usage = 8,500 kg
1,100 kg (F)
× K 9.00 = **K9,900 (F)**

(c)

Labour rate variance: Liner

Standard rate: K4.00 per hour
Actual rate: K3 .00 per hour
Variance K 1.00 per hour × 6400 hrs = **K6,400 (F)**

(d)

Labour efficiency variance: Keper

Standard hrs for actual output (2,400 units × 3 hrs/unit) = 7,200 hrs
Actual hrs for actual output (8000 hrs × 95%) = 7,600 hrs
400 hrs ×K 5 = **K2,000 (A)**.

(e)

Variable overhead expenditure variance

Keper: Standard variable cost (2400 units × K10) = K24,000
Actual variable cost = K25,000
K 1,000(A)

Liner: Standard variable cost(1600 units × K10) = K16,000
Actual variable cost = K16,000
K 0 Variance

(f)

Variable overhead efficiency variance: Keper

Standard hours for actual output(2400 units × 3 = 7,200 hrs
Actual hours = 7,600 hrs
Variance in hours = 400 (A) ×K3.33/hr = **K1,332(A).**

(g)

Fixed overhead expenditure variance

Budgeted fixed overhead expenditure	= K75,000
Actual fixed overhead expenditure	= K70,000
Variance	= **K5,000 (F)**

(h)

Fixed overhead volume variance

	Keper	Liner
Budgeted volume	2,500	1,500
Actual volume	2,400	1,600
Variance (units)	100(A)	100(F)
Valued at FOAR	K18.75/unit	K18.75/unit
Variance	**K1,875 (A)**	**K1,875(F)**

(i) Sales value

	Keper	Liner
Sales price variance	K9,000 (A)	K16,000(F)
Actual sales(units)	1800	1600
Variance per unit	K5 (A)	K10 (F)
Budgeted price per unit	K150	K170
Actual price therefore	K145	K180
Value of total sales	**K261,000**	**K288,000**

SOLUTION FIVE

Part (a)

The current approach to the income generation capacity of the MoLG is not aggressive. Despite the MoLG having several sources of revenue, management has been depending on funding from the central government. MoLG has no basic systems and capacity to collect revenue from the many sources such as levies, waste management and issuance of licences indicates management's luck of a "profit drive"

MoLG has been undertaking the same activity ever year incurring the same costs on an incremental basis. The management of MoLG has no drive to reduce costs or a culture of cost savings. Incremental budgeting builds inefficiency in the budget and costs coupled with the current culture of spending what is in the budget with no regard to cost saving or whether there is need to spend on that activity.

Part (b)

Management of MoLG should introduce revenue generation systems and take advantage of the several revenue lines to maximise revenue collection. A more aggressive cost management approach needs to considered such as 'zero based' budgeting where costs are justified for inclusion in the budget. A cost control and reduction culture should be introduced from top to bottom and be part of performance management. A more detailed variance analysis including planning and operational variances should be introduced to provide explanations to variances amidst an uncertain environment.

Changes in the reporting systems to include reports on non-financial performance indicators such as customer satisfaction, new revenue lines introduced etc. if the MoLG is to remain relevant and competitive.

Finally management of MoLG needs to change its approach to a profit maximisation view of the business in line with the aspirations of the stakeholders.

Part (c)

Budget figures are usually estimates and indicative in nature, therefore actuals could be less or more than budget. Where the exact amount as budgeted is incurred for all expenditures, ethical considerations could arise. For example if the quoted amount by a supplier is less than the budgeted amount and management pays in accordance with the budget means the company is spending more where less could have been spent. In this case, management would have acted in a way that does not safe guard the interest of the company and stakeholders.

Part (d) <u>Preventative Costs</u>

- Costs of personal administration
- Medical services provision, e.g. check-ups, nursing staff
- Welfare costs, e.g. sports facilities, canteen
- Pension scheme costs
- Training and career development/progression costs

<u>Replacement Costs</u>

- Costs of selection and placement
- Employee induction costs
- Inefficiency of new labour
- Costs of tools and machine breakages
- Increased wastage and spoilage due to lack of expertise among new staff

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

CA APPLICATION ADVANCED DIPLOMA IN ACCOUNTANCY

CA 2.3: AUDITING PRINCIPLES AND PRACTICE

THURSDAY 17 JUNE 2021

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

INSTRUCTIONS TO CANDIDATES

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

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

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

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

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

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

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

8. Present legible and tidy work.

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

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

SECTION A

This question is compulsory and must be attempted.

QUESTION ONE

Quality Paints Manufacturers Ltd is a paint manufacturing company with a plant in Lusaka. The company has been in existed for the past twenty (20) years and has been using the same equipment which is old resulting in frequent breakdowns and high running costs. The old equipment resulted in the drop in the quality of products resulting in many customer complaints and returns of products. Quality Paints Manufacturers Ltd. is subject to regulations on the safety of employees which require that all staff should undergo medical examinations annually for early detection of diseases that may arise form handling toxic substances. The company has not carried out these routine medical examinations in the last two (2) years and the penalties could include withdrawal of the operating license.

In the last one (1) year, the company experienced increased production costs arising from the depreciation of the local currency affecting the cost of imports of raw materials. This has been compounded by an influx of cheap imported paints from China arising from a recent legislation lifting the ban on importation of paints. The influx of cheap imported products resulted in the company losing a 20% market share forcing the company to reduce its selling prices on a range of goods.

You work for Kimberly Chartered Accountants, the auditors of Quality Paints Manufacturers Ltd. as Audit Manager. You are planning the audit of the financial statements for the year ended 31 December 2020. You wish to assign one of the Audit Assistants on this audit the work on inventory.

The following information relates to the inventory control for Quality Paints Manufacturers Ltd.:

The company has a stores department which is responsible for the storage of raw materials, supplies for use in maintaining equipment and finished products. Miti is the Stores Manager and he has a complement of five (5) staff under him.

Procedure on receipt of goods:
When stores and finished goods are received in stores a Goods Received Note (GRN) is raised as evidence of receipt. A copy is sent to the Management Accountant for use in updating the relevant stock ledger account. There is no policy requiring that all receipts of goods should be checked for quality and quantity.

Stock records maintained:
The only record for supplies and other materials purchased is a manual stock card maintained in stores. This shows details of receipt of supplies received and issued and a running balance of inventory on hand.

Issue of supplies:
Issues of materials for use in manufacturing are on the basis of stores requisitions raised by the user departments. Stores department raise Stores Issue Notes which form the basis for updating the stock card and for the Management Accountant to pass an entry in the relevant general ledger account. The Stores Issue Note is approved by the Stores Manager but it does not require to be signed by the recipient of the supplies.

Inventory count:

The determination of closing inventory is done at the end of the year when a physical inventory count is conducted under the supervision of Miti. He prepares the inventory count sheets and at the end of the count he makes adjustments to agree the book stock quantity to the physical count. Any differences are advised to the Management Accountant who passes an adjustment to the inventory account in the general ledger.

In some cases, customers pay for goods and do not collect the goods until a later date. Finished products have a two (2) year shelf life after which it loses potency and cannot be sold to customers. Such inventory is sold at below cost in order to recover something.

You have been provided with a copy of the inventory count instructions that will be used for the physical inventory count.

Required:

(a) (i) Identify and explain five (5) business risks in Quality Paints Manufacturers Ltd. (10 marks)

(ii) Explain the possible impact on the financial statements for each of the business risks in (a) above. (5 marks)

(b) Identify and explain four (4) internal control deficiencies in the inventory system of Quality Paints Manufacturers Ltd. and suggest suitable improvements to the weaknesses identified. (8 marks)

(c) Describe six (6) suitable inventory count instructions that you expect to find in the inventory count instruction prepared by management of Quality Paints Manufacturers Ltd. (9 marks)

(d) Explain four (4) audit procedures, other than the inventory count, to be performed on the inventory value in the draft financial statements of Quality Paints Manufacturers Ltd. (8 marks)

[Total: 40 Marks]

SECTION B

There are FOUR (4) questions in this section. Attempt any THREE (3) questions.

QUESTION TWO

(a) Able has been running business as sole trader for five (5) years. The business is profitable and Able has identified new business opportunities and he would like to venture into these. Able needs additional capital if he is to venture into these new prospects but he does not wish to borrow funds from the bank because of prohibitive borrowing costs.

He approached his longtime friend, James, for short term financing. James got interested in the new venture that Able wanted to get into. He informed Able that he had just been paid his gratuity amounting to K580,000 at the end of his contract with his employer.

The contract of James with his employer was renewed and he agreed to advance Able the sum of K150,000 on condition that this is treated as his contribution towards the capital required to venture into the new prospects.

They agreed to form a partnership and agreed on the profit sharing ratios and that James would not be involved in the running of the business. They agreed that Able should be paid a salary for his involvement in running the business. The partners agreed that the partnership employs an Accountant who will be responsible for the preparation of the financial statements. James is concerned that his investment might not be well managed and that he risks losing all his investment.

Required:

(i) Explain the principle of accountability and stewardship using the information in the scenario. (2 marks)

(ii) Explain how an independent audit of the financial statements of the partnership will give assurance to James who is not involved in running the business. (4 marks)

(b) You are the Audit Senior in your firm of chartered accountants. You were assigned the audits of financial statements for four (4) of your firm's audit clients all with the year end 31 December 2020.

All the four (4) audits are at the review and conclusion stages. You wish to perform audit procedures on subsequent events in line with the provisions of ISA 560 *Subsequent events.*

The following information relates to the four (4) clients:

Western Ltd:
The company was sued by the former Chief Executive Officer for wrongful dismissal before the expiry of his contract. He is claiming an amount of K1.5 million in damages. After consultations with the in-house lawyers, the company made a provision in the financial statements of K560,000. This case was still active in court at the period end.

A few days before signing the audit report, the case was concluded and Western Ltd was found guilty of having wrongly dismissed the former Chief Executive Officer and the court determined that the company pays K910,000 in compensation and also meets the legal fees of the Chief Executive Officer amounting to K200,000.

Eastern Ltd:
The company intends to declare a dividend of K10 per share at the next annual General Meeting (AGM) planned for the 26 February 2021 based on the performance for the year ended 31 December 2020.

Southern Ltd:
The company had old obsolete inventory at the year-end valued at K564,000. After the audit report was signed, all this inventory was sold to one (1) customer for K395,000.

Northern Ltd:
Soon after the year end of Northern Ltd, before concluding the audit but after having carried out the inventory count, a fire swept through the warehouse destroying inventory worth K250,000.

Management amended the financial statements and reduced the value of inventory by K250,000.

Required:

(i) Explain the objectives of your audit with regards to subsequent events of client companies. (4 marks)

(ii) Explain the active and passive responsibilities of the auditor subsequent to the accounting period. (2 marks)

(iii) Evaluate each of the matters in the four (4) audit clients and state the impact on the financial statements. (8 marks)

[Total: 20 Marks]

QUESTION THREE

(a) Mopani Ltd is a private limited company. It is owned by members of two families who own shares in the company. The major shareholders are involved in managing the company. Over the past few years, the management of Mopani Ltd have rejected the suggestion that the financial statements should be audited by independent auditors. The argument advanced for the rejection is that the shareholders are also the ones running the company so there is no need to spend money paying auditors.

The company has recently been considering having its shares listed on the Lusaka Securities Exchange (LuSE). The consultants advising the company on the listing requirements have informed the management that once the company shares are listed on the stock exchange, the company will be required to have the financial statements audited by independent auditors.

At a management meeting where the consultant briefed management on how to go on with listing the shares, the major shareholder, who will retain shares in the listed company, expressed concern that auditors can only give reasonable assurance on the financial statements. He wondered why the auditors do not state with certainty whether or not the financial statements are correct.

Required:

(i) Explain the meaning of reasonable assurance in an assurance engagement.

(2 marks)

(ii) State and explain four (4) reasons why auditors do not give an absolute assurance on the financial statements of a client company. (4 marks)

(iii) Explain four (4) advantages of a non-statutory audit to a company that is not required by law to have its financial statements audited. (4 marks)

(b) You are a partner in CK Chartered Accountants. You are in charge of training and client acceptance. Your firm has been in existence for over ten (10) years carrying out audits manually. The client base and revenue have been falling over the last three (3) years because of competition with many audit firms offering audit services at lower fees making your firm uncompetitive.

The head office of your firm based overseas is concerned with the reduced income from your firm and is considering closing the practice unless revenue increases. You recently attended a meeting of all partners in charge of client acceptance and training at your head office at which the use of Computer Assisted Audit Techniques (CAATs), was discussed and suggested to be the option by all practices in order to reduce audit costs.

It was observed that because of reduced costs of Information Technology systems, most small and medium size companies have computerized their accounting systems. Through the use of Computer Assisted Audit techniques (CAATs) manpower costs of audits will be cut substantially making the firms competitive.

It was resolved at this meeting that practices will be expected to increase sample sizes in order to reduce sampling risk to acceptable levels. The use of audit software and test data should help the firms cope with increased sample sizes.

Required:

(i) Explain, giving suitable examples, the objective and use of audit software and test data in the audit of the financial statements of client companies.

(6 marks)

(ii) Explain the meaning of sampling risk and non-sampling risk in the audit of financial statements. (4 marks)

[Total: 20 Marks]

QUESTION FOUR

Chipendeshi Plc. is a company which is listed on the Lusaka Securities Exchange (LuSE). It produces explosives which it sells to the mining companies in Zambia. The explosives are produced according to recommended quality standards.

You work for Sikabenga & Co, a ZiCA registered firm and you are the Audit Senior responsible for the audit of the financial statements for the year ended 31 March 2020. The Engagement Partner has asked you to start the audit planning for Chipendeshi Plc.

Last year, Chipendeshi Plc experienced an increase in fraud by employees and your firm was engaged to review internal controls. A number of deficiencies were identified and lack of segregation of duties was quite a big issue. One of the Senior Managers of Chipendeshi Plc. has raised an issue with Sikabenga Plc. in confidence. He expressed concern that segregation of duties has not been given the attention it deserves mainly because the Managing Director is a strong believer in lean staffing levels, although he pretends to be in support of segregation of duties.

The Managing Director of Chipendeshi Plc., recently married the cousin to the Engagement Partner. The Board of Directors is pleased with his performance and recently endorsed his new improved contract of service.

Chipendeshi Plc. has promised to provide the auditors with non-reusable Personal Protective Equipment (PPEs) for COVID-19 during the entire period of the audit. The Personal Protective Equipment will be imported specifically for audit staff and will cost approximately $50 each. The audit is expected to take two (2) months.

The company is experiencing cash flow problems due to reduced business activity as a result of the COVID-19 pandemic and proposed that the audit fee should be 0.1% of gross turnover. Sikabenga & Co. is yet to respond to this proposal. This will enable the company to maintain the much needed working capital required for its current operations.

The Board of Directors has confidence in the Managing Director and only meets to ratify decisions already taken by Senior Management.

Required:

(a) Define, giving two (2) examples, segregation of duties and explain its importance. (5 marks)

(b) Explain the meaning of professional competence and due care and explain its importance to the audit of the financial statements for Chipendeshi Plc (5 marks)

(c) Identify and explain four (4) ethical threats in the audit of the financial statements of Chipendeshi Plc. and suggest suitable safeguards. (10 marks)

[Total: 20 Marks]

QUESTION FIVE

(a) Mazabuka Plc is involved in various agricultural activities on the Copperbelt. It is one of the most successful and profitable companies in Zambia.

Your firm is the auditor of Mazabuka Plc and you are the Audit Manager in charge of this audit. You are finalizing the audit plan of the audit of the financial statements of Mazabuka Plc for the year ended 31 March 2020. Last year, the Engagement Partner was not happy with the quality of audit documentation and warned that he will not hesitate to institute appropriate disciplinary action to any audit team member found wanting.

The Management of Mazabuka Plc requested your firm for the working papers for the previous year's audit to assist them on various matters including brought forward balances on number of accounts since most of the adjustments which were made were not captured in the general ledger. The Engagement Partner requested you to handle this matter.

Required:

(i) Explain the importance of documentation in a statutory audit of financial statements. (7 marks)

(ii) Suggest the actions your firm should take regarding the request by the management of Mazabuka Plc regarding the working papers. (3 marks)

(b) An Audit Manager responsible for the audit of the financial statements for Kapiri Ltd has tested positive for COVID-19 and was asked to isolate for at least fourteen (14) days. The only outstanding evidence was a written representation letter which was submitted on 29 June 2020. The company's financial reporting timetable shows that the financial statements will be issued to the shareholders on 16 July 2020.

The Engagement Partner for this audit asked you to evaluate the following extracts of the audit report of the audit of the financial statements for the year ended 31 December 2019.

Title

"KAPIRI LTD AUDITOR'S REPORT for the year ended 31 December 2019"

Opinion paragraph

"We have examined the financial statements of Kapiri Ltd, set out on pages 30 to 46 which comprise the statement of financial position as at 31 December 2019, the statement of profit or loss and other comprehensive income, the statement of changes in equity and the statement of cash flows for the year then ended.

In our opinion, the financial statements give a correct position of the financial statements of Kapiri Ltd as at 31 December 2019, and its financial performance and cash flows for the year then ended in accordance with International Financial Reporting Standards ("IFRS"), and in the manner required by the Companies Act, 2017"

Responsibilities of the Directors for the financial statements

The Directors are responsible for the preparation of the financial statements which give a true and fair view in accordance with the requirements of the Companies Act, 2017 and for such internal control as the Directors determine is necessary to enable the preparation of the financial statements that are free from misstatement, whether due to fraud.

In preparing the financial statements, the Directors are responsible for stating the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Directors either intend to liquidate the Company or to cease operations, or have no realistic alternative but to do so.

Date of the audit report

"21 June 2020"

Required:

Evaluate the proposed contents of the extract audit report on the financial statements for Kapiri Ltd for the year ended 31 December 2019.

(10 marks)

[Total: 20 Marks]

END OF PAPER

CA 2.3 AUDITING PRINCIPLES AND PRACTICE

SUGGESTED SOLUTIONS

SOLUTION ONE

(a)(i) Business risks in Quality Paints Manufacturers Plc.:

1. **Use of old equipment:**
   The use of old equipment in manufacturing could lead to frequent breakdowns and loss of production and also increased cost of maintenance of the equipment.

2. **Mandatory medical examinations of employees:**
   The fact that the company has not complied with the requirement to have staff undergo mandatory medical examinations is a business risk in that the company risks being charged the penalties arising from this. In the extreme case, the company risks the license being withdrawn which has implications of the going concern ability of the company.

3. **Local currency:**
   The fast depreciation of the local currency will impact on the cost of production. The company may face liquidity problems in securing the currency required for imports and this will have an impact on production which could lead into the company running out of materials. This has implications on the ability of the company continuing as a going concern.

4. **Influx of cheap paints:**
   The lift on the ban of imported paints will make the products of Quality Paints Manufacturers Ltd. uncompetitive. This can result in the loss of business and will impact the company negatively in terms of liquidity.

5. **Loss of market share:**
   The loss of market share arising from cheap imported goods will impact the company and result in reduced revenue to meet operational costs. This has implications on the ability of Quality Paints Manufacturing Ltd continuing operating as a going concern.

(ii) Impact of business risks on the financial statements:

The points in this part are in the same order as the business risks in (i). This part and part (a) (i) could have been answered side by side in columnar form.

1. It most likely that the equipment is impaired and the risk is that no impairment review has been carried out despite the fact that the equipment is old and working below expected capacity. The **tangible non-current assets** may be misstated to the extent that no impairment has been carried out.

2. The ability of the company to continue as a going concern is questionable if in the extreme, case the license is withdrawn for not complying with the requirement for mandatory medical examinations of staff. Further, **provisions** may be misstated in the event that the company is liable to penalties for non-compliance.

3. The company may no longer be competitive in pricing its products because of the increased costs of importation of raw materials arising from the depreciating local currency. This could have implications on the ability of the company **continuing operating.**

4. The lifting of the ban on the importation of cheap paints can have serious consequences for the company and it may fail to operate at a level where it is still making profits. The company could be forced to close unless the cost of production is reduced and the selling prices competitive with the imported paints. This has implications on the **going concern ability** of the company and the basis of the preparation of the financial statements on a historical cost basis.

5. The loss of market share will impact on the ability of the company continuing as a going concern. Further, reductions in the selling prices of a range of products could have an impact on the **valuation of closing inventory** which should be valued at the lower of cost and net realizable value.

(b) Internal control deficiencies in inventory system of Quality Manufacturers Plc. and suggested improvements:

1. **No quality control checks on receipt of goods in stores:**
   The lack of quality control checks on receipt of goods could result in the company receiving wrong, defective or undelivered supplies. Further, the quality of goods received may not meet the specifications required.

   Improvement required:
   The company should introduce quality control systems requiring that all good received in stores should be checked for quality at the point of receipt and the checking should be evidenced in writing.

2. **Stock cards not numbered:**
   The only stock records for inventory maintained are the unnumbered stock cards. The fact that the cards are not accountable documents means that they can be destroyed and replaced in a fraud that may take place.

   Improvement required:
   All stock cards must be pre-numbered and must be controlled so that all cards in use are signed for and accounted for.
3. **Lack of acknowledgement of receipt of stores issues:**

The fact that issues to manufacturing are not signed for is a control weakness which could result in fraud being carried out by stores staff. Falsification of quantities issued could easily be carried out resulting in the company losing inventory.

Improvement required:
All goods issued by stores should be signed for by the recipient. Full details of the recipient should be obtained so that the one who received the goods can be traced.

4. **Lack of segregation of duties during inventory count:**
There is lack of segregation of duties during inventory count at the period end. Miti who is the Stores Manager is also responsible for the inventory count as well as the updating of the inventory records following the count. It is possible that falsification of count records and inventory records may take place in order to hide any fraud that may have taken place knowing that he will be held accountable and answerable for any discrepancies identified during the inventory count.

Improvement required:
The company should introduce segregation of duties during the inventory count. A different person other than Miti should be responsible for the inventory count. Preferably this should be a person who is not involved in handling inventory.

(c) Suggested inventory count instructions in the inventory count of Quality Manufacturers Plc.:

1. Inventory should be clearly labeled for easy of identification.
2. Damaged and obsolete inventory should be separately identified.
3. Counts should be done in groups of two with one member doing the count and the other recording on the inventory count sheets.
4. All inventory count sheets should be numbered and accounted for after the inventory count.
5. The entries on the inventory count sheets should be in ink.
6. Production should cease during inventory count and no receipt or issues of items should be done during the count.
7. Inventory held and belonging to third parties should be separately identified and not included in the final inventory count.

(d) Audit procedures in the audit of inventory of Quality Paints Manufacturers Plc.:

1. Review the final inventory count sheets and for selected items confirm that the valuation was done appropriately at the lower of cost and net realizable value.
2. Review the allowance made for obsolete and damaged good and confirm it is sufficient.
3. Follow test counts carried out to the final inventory count sheets and investigate any differences.
4. For selected items of inventory that may have been sold subsequent to the period end confirm the sales value and compare with the cost. If the realizable value is lower than cost, request management to write down the inventory.

SOLUTION T WO

(a)(i) Principle of accountability and stewardship in the partnership:

Accountability – Able is involved in running the business while James, who has invested in the partnership, is not involved in running the business. James will rely on the financial statements prepared by the Accountant and the supervision of Abel. The principle of accountability requires that Able should be accountable for his actions in running the business and he has an obligation to accept responsibility for his actions.

Stewardship – this is the duty of a person who manages another's property. In this case even though Abel has an interest in the business he and the Accountant who run the business should do so in the best interest of James who has a stake in the business.

(ii) Assurance to James a sleeping partner:

- The financial statements prepared by the Accountant will be independently checked.
- The audit will be conducted by Auditors who are independent of the business and so are expected to be objective in their work.
- James will receive an audit report containing an opinion on the financial statements.
- During the course of the audit, the Auditors may come across internal control weaknesses which they will communicate to the company with a view to improve on the controls.

(b)(i) Objectives of the auditor with regards subsequent events:

1. To obtain sufficient appropriate audit evidence about whether subsequent events to the date of the auditor's report have been appropriately accounted for in the financial statements of the client company in accordance with the provisions of IAS 10 *Events after the reporting period*.

   Adjusting events should be adjusted and non-adjusting events need not be adjusted in the financial statements.

2. The auditor will require to respond to any facts that may come to his attention after the date of the auditor's report which may have caused the auditor to amend the auditor's report if he had known about the facts before the date of the report.
3. For the auditor to remain alert during the active period subsequent to the year end for any subsequent events and obtain sufficient appropriate evidence that they have been correctly accounted for by management.

4. To respond appropriately to any subsequent events after the report date and establish how management intends to deal with these and if necessary require the financial statements to be amended and perform audit procedures on the amendments.

(ii) Active and passive responsibilities of the auditor regarding subsequent events:

The **active** responsibility of the Auditors relates to the requirement that the auditor should look out for adjusting and non-adjusting events that occur between the end of the financial year and the date of the auditor's report.

After the date of the auditor's report, the auditor has a **passive** duty and it is the responsibility of management to bring to the attention of the auditor matters that would have an impact on the audit. The auditor does not have any obligation to perform or make enquiries regarding the financial statements after the date of the report.

(iii) Evaluation of subsequent events:

Western Ltd:
The provision of K560, 000 that was made in the financial statements was appropriate in line with IAS 37 *Provisions, contingent liabilities and contingent assets.* This was an accounting estimates based on management's assessment of the likely outcome of the case.

The determination of the case by the court that the company should pay K1.11 million confirms the amount that should have been provided at the year end. This is an adjusting event giving evidence of conditions that existed at the year end. Management should be requested to adjust the figure of provision and increase it by K550, 000 to bring the total provision to K1, 110,000.

Eastern Ltd:
The intended declaration of the dividend that will be made at the Annual General Meeting (AGM) is an example of a non-adjusting event. The dividend will be accounted for in the year that it is declared which is the year ending 31 December 2021.

The event does not require that the financial statements for the year ended 31 December 2020 does not require that the financial statements are adjusted and the auditor will need to confirm this.

Southern Ltd:
The valuation of inventory at the lower of cost of cost and net realizable is in accordance with the provisions of IAS 2 *Inventories.*

The sales value of K395, 000 is the actual net realizable value which should have been compared with the cost.

This event is an adjusting event and the inventory of Southern Ltd should be written down to K395, 000 with an adjustment of K169, 000.

Northern Ltd:
The fire that destroyed the inventory happened after the period end before the finalization of the financial statements. This inventory existed at the year end and is correctly included in the inventory value at that date. This is a non-adjusting event that will not require that the inventory valued be adjusted. The incident may be disclosed in the notes to the financial statements.

SOLUTION THREE

(a) (i) The meaning of reasonable assurance:

Reasonable assurance is a high level of assurance that is given by the auditor and it is not an absolute assurance. It arises from the auditor carrying out audit procedures on a large amount of transactions and balances and it is stated in a positive form by the auditor stating whether or not the financial statements show a true and fair view.

(ii) Reasons why Auditors cannot give absolute assurance:

1. Auditors do not test all the transactions and balances contained in the client financial statements. This means that there could be misstatements in the financial statements which were not detected by the Auditors and as such they cannot give an absolute assurance.
2. The financial statements contain accounting estimates wherein there is subjectivity in determining such amounts.
3. Auditing is not objective in that there is a lot of judgment that the Auditors use in matters such as the nature of audit procedures and also the conclusions reached.
4. Financial statements themselves have limitations such as there could be override of controls by management which may not be detected by the Auditors or there could be human error and collusion to commit fraud.

(iii) Advantages of non-statutory audits:

1. Non statutory audits are beneficial to owners of businesses who are not involved in the day to day management of the business. Such audits help to ensure that the accounts upon which sharing of profits is based can be relied upon.
2. In the case of a sale of a business, audited financial statements can be a positive basis for negotiating the price.
3. Most lenders of finance require audited financial statements in order to provide finance.
4. In the case of a partnership audited financial statements can provide a reliable basis for settling accounts between partners.

(b) (i) Use of audit software in performing audits:

There is increased use of computers in performing audits because of increased computerization in most organizations.

The use of audit software is that the auditor can use computers to perform tasks that previously were performed manually. This is because computers can perform such tasks faster and more accurately. In the case at hand, the Auditors extracted samples for testing manually and this task could be performed through the use of audit software which can select the samples rather than doing it manually.

Audit software could also be used to perform audit tests that would otherwise be performed manually.

Use of test data in performing audits:
This is a technique that is used where data is entered in an entity's computer system and then comparing the results obtained with the pre-determined results. In the case at hand test data could be used to test controls in the computer system of client companies for example testing password and data access controls in the company.

Test data could also be used to test processing of characteristics of the client computer system by the auditor coming up with the test data with expected results and requiring that the data is input in the client computer and comparing the results with the predetermined results.

(ii) Meaning of sampling risk:
Sampling risk is the risk that the auditor will give an inappropriate audit opinion because of basing the opinion on the sample results.

This means that had the Auditors tested all the elements in the population a different conclusion would have been reached.

Meaning of non-sampling risk:
This is the risk that the auditor will give an inappropriate opinion/conclusion for reasons other than sampling. Such reasons could for example be the inability of the Auditors detecting material misstatements in the figures contained in the financial statements.

SOLUTION FOUR

(a) Segregation of duties:

Segregation of duties means a number of people being involved in the accounting process. It takes place in various ways:

- Segregation by function – the key functions that should be segregated are the carrying out of a transaction, recording that transaction in the accounting records and maintaining custody of assets that arise from the transaction
- The various steps in carrying out the transaction should also be segregated
- The carrying out of various accounting operations should be segregated. For example, the same staff should not record transactions and carry out the reconciliations at the period-end.

Segregation of duties is importance mainly because of the following:

- This makes it more difficult for fraudulent transactions to be processed, since a number of people would have to collude in the fraud
- It is also more difficult for accidental errors to be processed since the more people are involved, the more checking there can be.

(b) Meaning and importance of professional competence and due care:

Professional competence and due care is one of the fundamental ethical principle which needs to observed by all Accountants. Professional competence can be defined as the ability to perform better while due care may mean being cautious in the performance of the audit.

Professional competence and due care in the audit of the financial statements for Chipendeshi Plc. is very important because:

- The company is listed on the Lusaka Securities Exchange (LuSE) – the listing rules are quite stringent and must be adhered to. Any concerns regarding professional negligence could significantly damage Sikabenga's reputation.
- The company produces explosives – these highly dangerous and manufacturers are required to observe strict health and safety laws and regulations. Non-compliance of laws and regulations could result in the company being closed. This may invalidate any financial statements prepared on a going concern basis

Sikabenga should use audit personnel who have appropriate working knowledge of ISA 250 *Consideration of laws and regulations in an audit of financial statements* to reduce audit risk to an acceptably low level.

The accounting profession expect all Accountants to develop and maintain appropriate levels of professional competence and due care. Appropriate disciplinary measures exist for any Accountant who may be found wanting in this regard.

(c) Ethical threats and appropriate safeguards:

Ethical and professional issues	Explanations	Appropriate safeguards
1) Sikabenga was engaged to review internal controls	This creates a self-review threat as audit staff may end up reviewing their own work. This will negatively affect their objectivity.	Sikabenga must ensure staff who were involved in the review of internal controls are not part of the audit team.
2) The Managing Director recently married the cousin to the Engagement Partner	This gives rise to familiarity threat which could seriously impair objectivity. The Engagement Partner could be too sympathetic and fail to exercise appropriate levels of skepticism.	The Engagement Partner should be replaced in order to be and be seen to be objective.
3) Chipendeshi Plc. has promised to provide the Auditors with non-reusable Personal Protective Equipment (PPEs) for COVID 19 during the entire period of the audit	This creates a self-interest and familiarity threats. The promised PPEs are very expensive and as a result could impair objectivity. The audit staff may want to reciprocate such a good gesture at all costs.	The ESBA code states that gifts and hospitality should only be accepted where the value is trivial and inconsequential. In this case, it would be appropriate to decline the PPEs and ask for whatever the employees have been provided with, provided they meet the health guidelines.
4) Proposal that the audit fee should be 0.1% of gross turnover	This is a form of contingent fees. This creates a self-interest threat because Sikabenga may not query overstatement of turnover.	This is prohibited by the IESBA code and should therefore not be accepted.

SOLUTION FIVE

(a) (i) Importance of documentation in a statutory audit o:

- It provides evidence of the auditor's basis for a conclusion about the achievement of the overall objective
- It provides evidence that the audit was planned and performed in accordance with ISAs and other legal and regulatory requirements
- It assists the engagement team to plan and perform the audit
- It assists team members responsible for supervision to direct, supervise and review audit work
- It enables the team to be accountable for its work
- It allows a record of matters of continuing significance to be retained
- It enables the conduct of quality control reviews and inspections (both internal and external).

(ii) Suggested actions to take on request by management of Mazabuka Plc.:

Auditors must follow ethical guidance on the confidentiality of audit working papers. They may, at their discretion, release parts of or whole working papers to the entity, as long as disclosure does not undermine "the independence or validity of the audit process." The Engagement Partner must exercise professional judgment and it may only be reasonable to release only copies of the relevant parts. Hence, Mazabuka Plc. should request to be very specific.

(b) Evaluation of proposed contents of the extract audit report

Sections	Evaluations of proposed reports
(1) Title	The auditor's report must have a title that clearly indicates that it is the report of the **independent** auditor. This signifies that the auditor has met all the ethical requirements concerning independence and therefore distinguishes the auditor's report from other reports. In the proposed title the word "independent" is missing and should therefore be included.
(2) Opinion paragraph	The opinion paragraph is generally in line with the recommended wordings in ISA 700 (Revised) *Forming an opinion and reporting on the financial statements* except for the following: • The words used "examined" should be replaced with "**audited**".

	• There is no mention of "the **notes** to the financial statements, including a summary of significant accounting policies". This is part of the financial statements audited and should therefore be included. • The word "correct" should be replaced with "**true and fair".**
(3) Responsibilities of the Directors for the financial statements	This paragraph is generally in line with the recommended wordings in ISA 700 (Revised) *Forming an opinion and reporting on the financial statements* except for the following: • The standard uses the words "preparation and **fair presentation"**. However, the words "fair presentation" are missing and should therefore be included. • There is no mention of "**International Financial Reporting Standards**". This is cardinal to any unnecessary misunderstandings and should therefore be included. • The standard uses the words "**material** misstatement". The word "material" should be included. Auditors' main focus is material misstatements which could influence the users economic decisions based on the financial statements. • The standard uses the words "fraud or **error**". The word "error" is missing and this could give wrong impressions regarding Auditors' responsibilities regarding fraud as guided by ISA 240 *The auditor's responsibilities relating to fraud in an audit of financial statements.* • The word "stating" should be replaced by "**assessing**". Stating is too basic and does not portray the amount of work management are required to carry out in respect of going concern.
(4) Date of the report	The report must be dated **no earlier than the date on which the auditor has obtained sufficient appropriate audit**

	evidence on which to base the auditor's opinion on the financial statements. The only written representation letter which was outstanding was submitted on 29 June 2020 but the proposed date of the audit report is "21 June 2020". This is technically wrong and should be corrected.

END OF SOLUTIONS

CA-ZAMBIA PROGRAMME EXAMINATIONS

CA APPLICATION ADVANCED DIPLOMA IN ACCOUNTANCY

CA 2.4: TAXATION

THURSDAY 17 JUNE 2021

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

INSTRUCTIONS TO CANDIDATES

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

2. This paper is divided into TWO (2) sections:
   Section A: ONE (1) Compulsory Question.
   Section B: Four (4) Optional Questions. Attempt any THREE (3) questions

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

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

5. **Cell phones** are **NOT** allowed in the examination room.

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

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

8. Present legible and tidy work.

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

10. A Taxation table is provided from page 2 to page 6 of the question paper.

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

Taxation table for paper CA2.4– Taxation (2021 Examinations) Taxation Table

Income Tax

Standard personal income tax rates

Income band	Taxable amount	Rate
K1 to K48,000	first K48,000	0%
K48,001 to K57,600	next K9,600	25%
K57,601 to K82,800	next K25,200	30%
Over K82,800		37.5%

Income from farming for individuals

K1 to K48,000	first K48,000	0%
Over K48,000		10%

Company Income Tax rates

On income from manufacturing and other	35%
On income from farming	10%
On income of Banks and other Financial Institutions	35%
On income from mineral processing	30%
On income from mining operations	30%
On income from manufacture of products made out of copper cathodes	15%

Mineral Royalty

Mineral Royalty on Copper

Range of Norm Price	Mineral Royalty Rate
Less than US$4,500	5.5% of norm value
From US$4,500 to less than US$6,000	6.5% of norm value
From US$6,000 to less than US$7,500	7.5% of norm value
From US$7,500 to less than US$9,000	8.5% of norm value
From US$9,000 and above	10% of norm value

Mineral Royalty on other minerals

Type of mineral	Mineral Royalty Rate
Base Metals (Other than Copper, Cobalt and Vanadium)	5% of norm value
Cobalt and Vanadium	8% of norm value
Energy and Industrial Minerals	5% of gross value
Gemstones	6% of gross value
Precious Metals	6% of norm value

Capital Allowances

Implements, plant and machinery and commercial vehicles:

Wear and Tear Allowance –	Plant used normally	25%

	Used in Manufacturing and Leasing	50%
	Used in farming and agro-processing	100%
	Used in mining operations	20%

Non- commercial vehicles

Wear and Tear Allowance	20%

Industrial Buildings:

Wear and Tear Allowance	5%
Initial Allowance	10%
Investment Allowance	10%

Low Cost Housing **(Cost up to K20,000)**

Wear and Tear Allowance	10%
Initial Allowance	10%

Commercial Buildings

Wear and Tear Allowance	2%

Farming Allowances

Development Allowance	10%
Farm Works Allowance	100%
Farm Improvement Allowance	100%

Presumptive Taxes

Turnover Tax 4%

Presumptive Tax for Transporters

Seating capacity	Tax per annum	Tax per day
	K	K
From 64 passengers and over	10,800	29.60
From 50 to 63 passengers	9,000	24.70
From 36 to 49 passengers	7,200	19.70
From 22 to 35 passengers	5,400	14.80
From 18 to 21 passengers	3,600	9.90
From 12 to 17 passengers	1,800	4.90
Less than 12 passengers and taxis	900	2.40

Property Transfer Tax

Rate of Tax on Realised Value of Land, Land and Buildings and shares	5%
Rate of Tax on Realised Value on a transfer or sale of a mining right	10%
Rate of Tax on Realised Value on a transfer of Intellectual Property	5%

Value Added Tax

Registration threshold	K800,000
Standard Value Added Tax Rate (on VAT exclusive turnover)	16%

Customs and Excise duties on used motor vehicles

	Aged 2 years but below 5 years		Aged 5 years and over	
Motor vehicles for the transport of ten or more persons, including the driver	**Customs duty**	**Excise duty**	**Customs duty**	**Excise duty**
	K	**K**	**K**	**K**
Sitting capacity of 10 but not exceeding 14 persons including the driver	17,778	22,223	8,889	11,112
Sitting capacity exceeding 14 but not exceeding 32 persons	38,924	0	13,840	0
Sitting capacity of 33 but not exceeding 44 persons	86,497	0	19,462	0
Sitting capacity exceeding 44 persons	108,121	0	43,248	0

	Aged 2 years but below 5 years		Aged 5 years and over	
Motor cars and other motor vehicles principally designed for the transport of persons including station wagons and racing cars	**Customs duty**	**Excise duty**	**Customs duty**	**Excise duty**
	K	**K**	**K**	**K**
Sedans				
cylinder capacity not exceeding 1000 cc	12,490	10,824	7,136	6,185
Cylinder capacity exceeding 1000 cc but not exceeding 1500 cc	16,058	13,917	8,564	7,422
Cylinder capacity exceeding 1500 cc but not exceeding 2500 cc	16,545	21,508	8,423	10,950
Cylinder capacity exceeding 2500 cc but not exceeding 3000 cc	18,049	23,463	10,528	13,687
Cylinder capacity exceeding 3000 cc	22,561	29,329	12,032	15,642
Hatchbacks				
cylinder capacity not exceeding 1000 cc	10,705	9,278	7,136	6,185
Cylinder capacity exceeding 1000 cc but not exceeding 1500 cc	14,274	12,371	8,564	7,422
Cylinder capacity exceeding 1500 cc but not exceeding 2500 cc	15,041	19,553	8,423	10,950
Cylinder capacity exceeding 2500 cc but not exceeding 3000 cc	16,545	21,508	10,523	13,687
Cylinder capacity exceeding 3000 cc	19,553	25,419	12,032	15,642
Station wagons				
cylinder capacity not exceeding 2500 cc	16,545	21,508	9,024	11,731
Cylinder capacity exceeding 2500 cc but not exceeding 3000 cc	18,049	23,463	13,357	17,598

Cylinder capacity exceeding 3000 cc but not exceeding 2500 cc	22,561	29,329	18,049	23,463
SUVs				
Cylinder capacity not exceeding 2500 cc	21,057	27,374	9,024	11,732
Cylinder capacity exceeding 2500 cc but not exceeding 3000 cc	24,065	31,284	13,357	17,598
Cylinder capacity exceeding 3000 cc	28,577	37,150	18,049	23,463

	Aged 2 years but below 5 years		**Aged 5 years and over**	
Motor vehicles for the transport of goods - with compression-ignition internal combustion piston engine (diesel or semi-diesel):	**Customs duty**	**Excise duty**	**Customs duty**	**Excise duty**
	K	**K**	**K**	**K**
Single cab				
GVW exceeding 1.0 tonne but not exceeding 1.5 tonnes	21,926	9,501	8,770	3,801
GVW exceeding 1.5 tonnes but not exceeding 3.0 tonnes	26,311	11,402	15,348	6,651
GVW exceeding 3.0 tonnes but not exceeding 5.0 tonnes	30,697	13,302	17,541	7,601
Double cabs GVW exceeding 3 tonnes but not exceeding 5 tonnes	30,274	0	24,119	10,452
Double cabs GVW exceeding 3.0 tonnes but not exceeding 5.0 tonnes, **with spark ignition internal combustion piston engine**	30,697	13,302	24,119	10,452
Panel Vans				
GVW exceeding 1.0 tonne but not exceeding 1.5 tonnes	15,348	6,651	8,770	3,801
GVW exceeding 1.5 tonnes but not exceeding 3.0 tonnes	17,541	7,601	15,348	6,651
GVW exceeding 3.0 tonnes but not exceeding 5.0 tonnes	21,926	9,501	17,541	7,601
Trucks				
GVW up to 2 tonnes	21,926	9,501	10,963	4,751
GVW exceeding 2.0 tonnes but not exceeding 5.0 tonnes	28,504	12,352	13,156	5,701
GVW exceeding 5.0 tonnes but not exceeding 10.0 tonnes	24,724	18,955	10,817	8,293
GVW exceeding 10.0 tonnes but not exceeding 20.0 tonnes	30,905	23,694	11,744	9,004
GVW exceeding 20 tonnes	51,898	0	19,461	0
GVW exceeding 20 tonnes, **with spark ignition internal combustion piston engine**	37,086	28,432	13,907	10,662

Surtax

On all motor vehicles aged more than five (5) years from year of manufacture	K2,000

Customs and Excise on New Motor vehicles

Duty rates on:

1.	**Motor cars and other motor vehicles (including station wagons) principally designed for the transport of less than ten persons, including the driver:**	
	Customs Duty:	
	Percentage of Value for Duty Purposes	30%
	Minimum Specific Customs Duty	K6,000
	Excise Duty:	
	Percentage of Value for Duty Purposes for Excise Duty Purposes	
	Cylinder capacity of 1500 cc and less	20%
	Cylinder Capacity of more than 1500 cc	30%
2.	**Pick-ups and trucks/lorries with gross weight not exceeding 20 tones:**	
	Customs Duty	
	Percentage of Value for Duty Purposes	15%
	Minimum specific Customs Duty	K6,000
	Excise Duty:	
	Percentage of Value for Duty Purposes for Excise Duty Purposes	10%
3.	**Buses/coaches for the transport of more than ten persons**	
	Customs Duty:	
	Percentage of Value for Duty Purposes	15%
	Minimum Specific Customs Duty	K6,000
	Excise Duty:	
	Percentage of Value for Duty Purposes for Excise Duty Purposes	
	Seating Capacity of 16 persons and less	25%
	Seating Capacity of 16 persons and more	0%
4.	**Trucks/lorries with gross weight exceeding 20 tonnes**	
	Customs Duty:	
	Percentage of Value for Duty Purposes	15%
	Excise Duty:	
	Percentage of Value for Duty Purposes for Excise Duty Purposes	0%

SECTION A

This question is compulsory and must be attempted.

QUESTION ONE - (COMPULSORY)

KTT Plc is a Zambian resident farming company. It listed its shares on the Lusaka Securities Exchange (LuSE) a year ago on 1 January 2020 and 27% of its issued shares were taken up by indigenous Zambians.

The company made a net profit before taxation as per the statement of profit or loss amounting to K1,340,000 for the year ended 31 December 2021. This profit figure was arrived at after taking into account the following items of income and expenditure:

Other Income

(1) Dividend received from Ndeke Ltd, a Zambia resident company amounting to K45,000 (gross).

(2) Royalties of K190,000 (net) received from other Zambian companies.

(3) Bank interest of K170,000 (gross) received from Zambian banks.

(4) Profit on sale of a tractor amounting to K50,000. The tractor was sold for K190,000 and it was acquired at cost of K175,000.

(5) An unrealised foreign exchange gain amounting to K400,000 arising from the translation of an unsettled receivable at the year end that had was denominated in US$ dollars.

Expenses

(1) Directors emoluments of K3,600,000, which included emoluments of K540,000 which were paid to the Managing Director who has been accommodated in a company owned house for which he paid no rent.

(2) The company has employed three (3) differently abled persons in the Human Resources Department. They are permanent employees and their total salaries of K240,000 are included in the overall figure for wages and salaries.

(3) Depreciation of tangible non-current assets amounting to K530,000 and amortization of intangible assets of K80,000.

(4) Repairs and renewals of K1,920,000 includes renovations to a reconditioned second hand combine harvester of K60,000, costs incurred to comply with the Corona Virus Pandemic (COVID-19) health guidelines of K200,000 and other allowable repairs and renewals of K1,420,000. The repairs to the reconditioned second hand combine harvester were necessary before it could be used in the business.

(5) Irrecoverable debts expenses of K83,000 which included loans to former employees written off of K65,000, trade debts written off of K40,000, increase in specific provision of K54,000, decrease in general provision of K50,000, trade debts previously written off now recovered of K20,000 and loans to former employees previously written off now recovered of K6,000.

(6) Entertainment expenses of K270,000 which included K90,000 incurred in entertaining employees, K130,000 in entertaining customers and the balance incurred in entertaining external auditors.

(7) Professional and legal fees of K600,000 includes K215,000 for collection of trade debts, K250,000 for accountancy and audit services, K3,000 for recovery of loans from former employees, K52,000 for the acquisition of farmland in Kabwe and K80,000 for defending title to company's farm land in Chisamba.

(8) General expenses of K590,000 included donation to approved public benefit organization of K120,000, subscriptions to Zambia National Farmers Union (ZNFU) of K50,000, canteen expenses incurred in providing meals to members of staff of K330,000 and the remainder comprised sundry allowable business expense.

Other information

(1) On 1 January 2021, the company held the following implements, plant and machinery:

	Income tax value	**Original cost**
	K	K
Office furniture	75,000	100,000
Computer	40,000	80,000
Tractor (old)	0	250,000
Delivery van	450,000	600,000
Nissan Murano car (3000cc)	100,000	500,000
Ford Ranger Double Cab (2200cc)	0	350,000
Toyota RAV4 pool car (1500cc)	70,000	175,000

The Nissan Murano car and Ford Ranger Double Cab are used on a personal-to-holder basis by the Managing Director and Finance Manager respectively. The business use in the cars has been agreed with the Commissioner General as follows:

Managing Director	75%
Finance Manager	80%

(2) During the year ended 31 December 2021, the company had the following capital transaction

	Cost/(Proceeds)
	K
Stumping and clearing	90,000
Borehole	40,000
Construction of six (6) farm dwellings for employees (Costing K40,000 each)	240,000
Second-hand Combine harvester	500,000
Tractor (new)	300,000
Tractor (old)	(80,000)
Toyota RAV4 pool car	(190,000)
Toyota Corolla Altis pool car (1800cc)	270,000

(3) Provisional income tax paid by the company for the tax year 2021 amounted to K180,000.

Required:

(a) Calculate the maximum capital allowances that KTT Plc can claim for the tax year 2021. (16 marks)

(b) Calculate the taxable business profit for the company for the year ended 31 December 2021. (13 marks)

(c) Calculate the final amount of company income tax payable by the company for the tax year 2021. (8 marks)

(d) State the due date when KTT Plc should submit the Income Tax return for the tax year 2021 and state the penalty for submitting the return late. (3 marks)

[Total: 40 Marks]

SECTION B

There are FOUR (4) questions in this section. Attempt any THREE (3) questions.

QUESTION TWO

You are employed in the Tax department of a firm of Chartered Accountants. Your firm is preparing a training workshop for newly recruited trainee accountants. The Tax Manager has asked you to develop notes including enough details on the following topics which will be used in a training workshop for newly recruited trainee accountants which your firm will be conducting soon.

(1)The role, function and composition of the Tax Appeals Tribunal (TAT)

(2)Tax Avoidance & Tax Evasion

The Tax Manager has additionally provided you with the following details of transaction entered into by Katongo Mulenga, a client of your firm during the year and has asked you to provide notes explaining the property tax implications of each transaction.

(1) On 5 February 2021, Katongo sold a residential plot for net proceeds of K392,000 after deducting commission of 2% of the gross proceeds paid to an estate agent for arranging the sale. He acquired the plot ten years ago at a cost of K190,000. The open market value of the commercial plot as determined by the Commissioner General was K395,000 on the date of the transfer.

(2) On 8 February, Katongo sold 100,000, K1 shares he held in DLT Ltd, a private limited company at K8 per share. He acquired the shares five (5) years ago at a total cost of K200,000. The market value of the shares determined using approved valuation methods was K10 per share.

(3) On 12 February, 2021, Katongo gifted his residential house to his daughter Linda as a wedding present. The open market value of the plot on that date was K300,000. He acquired the house eight years ago at a cost of K160,000. Linda paid Katongo K10,000 to help cover the costs relating to the transfer of title to the house to her from her father.

(4) On 15 February, 2021 Katongo gifted 2 hectares of farm land to his nephew Kasongo who had just successfully completed his academic degree at a famous university. The open market value of the plot as assessed by the Commissioner General on that date was K180,000. He acquired the house seven years ago at a cost of K70,000. Kasongo paid Katongo K12,000 to cover the costs relating to the transfer of title to the property from to him.

(5) On 20 February 2021, Katongo sold his Toyota Fortuner motor car for K380,000, being the open market value of the vehicle. The amount of K380,000 is after deducting the car dealer's fee of K4,000. Kotongo acquired the Fortuner three years at a cost of K420,000.

Required:

(a) Prepare notes to be used in the training workshop:

(i) Explaining the Role and function of the TAT. (2 marks)

(ii) Explaining the composition of the TAT (3 marks)

(iii) Explaining the differences between and possible causes of tax avoidance and tax evasion, describing the practical consequences of engaging in each practice. (7 marks)

(b) Explain the property tax implications of the transactions entered into by Katongo during the year, calculating the amount of any property transfer tax arising on each transaction. (8 marks)

[Total: 20 marks]

QUESTION THREE

Fernando Chalimbana had been employed by CB Solutions Limited at a monthly salary of K28,100. His salary was increased by 12% with effect from 1 April 2021. His other conditions of service provided for a housing allowance of 21% of his basic salary, transport allowance of 10% of the basic salary and medical allowance of K1,200 per month. CB Solutions Limited has always paid life assurance premiums amounting to K510 per month on his behalf.

On 1 May 2021, he received a Labour Day award as the most committed employee. The award comprised of the Laptop valued at K11,000 and cash amounting to K6,000. As a long serving employee of CB Solutions Limited, Fernando received a long-term service award amounting to K6,000 in cash.

On 31 October 2021 Fernando retired from employment. Upon his retirement, he received the following:

	K
Repatriation pay	25,000
Leave pay	22,000
Accrued service bonuses	54,200
Pension refunds	400,000

Half of the pension refunds were employee's pension refunds and the other half were employer's pension refunds.

During the tax year 2021 he incurred the following expenses:

	K
Medical expenses	8,000
Income tax paid under PAYE	131,400

Donation to political parties	16,000
Donation to approved public benefit organization	14,000
School fees for his children	21,300
Professional subscription	3,200

He has always contributed NAPSA at 5% of his gross salary. During the year to 31 December 2021, the company deducted employee's National Health Insurance Scheme Contributions (NHISCs) from his earnings at the rate of 1% of his basic salary and paid employer's NHISCs at the rate of 1% of his basic salary on his behalf.

He received the following investment income during the year ended 31 December 2021:

	K
Dividends from MNC Plc a mining company	6,000
Dividends from CDF Limited a private company	7,650
Royalties	63,750
Bank interest	2,000
Rental income	99,000
Treasury bill interest	10,200

The amounts of investment income represent the actual amounts of cash received by Fernando. Withholding tax had already been deducted at source.

Required:

(a) Calculate the amount of withholding tax paid on each investment income and the total withholding tax paid for the tax year 2021. (5 marks)

(b) Compute the income tax payable by Fernando Chalimbana for the tax year 2021. (You should clearly indicate in your computation by the use of zero (0) any items of income which are not taxable). (15 marks)

[Total: 20 Marks]

QUESTION FOUR

Michael and Salmon partners have run a partnership business for many years. The partnership agreement provides for profits and losses to be shared in the ratio of 3: 2 between Michael and Salmon respectively. This is after allowing for annual partnership salaries of K30,000 each. On 1 March 2021, Nyambe was admitted to the partnership and with effect from that date, the partnership agreement was changed. Profits and losses and partners' annual salaries were to be provided for as given in the table below:

	Michael	**Salmon**	**Nyambe**
Salaries per annum	K24,300	K21,700	K18,600
Share of balance of profits and losses	4	3	2

The partnership statement of profit or loss is provided below.

MICHAEL AND SALMON STATEMENT OF PROFIT OR LOSS FOR THE YEAR ENDED 31 DECEMBER 2021.

		K	K
Sales			641,607
Cost of sales			(192,000)
Gross profit			449,607
Less :Expenses			
Salaries and wages	(Note 1)	152,607	
Rent and rates		6,300	
Repairs and renewals		4,860	
Telephone		1,760	
Postage and stationery		11,560	
Legal and professional fees	(Note 2)	65,300	
Miscellaneous expenses	(Note 3)	93,697	
Total Expenses			(336,084)
Net Profit			**113,523**

Note 1 Salaries and wages	**K**
Salaries and wages comprise:	
Employees' salaries	63,000
Partners salaries	70,607
Employer's NAPSA contributions	14,000
Partner's pension contributions	5,000
Total	**152,607**

Note 2 Legal and professional fees	**K**
Legal and professional fees comprise:	
Costs of preparing the income tax return	6,820
Costs incurred in connection with defending title to existing non-current asset.	19,800
Legal fees incurred in connection with the	

purchase of a 15 year lease of land	20,300
Interest paid on overdue tax	7,956
Legal costs in connection with disputed tax liability	2,000
Accounting and audit fees	8,424
Total	**65,300**

Note 3 Miscellaneous expenses	**K**
Miscellaneous expenses comprise:	
Loans to employees written off	4,895
Increase in General provision for bad debts	9,803
Theft of money by employee	24,475
Donation to a political party	5,247
Payment to employee in lieu of notice	2,560
Entertaining prospective investors	7,400
Loss on disposal of machinery	6,599
Depreciation of non-current assets	27,718
Trade debts written off	5,000
Total	**93697**

Note 4: Other information

The partnership's capital allowances for the tax year 2021 on partnerships assets have been calculated as K73,400. The loss on disposal of machinery relates to a machine which was sold during the year 2021.

Required:

(a) Calculate the partnerships tax adjusted business profit for the tax year 2021 before division of the partnership profits between the partners. (7 marks)

(b) Calculate the amount of business profits on which each partner will be assessed for the 2021 tax year. (9 marks)

(c) Calculate the final income tax payable by the partners for the tax year 2021. (4 marks)

[Total: 20 Marks]

QUESTION FIVE

Delta Minerals Corporation (DMC) Plc is a Zambian resident company engaged in mining. The company extracts copper in North-Western province of Zambia. The following is the statement of profit or loss for the year ended 31 December 2021:

STATEMENT OF PROFIT OR LOSS FOR THE YEAR ENDED 31 DECEMBER 2021

	Notes	K
Revenue	(1)	34,200,300
Cost of sales	(2)	(18,720,180)
Gross profit		15,480,120
Operating expenses	(3)	(7,392,448)
Other income	(4)	400,000
Profit before tax		8,487,672
Income tax expense	(5)	(2,546,302)
Profit for the year		5,941,370

The following additional information is relevant:

(1) The revenue shown in the statement of profit or loss is the norm value of the copper exported for mineral royalty tax purposes. The copper prices averaged US$8,100 per metric tonne during the year ended 31 December 2021. Mineral royalty tax was calculated correctly and paid on the relevant due dates.

(2) Included in cost of sales is mineral royalty tax paid during the year ended 31 December 2021. Other expenses included in cost of sales are construction of Clinic in the mine township at a cost of K3,000,000, construction of community school in mine township at a cost of K1,200,000 and repairs to old mining equipment K500,000. The balance is made up of revenue expenses which are all allowable for tax purposes.

(3) Included in operating expenses is depreciation K430,000, amortization K180,000, entertaining major customers K400,000, entertaining employees K670,000, donation to an approved public benefit organization K230,000, donation to political party K300,000 and gifts to suppliers of food hampers (costing K190 each) totaling K190,000. The balance consists of revenue expenses which are all allowable for tax purposes.

(4) Other income include Dividends from Zambian companies K180,000 (gross), profit on sale of mining plant K40,000, rental income K80,000 (gross) and royalties K100,000 (gross). Withholding tax has been deducted at source from the investment income. The mining plant was sold for K110,000 and it had an income tax value of zero (0) at 1 January 2021.

(5) Income tax expense shown in the statement of profit or loss represents the amount of provisional income tax paid for the tax year 2021.

(6) There were no assets qualifying for capital allowances at 1 January 2021. During the year ended 31 December 2021, the company acquired the following capital assets from Zambian suppliers and paid for them in Zambian kwacha:

Bought mining equipment	K2,000,000
Bought Delivery trucks	K1,500,000
Bought four (4) Motor cars (2,900 cc)	K1,300,000

The motor cars are used by four (4) directors on the personal-to-holder basis. It has been agreed with the commissioner General that each motor car is used 30% for private purposes.

Required:

(a) Calculate the adjusted mining profit for Delta Minerals Corporation (DMC) Plc for the tax year 2021. (15 marks)

(b) Calculate the income tax payable for the tax year 2021. (5 marks)

[Total: 20 Marks]

END OF PAPER

CA 2.4: TAXATION

SUGGESTED SOLUTION

SOLUTION ONE

(a) KTT PLC

COMPUTATION OF MAXIMUM CAPITAL ALLOWANCES FOR THE TAX YEAR 2021

	Values	Capital allowances
	K	K
Office furniture		
Income tax value b/f	75,000	
Wear & tear allowance (25% X 100,000)	(25,000)	25,000
Income tax value c/f	50,000	
Computer		
Income tax value b/f	40,000	
Wear & tear allowance (25% X 80,000)	(20,000)	20,000
Income tax value c/f	20,000	
Tractor 1 (old)		
Income tax value b/f	0	
Proceeds (restricted to cost)	(175,000)	
Balancing charge	(175,000)	(175,000)
Tractor 2 (old)		
Income tax value b/f	0	
Disposal	(80,000)	
Balancing charge	(80,000)	(80,000)
Cost	300,000	
Wear & tear allowance (100% X300,000)	(300,000)	300,000
Income tax value c/f	0	
Delivery van		
Income tax value b/f	450,000	
Wear & tear allowance (25% X 600,000)	(150,000)	150,000
Income tax value c/f	300,000	
Nissan Murano car		
Income tax value b/f	100,000	
Wear & tear allowance (20% X 500,000)	(100,000)	100,000
Income tax value c/f	0 .	
Ford Ranger Double Cab		
Income tax value b/f	0	
Wear & tear allowance	0	0
Income tax value c/f	0 .	
Toyota RAV 4 pool car		
Income tax value b/f	70,000	
Disposal (restricted to original cost)	(175,000)	

Balancing charge	(105,000)	(105,000)
Stumping and clearing		
Cost	90,000	
Farm works allowance (100% X 90,000)	(90,000)	90,000
Income tax value c/f	0 .	0
Borehole		
Cost	40,000	
Farm works allowance (100% X 90,000)	(40,000)	40,000
Income tax value c/f	0	
Farm dwellings		
Cost (restricted to K20,000 each)	120,000	
Farm improvement allowance (100% X120,000)	(120,000)	120,000
Income tax value c/f	0	
Second-hand Combine harvester		
Cost (K500,000 + K60,000)	560,000	
Wear & tear allowance (100% X560,000)	(560,000)	560,000
Income tax value c/f	0	
Toyota Corolla Altis pool car		
Cost	270,000	
Wear & tear allowance (20% X270,000)	(54,000)	54,000
Income tax value c/f	216,000	
Maximum capital allowances		1,099,000

(b) KTT PLC

COMPUTATION OF TAXABLE BUSINESS PROFIT FOR THE YEAR ENDED 31 DECEMBER 2021

	K	K
Net profit before tax		1,340,000
Add:		
Accommodation benefit		
(30% X K540,000)	162,000	
Depreciation	530,000	
Amortization	80,000	
Reconditioning	60,000	
Loan written off	65,000	
Entertaining customers	130,000	
Entertaining external auditors	50,000	
Legal fees – loan recovered	3,000	
Legal fees – acquisition of land	52,000	
Canteen	330,000	
Personal-to-holder cars – M.D. (3000cc)	40,000	
- F.D. (2200cc)	30,000	
		1,532,000

		2,872,000
Less:		
Dividend	45,000	
Royalties	190,000	
Bank interest	170,000	
Profit on sale of a tractor	50,000	
Exchange gain	400,000	
Differently-abled allowance (K2,000 X 3)	6,000	
Decrease in general provision	50,000	
Loan recovered	6,000	
Capital allowances (b)	1,099,000	
		(2,016,000)
Taxable business profit		856,000

(c) KTT PLC

COMPUTATION OF THE FINAL AMOUNT OF INCOME TAX PAYABLE FOR THE TAX YEAR 2021

		K
Farming profits		856,000
Non-farming income		
Royalties (K190,000 X 100/85)	223,529	
Bank interest	170,000	
		393,529
Taxable income		1,249,529
Company income tax		
Farming income K856,000 X 10%		85,600
Non-farming income (K393,529 X 35%		137,735
		223,335
Less tax already paid:		
Provisional tax		(180,000)
WHT on royalties (K223,529 X 15%)		(33,529)
WHT on bank interest (K170,000 X 15%)		(25,500)
Final company income tax refundable		(15,694)

(d) Due date and penalty

The due date when KTT Plc should submit the return for the tax year 2021 is 21 June 2022.

The penalty for submitting the return late is 2,000 penalty units (K600) per month or part thereof.

SOLUTION TWO

(a) (i) Role and function of the TAT

The functions of the Tax Appeals Tribunal (TAT) as outlined in the Tax Appeals Tribunal Act (2015) are:

(1) to hear and determine 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) to hear and determine any matter prescribed by the Minister, by statutory instrument, to be a matter against which an appeal may be made under the Customs and Excise Act, the Income Tax Act, the Property Transfer Tax Act and the Value Added Tax Act.

(ii) Composition of the TAT

The Tribunal consists of the following members who are appointed by the Minister:

(1) Three legal practitioners of ten years or more standing recommended by the Judicial Service Commission and who have sufficient knowledge of, and experience in, tax matters;

(2) Two qualified accountants certified as such by the Zambia Institute of Chartered Accountants; and

(3) Two persons from the business community.

The Minister appoints a Chairperson and Vice Chairperson from amongst the members who are legal Practitioners.

(iii) TAX EVASION

Tax evasion refers to the use of illegal means to avoid tax. Such means include failing to disclose the relevant amounts of income and other forms of fraud which the tax payers may engage in. The aim of the tax payer practicing tax evasion is to defraud the government of the revenue.

Possible causes

(1) Tax evasion arises when taxes are perceived to be too high or unfair on the tax payers.
(2) Another cause of tax evasion may be intentional where the tax payer intentionally hides some income.

Consequences of practicing Tax Evasion

(1) Tax evasion is an offence and may be punishable by fines and/or imprisonment.
(2) Loss of revenue for government society.
(3) Some persons have to pay for others: Persons who comply with the law shoulder a heavier tax burden than they should because they must compensate for others who participate in the underground economy.
(4) Tax compliant businesses face unfair competition

TAX AVOIDANCE

Tax avoidance on the other hand is concerned with identifying any loop holes in the taxes legislation, and using them to minimize or defer tax liabilities. Tax avoidance is, however difficult to define more thoroughly.

Possible causes

Tax avoidance is caused by tax payers planning their tax affairs so as to minimise or defer taxation liabilities.

Consequences

Tax avoidance is not an offence, though, to discourage its practice, the government may issue anti-avoidance legislation. Anti-avoidance legislation aims at sealing the loop holes in the taxes legislation so as to prevent taxpayers from taking advantage of them, and thereby reducing their tax liabilities lawfully.

(b) Property Transfer Tax (PTT) Implications

(1) Residential Plot

The realised value of land is the higher of its open market valuation and the agreed contract price:

(i) The agreed contract price are the gross proceeds of K400,000 (K392,000 x 100/98), before deducting estate agent fees of K8,000 (2/98 x K392,000) and;
(ii) The open market value of K395,000.

The realised value will therefore be K400,000 as this is higher than the agreed contract price.

The amount of PTT arising was:

K400,000 x 5% = K20,000

(2) Sales of shares

Property transfer tax will arise on the sale of shares in DLT Ltd because the company is not listed on the Lusaka Stock Exchange, on the realised value of the shares determined as the higher of the nominal value of the shares and their open market valuation.

Therefore, the realised value will be the highest of:

(i) The nominal value of the shares of K100,000 (i.e. K1 x 100,000)

(ii) Actual sales proceeds of K800,000 (i.e. K8 x 100,000)

(iii) The open market value of K1,000,000 (i.e. K10 x 100,000)

The realised value is therefore K1,000,000, being the highest of the above values.

The amount of PTT arising is:

K1,000,000 x 5% = K50,000

(3) Gifting of Residential house to Linda

This is a transfer to an immediate family member because his daughter is a member of his immediate family.

The realised value is the actual consideration received by Katongo and this is K10,000. The open market value of K300,000 is irrelevant.

The amount of PTT arising is therefore:

5% x K10,000 = K500

(4) Gifting of Farm land

Property transfer tax will arise on transfer of the residential plot to Kasongo as he is not Katonogo's immediate family member.

The realised value of the house will be taken as the higher of the actual consideration received by Katongo of K12,000 and the open market value of the property which is K180,000.The realised value of the property is therefore K180,000 being the higher amount

The amount of PTT arising is therefore:

5% x K180,000 = K9,000

(5) Sale of Toyota Fortuner

The sale of a Toyota Fortuner is not a transfer of property for the purposes of Property Transfer Tax purposes. There is therefore no realized value since there is no transfer of property and Katongo is not required to pay Property Transfer Tax.

SOLUTION THREE

(a) Fernando Chalimbana

Withholding tax payable for the tax year 2021

	K
Dividends from MNC Plc	0
Dividends from CDF Limited (K7,650 x 15/85)	1,350
Royalties (K63,750 x 15/85)	11,250
Bank interest	0
Rental income (K99,000 x 10/90)	11,000
Treasury bill interest (K10,200 x 15/85)	1,800
Total withholding tax paid	25,400

(b) Fernando Chalimbana

Income tax payable for the tax year 2021

	K	
Salary		
(K28,100 x 3) + (K28,100 x 1.12 x 7)		304,604
Housing allowance: (K304,604 x 21%)		63,967
Transport allowance (K304,604 x 10%)		30,460
Medical allowance (K1,200 x 10)		12,000
Life assurance premiums (K510 x 10)		5,100
Labour day award- Laptop		0
Labour day awards- cash		0
Long-term service award		6,000
Pension refund		0
Severance pay		0
Repatriation pay		0
Leave pay		22,000
Accrued service bonus		54,200
		498,331
Investment income		
Royalties (K63,750 x 100/85)		75,000
		573,331
Less:		
Donation to approved public benefit organizations	14,000	
Professional subscription	3,200	
		(17,200)
Taxable income		556,131
Computation		
First K48,000 @0%		0
Next K9,600 @25%		2,400
Next K25,200 @30%		7,560
Balance K473,331 @37.5%		177,499
Income tax liability		187,459
Less:		
PAYE	131,400	

WHT- Royalties (K75,000 x 15%)	11,250	
		(142,650)
Income tax payable		44,809

SOLUTION FOUR

(a) Michael and Salmon tax adjusted business profit for the year ended 31st December 2021.

	K	K
Net Profit		113,523
Add:		
Depreciation	27,718	
Partner's salaries	70,607	
Loans written off	4,895	
Loss on disposal of machinery	6,599	
Partners pension contributions	5,000	
Increase in general provision for bad debts	9,803	
Entertaining prospective investors	7,400	
Legal costs for tax dispute	2,000	
Interest paid on overdue tax	7,956	
Legal cost in connection with 15 year lease	20,300	
Donation to a political party	5,247	
		167,525
		281,048
Less:		
Capital allowances		(73,400)
Tax adjusted business profit		207,648

(b) ASSESSABLE BUSINESS PROFITS FOR EACH PARTNER

Year ended 31/12/2021	TOTAL	Michael	Salmon	Nyambe
Period ended 1/01/2020 - 28/02/2021	K	K	K	K
Salaries	10,000	5,000	5,000	Nil
Balance 3:2	29,608	17765	11,843	Nil
Total	34,608	22,765	16,843	0
	TOTAL	Michael	Salmon	Nyambe
1/03/2021- 31/12/2021	K	K	K	K
Salaries	53,833	20,250	18,083	15,500
Balance (4:3:2)	119,207	52,981	39,736	26,490
Total	173,040	73,231	57,819	41,990
Taxable profits	207,648	95,996	74,662	41,990

(c) Income tax payable for the tax year 2021

Income tax computation	Micheal	Salmon	Nyambe
First K48,000 @ 0%	0	0	0
Next K9,600 @ 25%	2,400	2,400	0
Next K25,200 @30%	7,560	0	0
Balance K17,062 @30%		5,119	
K13,196 @37.5%	4,949	0	0
Income tax payable	14,909	7,519	0

SOLUTION FIVE

(a) Delta Minerals Corporation

Adjusted mining profit for the tax year 2021

	K	K
Profit before tax		8,487,672
Add:		
Mineral royalty tax		
(K34,200,300 x 8.5%)	2,907,026	
Construction of clinic	3,000,000	
Construction of school	1,200,000	
Depreciation	430,000	
Amortization	180,000	
Entertaining customers	400,000	
Donation to political party	300,000	
Gifts to suppliers of food hampers	190,000	
Personal-to-holder car benefit		
(K40,000 x 4)	160,000	
		8,767,026
		17,254,698
Less:		
Dividends	180,000	
Profit on sale of mining plant	40,000	
Rental income	80,000	
Royalties	100,000	
Capital allowances	1,765,000	
		(2,165,000)
		15,089,698

Workings

(1) Capital allowances

	K
Mining plant	
Balancing charge (0 – K110,000)	110,000
Clinic (K3,000,000 x 20%)	600,000
Community School (K1,200,000 x 20%)	240,000
Mining equipment (K2,000,000 x 20%)	400,000
Delivery trucks (K1,500,000 x 25%)	375,000
Motor cars (K1,300,000 x 20%)	260,000
Total capital allowances	1,765,000

(b) Delta Minerals Corporation

Income tax payable for the tax year 2021

	K
Adjusted mining profit	15,089,698
Add:	
Royalties	100,000
Taxable income	15,189,698
Income tax:	
Mining: K15,089,698 x 30%	4,526,909
Non-mining: K100,000 x 35%	35,000
Income tax liability	4,561,909
Less:	
Provisional income tax	(2,546,302)
WHT- Royalties (K100,000 x 15%)	(15,000)
Income tax payable	2,000,607

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

CA APPLICATION ADVANCED DIPLOMA IN ACCOUNTANCY

CA 2.5: FINANCIAL MANAGEMENT

FRIDAY 18 JUNE 2021

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

INSTRUCTIONS TO CANDIDATES

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

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

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

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

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

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

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

8. Present legible and tidy work.

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

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

SECTION A

This question is compulsory and must be attempted.

QUESTION ONE

Mooya Contractors Inc. (MCI) is an engineering company that wishes to evaluate potential investments in machinery.

Project 1 – Machinery for Floor Tiles

The machinery would enable the company to meet increasing demand for existing products and the investment is not expected to lead to any change in the company's existing level of business risk.

The machinery will cost K2 million, payable at the start of the first year of operation, and is not expected to have any scrap value. Annual before-tax net cash flows of K680,000 per year would be generated by the investment in each of the five (5) years of its expected operating life. These net cash inflows are before taking account of expected inflation of 3% per year. Initial investment of K240,000 in working capital would also be required, followed by an incremental annual investment to maintain the purchasing power of working capital.

MCI has in issue five million shares with a market value of K3.81 per share. The equity beta of the company is 1.2. The yield on short-term Government debt is 14.5% per year and the equity risk premium is approximately 5% per year.

The debt finance of the company consists of bonds with a total book value of K25 million. These bonds pay annual interest before tax of 7%. The par value and market value of each bond is K100. MCI pays taxation one year in arrears at an annual rate of 25%. Capital allowances (tax-allowable depreciation) on machinery are on a straight-line basis over the life of the asset.

Project 2 – Block Making Plant

Mooya Contractors Inc. is also considering investing in two similar concrete block making plants. The investments are mutually exclusive. One model has a higher capacity and reliability than the other. Both models have life spans of five years.

Plant A requires a capital outlay of K8 million and would be disposed for K2 million, while plant B requires a capital outlay of K15 million and would be disposed for K5 million at the end of its life span. Expected profits are as follows:

		Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Plant A	Profits after depreciation (K'm)	2	3	4	3	3
Plant B	Profits after depreciation (K'm)	3	4	4	5	4

The company measures return on capital employed (ROCE) as average annual profit after depreciation, divided by the average net book value of the asset. MCI has an estimated after-tax weighted average cost of capital of 12% and requires a maximum payback period of five (5) years.

Required:

(a) For project one, prepare a forecast of the annual after-tax cash flows of the investment in nominal terms, and determine the present value of the new machinery and advise whether it is a worthwhile investment. (8 marks)

(b) Explain the following:

(i) Limitations of the capital asset pricing model (CAPM) and (6 marks)

(ii) How it can be used in calculating a project-specific discount rate, in investment appraisal. (6 marks)

(c) Determine the following for Project two:

(i) Which plant should be acquired if any based on ROCE. (8 marks)

(ii) Which plant should be selected if any based on payback period. (8 marks)

(iii) Discuss four (4) benefits of ROCE and payback period as investment appraisal techniques. (4 marks)

[Total: 40 Marks]

SECTION B

Attempt any THREE (3) questions in this section.

QUESTION TWO

Dot.Com Inc. is in the business of selling computers and accessories. The demand for computers is 40,000 units a year, at a steady rate. It costs K20,000 to place an order, and K400 to hold a unit for a year. The current annual credit sales are K19.81 million and the receivables period is 70 days. The company management is concerned with receivables period and have decided to approach a factoring company. The factor has offered to take over sales ledger administration and debt collection for an annual fee of 0.5% of credit sales. A condition of the offer is that the factor will advance Dot. Com Inc. 80% of the face value of its receivables at an interest rate of 1% above the current overdraft rate. The factor claims that it would reduce outstanding receivables by 30% and reduce administration expenses by 2% per year if its offer were accepted.

Required:

(a) Calculate the order size to minimize inventory costs, the number of orders placed each year, the length of the inventory cycle and the total costs of holding inventory for the year. (8 marks)

(b) Evaluate whether the factoring company's offer is financially acceptable. (12 marks)

[Total: 20 Marks]

QUESTION THREE

Zambeef Plc is listed on the Lusaka Securities Exchange and has a dispersed shareholding. The company has not paid a dividend for past five (5) years and therefore, the company management is considering changing the dividend policy. One of the directors suggested that if the company changes the dividend policy, a share valuation exercise should be undertaken to determine if the change will affect the value of the company. Zambeef has in issue 9% bonds which are redeemable at their par value of K100 in five (5) years' time. Alternatively, each bond may be converted on that date into 20 ordinary shares of the company. The current ordinary share price of Zambeef Co is K5 and this is expected to grow at a rate of 7% per year for the foreseeable future. Zambeef has a cost of debt of 7% per year.

Required:

(a) Explain the circumstances under which a share valuation will be necessary to be undertaken. (5 marks)

(b) Discuss whether a change in dividend policy will affect the share price of Zambeef Plc. (7 marks)

(c) Calculate the following current values for each K100 convertible bond:

(i) Market value;
(ii) floor value;
(iii) Conversion premium.

(8 marks)
[Total: 20 Marks]

QUESTION FOUR

CDX Ltd is a private company in the retail sector. The company is considering listing its shares on the stock exchange in the near future. However the company Directors are uncertain whether the company will meet the conditions for a stock market listing. Alternative forms of finance such as debt finance or Venture capital are also being considered by the company.

CDX shares are expected to pay a dividend of K1.1 million one year from now. During the next 3 years the dividend is expected to grow at 10% per annum. After that growth will equal 15% per annum for the next two years. Finally growth will settle down to an average of 11% per annum.

Required:

(a) Discuss the use of Venture capital as a source of finance for CDX Limited. (8 marks)

(b) Explain four (4) factors that might influence the choice of debt finance for CDX Limited. (4 marks)

(c) Estimate the current value of CDX Ltd shares if the required return to shareholders of quoted companies in the same industry as CDX Ltd is 20%. (8 marks)

[Total: 20 Marks]

QUESTION FIVE

(a) Rugambwa Transport Ltd is considering the purchase of a tanker worth K400,000 in cash. Alternatively, the tanker could be leased on a 5-year contract for K110,000 per year. If the tanker is owned, the service and maintenance charges will be K16,000 per annum, whereas the lease charge includes maintenance and servicing. The salvage value of the tanker in five (5) years is expected to be nil. The company uses the straight-line method of depreciation. Capital allowances are 20% per annum using the straight line method.

The company's tax rate is 30% and the pre-tax cost of debt is 10%.

Required:

(i) Calculate the cost of owning a tanker; Use the discounted cash flow method. (4 marks)

(ii) Calculate the cost of leasing the tanker; use the discounted cash flow method. (4 marks)

(iii) Advise on the option to be adopted. Justify your answer. (2 marks)

(b) Assume you are the Financial Manager of Sola Ltd, a subsidiary of Rugambwa Transport Ltd. The company has 2 million ordinary shares in issue, and the current market price is K10 per share. Sola Ltd also has 400,000 preference shares in issue and has a market price of K15. The dividend paid on preference share is K3 per share. The company's outstanding debentures have ten years to maturity, with a face value of K5 million, that pays an interest rate of 10% per annum. The debentures have a yield-to-maturity (YTM) of 12%.

Additional Information:

- The risk-free rate is 8% and the expected return on the market is 17%.
- Sola Ltd has a beta of 1.2, and the company tax rate of 30%.

Required:

Calculate the current weighted average cost of capital (WACC) of Sola Ltd.

(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	0·914	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

Formula Sheet

Economic order quantity

$$= \sqrt{\frac{2C_0D}{C_H}}$$

Miller – Orr Model

$$\text{Return point} = \text{Lower limit} + \left(\frac{1}{3} \times \text{spread}\right)$$

$$\text{Spread} = 3\left[\frac{\frac{3}{4} \times \text{transaction cost} \times \text{variance of cash flows}}{\text{interest rate}}\right]^{\frac{1}{3}}$$

The Capital Asset Pricing Model

$$E(r_i) = R_f + \beta_i(E(r_m) - R_f)$$

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

$$s_1 = S_0 \times \frac{(1+h_c)}{(1+h_b)} \qquad f_0 = s_0 \times \frac{(1+i_c)}{(1+i_b)}$$

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

SUGGESTED SOLUTION

SOLUTION ONE

1(a)

Year	0	1	2	3	4	5	6
	K000	K000	K000	K000	K000	K000	K000
Cash in flows		700.4	721.4	743·1	765·3	788·3	
Tax on cash inflows			(175.1)	(180·4)	(185·8)	(191·4)	(197·1)
		700.4	546.3	562.7	579.5	596.9	(197,1)
CA tax benefits		-	100.0	100.0	100.0	100.0	100.0
After-tax cash flows		700.4	646.3	662.7	679.5	696.9	(97.1)
Initial investment	(2000)						
Working capital	(240)	(7·2)	(7·4)	(7·6)	(7·9)	270.1	-
Net cash flows	(2,240)	693.20	638.90	655.10	671.60	967.00	(97.10)
Discount factors (12%)	1	0.893	0.797	0.712	0.636	0.567	0.507
Present values	(2,240)	619.03	509.20	466.43	427.14	548.29	(49.23)

The NPV = K280, 859

The investment is financially acceptable, since the net present value is positive. The investment might become financially unacceptable, however, if the assumptions underlying the forecast financial data were revised. For example, the sales forecast appears to assume constant annual demand, which is unlikely in reality.

Workings

Capital allowance tax benefits

Annual capital allowance (straight-line basis) = K2·0m/5 = K400,000 Annual tax benefit = K400,000 x 0·25 = K100,000 per year

	0	1	2	3	4	5
Working capital (K000)	240	247·2	254·6	262·2	270·1	
Incremental investment K000)		(7·2)	(7·4)	(7·6)	(7·9)	270·1

(b)(i) The capital asset pricing model (CAPM) can be used to calculate a project-specific discount rate in circumstances where the business risk of an investment project is different from the business risk of the existing operations of the investing company. In these circumstances, it is not appropriate to use the weighted average cost of capital as the discount rate in investment appraisal.

The first step in using the CAPM is to calculate a project-specific discount rate is to find a proxy company (or companies) that undertake operations whose business risk is similar to that of the proposed investment. The equity beta of the proxy company will represent both the business risk and the financial risk of the proxy company. The effect of the financial risk of the proxy company must be removed to give a proxy beta representing the business risk alone of the proposed investment. This beta is called an asset beta and the calculation that removes the effect of the financial risk of the proxy company is called 'ungearing'.

The asset beta representing the business risk of a proposed investment must be adjusted to reflect the financial risk of the investing company, a process called 'regearing'. This process produces an equity beta that can be placed in the CAPM in order to calculate a required rate of return 'a cost of equity'. This can be used as the project-specific discount rate for the proposed investment if it is financed entirely by equity. If debt finance forms part of the financing for the proposed investment, a project-specific weighted average cost of capital can be calculated.

In addition to an explanation, an actual computation using data in the question may be given partial credit:

Calculation of weighted average cost of capital:

Cost of equity = 14.5 + (1.2 x 5) = 20.5%

The company's bonds are trading at par and therefore the before-tax cost of debt is the same as the interest rate on the bonds, which is 7%.
After-tax cost of debt = 7 x (1 – 0.25) = 5.25%

Market value of equity = 5m x 3.81 = K19.05 million
Market value of debt is equal to its par value of K2 million
Sum of market values of equity and debt = 19.05 + 25 = K44.05 million
WACC = (20.5 x 19.05/44.05) + (5.25 x 25/44.05) = 12.0%

(b)(ii) The limitations of using the CAPM in investment appraisal are both practical and theoretical in nature. From a practical point of view, there are difficulties associated with finding the information needed. This applies not only to the equity risk premium and the risk-free rate of return, but also to locating appropriate proxy companies with business operations similar to the proposed investment project. Most companies have a range of business operations they undertake and so their equity betas do not reflect only the desired level and type of business risk.

From a theoretical point of view, the assumptions underlying the CAPM can be criticised as unrealistic in the real world. For example, the CAPM assumes a perfect capital market, when in reality capital markets are only semi-strong form efficient at best. The CAPM assumes that all investors have diversified portfolios, so that rewards are only required for accepting systematic risk, when in fact this may not be true. There is no practical replacement for the CAPM at the present time, however.

1 (c)

(i)

	Plant A	**Plant B**
Annual depreciation	8 – 2/5 =K1.2 m	15 – 5/5 =K2 m
Average annual profit	15/5 = K3 m	20/5 = K4 m
Average Investment	8+2/2 = 5	15+5/2 = 10
ROCE	3/5 X 100 = 60%	4/10 X 100 = 40%
WACC	12%	12%

Both plants are financially viable, since Plant A's ROCE of 60% is higher than the company's cost of capital of 12%, and Plant B's ROCE of 40% is also higher than its cost of capital of 12%. However, from a financial point of view, since the plants are mutually exclusive, and plant A has a higher ROCE than Plant B, the company should acquire Plant A.

(ii).

Years		**0**	**1**	**2**	**3**	**4**	**5**
Plant A	Cash flows(Km)	(8)	3.2	4.2	5.2	4.2	4.2
Cumulative Cash flows (Km)			(4.8)	(0.6)	4.6	8.8	13
Plant B	Cash flows(Km)	(15)	5	6	6	7	6
Cumulative Cash flows (Km)			(10)	(4)	2	9	15

Plant A has a payback period of 2 years, 1 month [0.6/5.2*12]. Plant B has a longer payback period of 2 years, 8 months [4/6*12]. Both plants meet the company's maximum payback period of five years.

However, ONLY Plant A should be acquired, since it meets both the ROCE and payback requirements.

(c)(iii)

Advantages - ROCE

- Uses accounting profits – which are readily available
- Simple to calculate & easy to understand
- Widely used to assess performance of business units
- Looks at entire project life

Advantages - Payback

- Preserves liquidity by giving preference to projects with short paybacks
- Easily understood by non-finance managers
- Can be modified to take into account time value of money

SOLUTION TWO

a)

$$Q = \sqrt{\frac{2C_0D}{C_h}} = \sqrt{\frac{2 \times 20,000 \times 40,000}{400}} = 2,000 \text{ units.}$$

This means that there will be:

$$\frac{40,000}{2,000} = 20 \text{ orders placed each year.}$$

The inventory cycle is therefore:

$$\frac{52 \text{ weeks}}{20 \text{ orders}} = 2.6 \text{ weeks.}$$

Total costs will be $(20 \times K20,000) + \left(\frac{2,000}{2} \times 400\right) = K800,000$ a year.

b)

Current receivables = 70days x K19.81million/365days = K3.8million

	K'000
Current receivables	3,800
Receivables under factor = 3,800 x 0.7	2,660
Reduction in receivables	**1,140**

	K'000
Finance cost saving = 1,140 x 0.08	91.2
Interest on advance = 2,660 x 0.8 x 0.01	(21.3)
Factor's annual fee = 19,810 x 0.005	(99.05)
Net benefit of accepting factor's offer	**(29.15)**

The terms of the factor's offer are financially unacceptable because of the net financial cost of factoring is (K29,150). Other benefits, such as the application of the factor's expertise to the receivable management of Dot.Com Inc., might also be influential in the decision on whether to accept the offer.

Note: We have assumed 8% as the financing cost since the rate for overdraft was not provided in the question. Candidates who assumed a different rate were given full credit.

SOLUTION THREE

(a) A share valuation will be necessary:

(1) For quoted companies, when there is a takeover bid and the offer price is an estimated 'fair value' in excess of the current market price of the shares.
A takeover is the acquisition by a company of a controlling interest in the voting share capital of another company, usually achieved by the purchase of a majority of the voting shares.
(2) For unquoted companies, when:
(i) The company wishes to 'go public' and must fix an issue price for its shares
(ii) There is a scheme of merger
(iii) Shares are sold
(iv) Shares need to be valued for the purposes of taxation
(v) Shares are pledged as collateral for a loan
(3) For subsidiary companies, when the group's holding company is negotiating the sale of the subsidiary to a management buyout team or to an external buyer.
(4) For any company, where a shareholder wishes to dispose of his or her holding. Some of the valuation methods we describe will be most appropriate if a large or controlling interest is being sold. However even a small shareholding may be a significant disposal, if the purchasers can increase their holding to a controlling interest as a result of the acquisition.
(5) For any company, when the company is being broken up in a liquidation situation or the company needs to obtain additional finance, or re-finance current debt.

(b)

Dividends as a signal to investors

The ultimate objective in any financial management decisions is to **maximise shareholders' wealth**. If shareholder wealth is increased; it can be expected that the share price will rise. Shareholder wealth and therefore the share price should largely be determined by the **cash flows arising from the investment decisions** taken by management

Shareholders will look at a number of factors when analysing investments and not just dividends. They will be particularly interested in the **business** and **financial risk** of the company and will not necessarily be impressed with a large increase in dividends.

The dividend declared can be interpreted as a **signal** from directors to shareholders about the strength of underlying project cash flows. Investors usually expect a **consistent dividend policy** from the company, with stable dividends each year or, even better, **steady dividend growth**.

Modigliani and Miller

Modigliani and Miller (MM) proposed that in a tax-free world, shareholders are indifferent between dividends and capital gains, and the value of a company is determined solely by the 'earning power' of its assets and investments.

MM argued that if a company with investment opportunities decides to pay a dividend, so that **retained earnings** are **insufficient** to finance all its investments, the shortfall in funds will be made up by **obtaining additional funds** from outside sources. If a company pursues a consistent dividend policy, 'each corporation would tend to attract to itself a **clientele** consisting of those preferring its particular payout ratio, but one clientele would be entirely as good as another in terms of the valuation it would imply for the firm'.

Conclusion

Capital markets are only **semi-strong efficient**, not perfect, so the signalling power of a dividend and the existence of clienteles can be important. This implies that a change in dividend policy could affect Zambeef Plc’s share price.

(c) (i) **Dividend growth model method of valuation**
Conversion value = P0(1 + g)nR
where P0 = current ex-dividend ordinary share price = 5
g = expected annual growth of the ordinary share price = 7%
n = number of years to conversion = 5
R = number of shares received on conversion = 20
Conversion value = 5 × (1 + 0.07)5 × 20 = K140.26
The conversion value is **higher** than the redemption value of K100 so **conversion is expected**.
The current market value is the sum of the present value of the future interest payments and the present value of the bond's conversion value.
Present value of K9 interest per annum for five years at 7% = 9 × 4.100 = K36.90
Present value of the conversion value = 140.26 × 0.713 = K100
Current market value of convertible bond = K36.90 + K100 = **K136.90**

(ii) **Floor value**
The floor value is the sum of the present value of the future interest payments and the present value
of the redemption value.
Present value of K9 interest per annum for five years at 7% = 9 × 4.100 = K36.90
Present value of the redemption value = 100.00 × 0.713 = K71.30
Floor value of convertible bond = K36.90 + K71.30 = **K108.20**
(iii) **Conversion premium**
Conversion premium = current market value – current conversion value
Current conversion value = K5 × 20 = K100
Current market value = K136.90
Conversion premium = K136.90 – 100.00 = **K36.90**
As an amount per share = 36.90/20 = **K1.845**

SOLUTION FOUR

a) A venture capitalist is a person or institution that invests in a new or small business venture, providing capital for start-up or expansion. venture capitalist are typically individuals who have spare cash available and are looking for a higher rate of return than would be given by more traditional investments.

Venture capital investment is a form of equity financing. The investor supplies funding in exchange for taking equity position in the company. Equity financing is normally used by non-established businesses that do not have sufficient cash flow or collateral with which to secure business loans from financial institutions.

venture capitalist fill in the gap between the small-scale financing provided by family and friends and venture capitalists. Attracting venture capitalist is not always easy, but there are things you can do. First, consider whether angel investing is truly for you and your business.

Advantages and Disadvantages for Business Owners

The big advantage is that financing from Venture investments is much less risky than debt financing. Unlike a loan, invested capital does not have to be paid back in the event of business failure. And, most venture capitalist understands business and takes a long-term view. Also, an venture capitalist is often looking for a personal opportunity as well as an investment.

The primary disadvantage of using venture capitalist is the loss of complete control as a part-owner. Your venture capitalist will have a say in how the business is run and will also receive a portion of the profits when the business is sold. With debt financing, the lending institution has no control over the operations of your company and takes no share of the profits.

b) CHOICE OF DEBT FINANCE- FACTORS

- Availability

  Only listed companies will be able to make a public issue of bonds on a stock exchange.

- Duration.

  If the loan is sought to buy a particular asset to generate revenues for the business, the length of the loan should match the length of time that the asset will be generating revenues.

- Fixed or floating rate.

  Expectations of interest rate movements will determine whether a company chooses to borrow at fixed or floating rate. Fixed rate finance may be more expensive, but the business runs the risk of adverse upward rate movements if it chooses floating rate finance.

- Security and covenants.

  The choice of finance may be determined by the assets that the business is willing or able to offer as security also the restrictions in covenants that the lenders wish to impose.

c)

Future year	growth	expected dividend	AF	DF @20%	PV
1	0.1	1,100,000		0.8333	916,630
2	0.1	1,210,000		0.6944	840,224
3	0.1	1,331,000		0.5787	770,249.70
4	0.1	1,464,100		0.4823	706,135.43
5	0.15	1,683,715		0.4019	676,685.06
6	0.15	1,936,272.25		0.3349	648,457.58
7onwards	0.11	2,168,624.92	12.5	0.3349	8,997,348.87
Present Value					**13,555,730.64**

The current value for shares of CDX is **K13,555,730.64.**

SOLUTION FIVE

(5)(a-i) **OWNING**

DETAIL	Y0	Y1	Y2	Y3	Y4	Y5
Purchase price	(400 000)					
Service charge 16000 x 0.7		(11 200)	(11 200)	(11 200)	(11 200)	(11 200)
Dep. Tax shield 80000 x 0.3		24 000	24 000	24 000	24 000	24 000
Net Cash Flow		12 800	12 800	12 800	12 800	12 800
PV Factor @ 7%		0.9346	0.8734	0.8163	0.7629	0.7130
PV Cash Flow	(400 000)	11 963	11180	10 449	9 765	9 126

NPV = K(347 517)

(5)(a-ii) LEASING

DETAIL	Y1	Y2	Y3	Y4	Y5
Lease payments	(110 000)	(110 000)	(110 000)	(110 000)	(110 000)
Tax shield 0.3	33 000	33 000	33 000	33 000	33 000
Net Cash Flow	(77 000)	(77 000)	(77 000)	(77 000)	(77 000)
P V Factor @ 7%	0.9346	0.8734	0.8163	0.7629	0.7130
P V Cash Flow	(71 964)	(67 252)	(62 855)	(58 743)	(54 901)

NPV = K315 715

(5)(c) 3.2 It is an advantage to lease rather than own. The NPV of cash outflows is greater for owning by K31 802).

3.**1 OWNING (Working - Total)**

After tax cost of debt	= 10% (1-0.3)	=	7%
Y0	Purchase price	=	(400 000)
Y1 to Y5	Service charge 16 000 x 0.7 x 4.1002	=	(45 922)
Y1 to Y5	Depreciation tax shield 80 000 x 0.3 x 4.1002	=	98 405
	NPV of Owning		(K347 517)

3.**2 LEASING (Working - Total)**

Y1 to Y5	Lease payments 110 000 x 4.1002	=	(451 022)
Y1 to Y5	Tax shield 110 000 x 0.3 x 4.1002	=	135 307
	NPV of Leasing		<u>K315 715</u>

It is an advantage to lease rather than own

The NPV of Cash Outflows is greater for owning by <u>(K31 802).</u>

(5)(d) 4.1 Market Values

Ordinary shares 2 000 000 x K10 = K20 000 000

Preference shares 4 000 000 x K15 = 6 000 000

Number of shares issued x the current market price

The current market price of the debt can be calculated as follows:

Present value of annuity (PVA) of interest payment + PV of capital repayment amount.

Po = K500 000 x PVAIF 10 YEARS, 12% +K5 000 000 x PVIF 10 years, 12%

=K500 000 x 5.6502 + K5 000 000 x 0.3220

=K2 825 100 + K1 610 000

= K4, 435,100

Where Po = market value

Therefore the total market value of the firm is the sum of the market value of each element

i.e K30, 435,100

4.2 Proportions

Ordinary/Shares	$\frac{20, 000 ,000}{30, 435,100}$	=	0.66
Preference/shares	$\frac{6 ,000, 000}{30 435 100}$	=	0.20
Dividend	$\frac{4, 435, 100}{30, 435, 100}$	=	0.14
		1.00	

4.3 Cost

Ordinary shares – Using CAPM

Equity = Rf + B (Rm-Rf)

= 8 + 1.2 (17 -8)

= 8 + 1.2 (9)

= 8 + 10.8

= 18.8%

Preference shares

Rp = D

Po

= 3 x 100

15 1

= 20%

Debt

Rd = YTM (I-Tc)

= 8.4%

4.4 WACC = (Proportion x Cost)

o/s	=	0.66 x 18.8%	=	12.41
p/s	=	0.2 x 20%	=	4.00
D	=	0.14 x 8.4%	=	1.18
				17.59%

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

CA APPLICATION ADVANCED DIPLOMA IN ACCOUNTANCY

CA 3.3: STRATEGIC BUSINESS ANALYSIS

WEDNESDAY 16 JUNE 2021

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

INSTRUCTIONS TO CANDIDATES

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

2. This paper is divided into TWO (2) sections:
   Section A: One (1) Compulsory question.
   Section B: There are four (4) questions. Attempt any three (3) questions.

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

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

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

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

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

8. Present legible and tidy work.

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

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

SECTION A

This is compulsory and must be attempted.

<u>QUESTION ONE</u> – (COMPULSORY)

Lufwanyama Enterprises Ltd. (LEL) would like to commence business operations in the field of fruit processing. Lufwanyama is a rural district with vast forests and multiple rivers with abundant water suitable for agricultural production but there are no good feeder roads, electricity or the necessary skilled manpower. The company still relies upon expensive expatriate labor due to the unavailability of local skills, a situation which they hope should change for the better very soon. Due to climate change, grains have become problematic to grow but fruits have not been affected by the same due to their drought resistant nature. But fruits are extremely susceptible to droughts and these have become the order of the day in recent years especially in sub-Saharan Africa where Zambia is located. Nevertheless, there is a huge unsatisfied market for fruits globally due to people preferring fruit-based diets which are inherently healthy. Further, Zambia has one of the most favorable climates in the world with plenty of water, sunlight, virgin forests, no hurricanes, no tornadoes, no snow, minimal flooding, rare droughts, good soils, and relatively flat land. Hence all kinds of fruits can be grown in the country throughout the year and marketed successfully to the final consumer. But the different fruits grow better in different parts of the country making the selection of the right fruits to grow cardinal to the success of the business venture.

LEL is a venture capital organization with immense financial resources from various interested investors located in Zambia and abroad who desire high returns on their investment. As such, it has a very diverse shareholding although locally dominated. These shareholders are like angel investors since their primary objective is to obtain the maximum return on their investments. Hence these shareholders hold immense power in terms of the running of the company strategically. But the company was started by a lawyer who recruited fellow lawyers to help run the company, hence they have little knowledge about strategic management, technology, business, production and other necessary skills required to run a modern startup company today. Fruits are also seasonal in Zambia in addition to them being very susceptible to insect, animal, weather and human attacks and destruction. The government has been very strong on wanting to diversify the Zambian economy and have promised to give various incentives like subsidies, favorable interest rates on loans, credit facilities and others to those farmers who would venture into non-traditional crops. Farming has become highly technological with different types of technologies being employed to make labor more efficient and productive. In this way, farming can be sustainable despite the attendant problems.

The natural possibilities are as follows:

Fruit	**Unit Costs, K'000**	**Unit Prices, K**	**Risk Level (%)**	**Risk Severity, High Or Low**	**Risk Frequency. High or Low**	**Growth Prospects, High Or Low**
Mango	1000	50	50	H	H	L
Bananas	1000	80	15	L	L	H
Oranges	1000	90	60	H	L	L
Strawberries	1000	100	75	L	H	H

The market demand is 10,000 kg per month. They can only process one type of fruit due to the available technology.

Required

(a) Describe the requirements which have to be met in order to ensure the suitability of this company's strategy in its environment. (5 marks)

(b) Determine the barriers to entry into this new type of agriculture and suggest how they can be lowered. (5 marks)

(c) Categorize the risks into families using a suitable technique. (5 marks)

(d) Carry out the strategic choice for this company and advise them which fruit to concentrate upon and why. Using risk analysis, show all the relevant workings and logics as required to arrive at your recommendation. (15 marks)

(e) Given the retained earnings = K500,000; total earnings = K1,500,000; EBIT = K2,000,000; capital invested = K5,000,000, sales = K3,000,000; forecast the growth in earnings for the shareholders. (10 marks)

[Total: 40 Marks]

SECTION B

Answer Any Three (3) from the following Questions.

QUESTION TWO

Dr. Ntali Fredrick owns a company which is about to embark on a project to produce motor vehicles for the domestic transport market and also for export. A choice had to be made between conventional gasoline models and electric/solar-powered models. In order to reduce risks in terms of the production of such high-value items, a suitable organizational structure was required.

Required

(a) Recommend an organizational structure that would be suitable for this organization, giving its specific requirements, advantages and demerits. (10 marks)

(b) Describe the different parts of the business environment in which this company is going to operate in and what types of analyses that can be done for each. (5 marks)

(c) Technology is a very important factor in today's business environment. Describe how changes in the technology can affect this organization. (5 marks)

[Total: 20 Marks]

QUESTION THREE

Management theory, developed over the past century, describes how companies plan, organize, staff, lead and control their employees. Effective managers get people to accomplish goals and use materials wisely to achieve profitability and maintain a competitive advantage. Advances in technology have enabled standardization, automation and globalization at a rate that early management theorists probably never thought possible. Complex information technology solutions, including hardware and software, allow businesses to create, store and retrieve data from locations throughout the world. In businesses large and small, all departments, including marketing, sales, finance and manufacturing, now typically depend on the company's IT infrastructure to manage the operations and functions necessary to complete business processes.

Required:

(a) Discuss the three (3) Strategic information systems that can be adopted by an organization (9 marks)

(b) Use the generic business strategies to show how Information systems can be used to achieve competitive advantage. (9 marks)

(c) Identify two advantages of virtual operations (2 marks)

[Total: 20 Marks]

QUESTION FOUR

Being in the clean energy business for more than twenty (20) years, PAZED Company was considering its plans for how the company might expand. The company decided to institutionalize its design process by building an innovation center. PAZED also added products that provided energy solutions beyond solar. Some within the company were hoping the company would go "deeper" and look at designing solutions for even poorer members of the Zambian population. Others were hoping that the company would go "wider" and expand beyond its current geographical areas in Muchinga and Kopala provinces. Whatever its direction, the strategic choices the company made at this point in its evolution would be crucial to determining its continued success.

Required:

(a) Diagrammatically use the correct model to determine the growth direction for PAZED. (12 marks)

(b) Johnson, Scholes & Whittington suggested two main principles and guidelines for product-market panning. Discuss four potential risks associated with implementing a product-market growth strategy. (8 marks)

[Total: 20 Marks]

QUESTION FIVE

Modern ethical standards impose a duty to guard, preserve, and enhance the value of the enterprise for the good of all touched by it, including the general public. Zambia Educational Requisites Limited (ZERL) is a quasi-government company dealing in many educational requisites needed by both government and private schools. It has been a perennial problem of the institution reported by Auditor Generals Reports, the daily papers and employees of the company of many unethical incidences that are embarrassing to the government the major shareholder. You have requested been request by the Zambia Education Coalition to investigate the institution on the unethical problems at institution.

Required:

Analyse the five (5) types of common ethical problems that you would target at the company.

[Total: 20 Marks]

END OF PAPER

CA 3.3 – STRATEGIC BUSINESS ANALYSIS SUGGESTED SOLUTION

<u>SOLUTION ONE</u>: CASE STUDY

a) **Suitability relates to the strategic logic of the chosen strategy. The strategy should fit the company's current strategic position and should satisfy the following requirements:**

- Exploit strengths in terms of unique resources and core competences.
- Rectify an organization's weaknesses or deal with problems identified in it.
- Neutralize or deflect environmental threats.
- Help the firm to seize opportunities.
- Satisfy the goals of the organization.
- Fill the gap that has been identified by gap analysis.
- Generate or maintain competitive advantage.
- Involve an acceptable level of risk.
- Suit the corporate culture and politics.

b) **Barriers to Entry**

- Scale economies
- Product differentiation
- Capital/investment requirements
- Knowledge requirements
- Switching costs
- Access to distribution channels.
- Cost advantages of existing producers independent of economies of scale.

Lowering of Barriers to Entry

Entry barriers can be lowered by the impact of change like:

- Environmental changes.
- Technological changes (including the Internet).
- New distribution channels for products and services (including the Internet).
- Use IS defensively (to increase economies of scale or raise capital cost of entry) or offensively (to leap over entry barriers).

c) **Risk Categorization: Risk Mapping**

<table>
<tr><td rowspan="4">Frequency</td><td colspan="3">Severity</td></tr>
<tr><td></td><td>Low</td><td>High</td></tr>
<tr><td>Low</td><td>No good feeder roads.
Climate change.
Loss of small suppliers</td><td>Droughts.
Shareholder power.
Loss of key investor.
Loss of senior or specialist staff.
Loss of sales to competitor.
Loss of sales due to macroeconomic factors.</td></tr>
<tr><td>High</td><td>Loss of lower level staff.</td><td>No electricity.
Lack of skilled manpower.
Reliance upon expensive expatriate labour.
Susceptibility to droughts.
People preferences change.
Wrong farming location.
Loss of key customers.
Failure of computer systems.
Loss of market.</td></tr>
</table>

d) **Strategic choice and advise**

FRUIT	UNIT COSTS, K'000	UNIT PRICES, K	TOTAL COSTS, K	TOTAL REVENUES, K	PROFIT/LOSS (TR – TC)
Mango	1000	50	100,000	500,000	K 400,000
Bananas	1000	80	100,000	800,000	700,000
Oranges	1000	90	100,000	900,000	800,000
Strawberries	1000	100	100,000	1,000,000	900,000

Fruit	Risk Level (%)	Risk Severity, High Or Low	Risk Frequency. High or Low	Growth Prospects, High Or Low
Mango	50	H	H	L
Bananas	15	L	L	H
Oranges	60	H	L	L
Strawberries	75	L	H	H

Results:

Maximum profit from strawberries.
Lowest risk level from bananas.
Highest growth prospects from bananas and strawberries.

Recommendation:
Since **strawberries** offer both maximum profits and highest growth prospects, strawberries should be chosen.

(e) Growth forecast in earning for shareholders

Retention rate = Retained earnings / Total earnings
= K 500,000 / K 1,500,000
= 0.33 or 33%

Return on Invested Capital (ROIC) = Sales / Invested Capital
= K 3,000,000 / K 5,000,000
= 0.6 or 60%

Earnings Growth Rate = Return on Invested Capital x Retention Rate
= 0.60 x 0.33
= **0.198** or **19.8%**

SOLUTION TWO

(a) Recommend and describe an organizational structure that would be suitable for this organization, giving its demerits, specific operational features and requirements.

The **transnational structure** attempts to reconcile global scope and scale with local responsiveness. It tries to combine the best of the international strategy in terms of economies of scale from a low-cost product specified for a single market and a range of low volume, high-cost products each specified for and produced in a single national market. The former is the global while the later is the multi-domestic approaches to organization which require their own characteristic organizational structures.

Specific operational characteristics:

- National units are independent operating entities but also provide capabilities that are utilized by the rest of the organization.
- Such shared capabilities allow national units to achieve global, or at least regional, economies of scale.
- The global corporate parent adds value by establishing the basic role of each national unit and then supporting the systems, relationships and culture that enable them to work together as an effective network.
- It responds specifically to the challenges of globalization.
- It tends to have a high proportion of fixed responsibilities in the horizontal lines of management.

Specific requirements

If it is to work, the transnational structure must have very clearly defined managerial roles, relationships and boundaries.

- Managers of global products or businesses have responsibilities for strategies, innovation, resources and transactions that transcend both national and functional boundaries.
- Country managers must feedback local requirements and build unique local competences.
- Functional managers nurture innovation and spread best practice.
- Managers at the corporate parent lead, facilitate and integrate all other managerial activity. They must also be talent spotters within the organization.

Demerits of the transnational structure

- It makes great demands on its managers, both in their immediate responsibilities and in the complexity of their relationships within the organization.
- The complexity of the organization can lead to the difficulties of control and the complications introduced by internal political activity.

(b) Describe the different parts of the business environment in which this company is going to operate in and what types of analyses that can be done for each.

The Macro-environment

Analyses:

PESTEL – identifies 6 types of influences on the organization. Political, Economic, Socio-cultural, Technological, Environmental, Legal. These are general environmental factors.

Key drivers of change.

Scenarios

The Industry or Sector

Analyses:

Five Forces – New entrants, Substitute products, bargaining power of customers, Bargaining power of suppliers, Rivalry amongst current competition.

Cycles of competition

- Competitors and Markets
- Analyses:
- Strategic groups
- Market segments
- Critical success factors

(c) Technology is a very important factor in today's business environment. Describe how changes in the technology can affect this organization.

Effects of technological change on the organization.

- The type of products or services that are made and sold.
- The way in which products are made.
- The way in which goods and services are sold.
- The way in which markets are identified.
- The way in which firms are managed.
- The means and extent of communications with external clients.

SOLUTION THREE

(a) **Discuss the three Strategic information systems that can be adopted by an organization**

i- Executive information system (EIS), **-**designed to provide senior manager with easy to access key internal and external information. It summaries and tracks strategically critical information.

ii- Management Information System (MIS),- designed to enable managers to make timely decisions for there functions. Provides reports and summaries files

iii- Decision Support Systems (DSS),-combine data and analytical models or data tools to support semi-structured and unstructured decision making

b) Use the generic business strategies to show how Information systems can be used to achieve competitive advantage.

Cost leadership- by facilitating reduction in cost levels. Low cost producer status involves more than just going down the learning curve. A low cost producer must find and exploit all sources of cost advantage. Low cost producers typically sell standard, or no-frills, products and place considerable emphasis on reaping scale or absolute cost advantages from all the sources.

Differentiation- The second generic strategy is differentiation. In this strategy an organization seeks to be unique in its industry along dimensions by using advance technology. It is rewarded for its uniqueness with a premium price. An organization that can achieve and sustain differentiation will be an above average performer in its industry if its premium price exceeds the extra cost incurred in being unique. A differentiation, therefore, must always seek ways of differentiating that lead to a premium price greater than the cost of differentiating.

Focus- This strategy is quite different from others because it rests on the choice of narrow competitive scope within an industry. The focuser selects a segment or group of segments in the industry and tailors its strategy to serving them to the exclusion of others. The focus strategy has two variants. In a cost focus an organization seeks a cost advantage in its target segments, while in differentiation focus, an organization seeks differentiation in its targets.

c) Identify two advantages of virtual operations

- It is cheaper- people work in remote stations
- Time – people save travelling time

SOLUTION FOUR

a) Use the growth vector matrix to determine the direction of growth for PAZED.

Ansoff's model is based on a matrix comprised of 'markets' on the vertical axis and 'products' on the horizontal axis. In turn, each axis is sub-divided into 'existing' and 'new'. Each cell of the matrix so formed represents a different strategic alternative for achieving growth. The matrix and each alternative is shown below:

		PRODUCT	
		EXISTING	**NEW**
MARKET	**EXISTING**	MARKET PENETRATION	PRODUCT DEVELOPMENT
	NEW	MARKET DEVELOPMENT	DIVERSIFICATION

Turning to each of the strategic alternatives in the matrix, an explanation of the characteristics of each alternative and the considerations in choosing between them.

(a) Market penetration

This strategy is based on expanding sales from present products in present markets. Where the total market is still growing, this strategy may be achieved for example through 'natural market growth'. In markets which are static or declining, however, a market penetration strategy can only be achieved by either increasing the total market through, for example, increasing usage or purchasing rate with existing customers or by increasing market share at the expense of competitors. Clearly such a strategy will require aggressive marketing backed by, for example, heavy price discounts, promotional activity, etc. An example of an organisation successfully using market penetration to grow is the Kellogg's company with their successful Cornflakes campaign.

(b) Market development

This strategy is based on expansion by entering new markets but with present products. For example the company might attempt to identify additional channels of distribution. Alternatively, the company might look for new locations, for example export markets. A classic way of achieving growth through market development is by reaching into new market segments. This strategy for growth is potentially high in synergy but the new markets must be carefully assessed with respect to, for example, the attractiveness of the market for the company; the extent to which the resources of the company match the new markets; and the potential effect on existing product markets. Many companies have found to their cost that it is not always straightforward to transfer skills and experience into a new market, particularly where that market is in another country. An example of an organisation using this strategy to grow is Nestlé in the coffee-drinking market through their expansion into new geographical markets.

(c) Product development

Product development entails developing and launching new products for sale in present markets. In fact these might be extensions to the existing product range such as, for example, products with additional features, different packaging, different quality levels etc. At the other extreme this strategy may be based on entirely new products for the market. Even where a company is familiar with the market through experience, this can be a risky strategy. Research indicates that more new products fail than succeed and therefore this growth strategy should be carefully evaluated. Where products are entirely new to the company, this can reduce the potential for synergy with existing products. An example of a company using product development as a strategy for growth is the Ford Motor Company with their expansion of the product range to include executive and luxury products.

(d) Diversification

This strategy is probably the highest risk of all the four strategic options inasmuch as it involves a company seeking to expand on the basis of new products and new markets. Diversification can take a number of forms; for example, a company might choose to diversify into new product markets that are similar in some way to existing products in that they have some relationship to existing technological and/or marketing know-how but which target new customer groups. The most radical, and therefore most risky, form of diversification growth is where the company diversifies into entirely new products and markets which are unrelated in any way to the existing business. This form of so-called 'conglomerate' form of diversification was very popular during the 1980s and early 1990s but its attendant risks have forced companies to be more wary of this method of strategic growth. An example of a company using diversification to grow is Scottish Power in the Chaptered Kingdom, which has diversified into financial services, telecoms and the water market.

A strategy of an organization forms a comprehensive master plan stating how the organization will achieve its mission and objectives. It maximizes competitive advantage and minimizes competitive disadvantage.

b) Johnson, Scholes & Whittington suggested two main principles and guidelines for product-market panning. Discuss four potential risks associated with implementing a product-market growth strategy.

- Market risk- when a firm enters a new market it will face competition from the exiting firms
- Product risk- New products risks being rejected and the costs may be high before realizing the positive retains
- Managerial risk- management may not be able to run and turnaround the new product effectively

- Financial risk- Cash flow from the new product is usually volatile and there can be need to raise more cash to support the new product.

SOLUTION FIVE

The Common ethical problems at Zambia Educational Requisites Limited that would be targeted for investigation and analysis would include the following:

(i) **Exhortation**. Officials have been known to threaten schools and institutions with complete closure of business with them unless suitable payments are made.

(ii) **Bribery.** This refers to payments for services to which institutions and individuals are not legally entitled.

(iii) **Grease money.** Multinational companies are sometimes unable to obtain services to which they are legally entitled because of deliberate stalling by local officials. Cash payment to "the right people" may be requested to oil the machinery of bureaucracy.

(iv) **Gifts.** In some culture, including Zambia, gifts are regarded as an essential part of civilized negotiations, even in circumstances where in the Western culture they might appear ethically dubious. Managers operating in such a culture may feel an obligation to adopt the local customs.

(v) **Conflict of interest.** A conflict of interest in business refers to a situation in which an individual's interests conflict with interests of their employer. For example, a purchasing manager may face a situation where a friend or relative applies to become a preferred supplier to the business.

END OF SOLUTION

CA ZAMBIA PROGRAMME EXAMINATIONS

CA ADVISORY PROFESSIONAL IN ACCOUNTANCY

CA 3.1: ADVANCED FINANCIAL REPORTING

MONDAY 14 JUNE 2021

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

INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading time. Use it to study the examination paper carefully so that you understand what to do in each question.
2. This paper is divided into TWO (2) sections:

   Section A: One (1) compulsory scenario question.

   Section B: Four (4) Optional scenario Questions. Attempt any three (3) questions.
3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name must **NOT** appear anywhere on your answer booklet.
4. Do **NOT** write in pencil (except for graphs and diagrams).
5. **Cell Phones** are **NOT** allowed in the Examination Room.
6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.
7. All workings must be done in the answer booklet.
8. Present legible and tidy work.
9. Graph paper (if required) is provided at the end of the answer booklet.
10. Present Value and Annuity tables are attached at the end of this paper.

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

SECTION A:

THIS QUESTION IS COMPULSORY AND MUST BE ATTEMPTED

QUESTION ONE- (COMPULSORY)

Zakeyo Plc has over the years pursued a strategy of growth through acquisitions within the manufacturing industry.

The draft statements of financial position of Zakeyo Plc and its investees Yobe Plc and Mateyo Plc as at 31 December 2020 are as follows:

	Zakeyo Plc	Yobe Plc	Mateyo Plc
ASSETS	**K'm**	**K'm**	**K'm**
Non current			
Property Plant and Equipment	500	375	425
Investment in:			
Yobe Plc	300		
Mateyo Plc	230	150	
	1030	525	425
Current assets	150	175	200
Total assets	1,180	700	625
EQUITY AND LIABILITIES			
Equity			
Share Capital	250	125	125
Retained earnings	580	400	350
Other Reserves	100	50	100
	930	575	575
Non Current Liabilities	150	75	30
Current Liabilities	100	50	20
Total equity and liabilities	1,180	700	625

Further information:

1. Zakeyo Plc acquired 60% of Yobe Plc's equity on 1 January 2015 at a cost of K250 million when Yobe Plc's retained earnings and other reserves amounted to K230 million and K32.5 million respectively. The fair value of Yobe Plc's identifiable net assets on 1 January 2015 was K400 million. The difference between the fair value and carrying amounts of Yobe Plc's identifiable net assets on 1 January 2015 was attributable to an item of plant which had a remaining useful economic on that date of eight (8) years.

   A 40% holding in Yobe Plc had a fair value K167 million on that date. Zakeyo plc has choosen to apply the full goodwill method in respect of all its acquisitions.

2. Zakeyo Plc acquired 35% of Mateyo Plc's equity on 1 January 2018 at a cost of K100 million. When Mateyo Plc's retained earnings and other reserves amounted to K100 million and K25 million respectively. The fair value of Mateyo Plc's identifiable net assets on 1 January 2018 was equal to their carrying amounts. The 35% holding gave Zakeyo Plc significant influence in Mateyo Plc.

3. Yobe Plc acquired 20% of Mateyo Plc's equity on 1 January 2019 at a cost of K125 million. When Mateyo Plc's retained earnings and other reserves amounted to K300 million and K75 million respectively. The fair value of Mateyo Plc's identifiable net assets on 1 January 2019 was K550 million. The difference between the fair value and carrying amounts of Mateyo Plc's identifiable net assets on 1 January 2019 was attributable to an item of plant which had a remaining useful economic use on that date of 10 years.

   The fair value of a 35% holding in Mateyo Plc on 1 January 2019 was K218.8 million whilst that of a 47% holding and a 53% holding was K293.8 million and K331.3 million respectively.

4. All the equity investment assets have been classified as Fair Value Through Other Comprehensive Income (FVTOCI) items in the separate financial statements of investor entities above in accordance with IFRS 9 Financial Instruments.

5. Arising from purchases of trading inventory from Mateyo Plc, Yobe Plc's closing inventory at 31 December 2020 includes items bought from Mateyo Plc at a price of K25 million. Mateyo Plc invoices Yobe Plc at a markup of 25%.

6. There had been no impairment losses in respect of investments in Yobe Plc and Mateyo Plc prior to 1 January 2020. A review of the investments at 31 December 2020 shows that the recoverable amounts of Yobe Plc and Mateyo Plc as Cash Generating Units at 31 December 2020 are K550 million and K650 million respectively.

7. Zakeyo Plc's property plant and equipment includes a building that was acquired on 1 January 2010 at a cost of K55 million. The building is being depreciated over a total life of 50 years on a straight line basis with a nil residual value. The building was last revalued on 31 December 2018 to a fair value of K44 million. The building is yet to be revalued on 31 December 2020 to a fair value of K43.5 million.

   Required:

   Prepare the Zakeyo Plc Group Consolidated Statement of Financial Position as at 31 December 2020. (40 marks)

   [Total: 40 Marks]

SECTION B:

Attempt any THREE (3) questions in this section.

<u>QUESTION TWO</u>

(a) (i) Discuss the general recognition principles for provisions in accordance with IAS 37 *Provisions, Continent Liabilities and Contingent Assets* with regard to accounting for provisions. (5 marks)

(ii) Mwabombeni Limited is a large entity in the retail sector within Zambia and was formed on 30 November 2010. The audit for 2021 for Mwabombeni Ltd has not yet commenced. The estimated audit fee for the audit of the 2021 financial statements amounts to K 30,000. The directors proposed to the finance manager to accrue the audit fee in the 2021 financial statements. The Finance manager was not sure whether or not this fee should be provided for in the 2021 financial statements.

Required:

Discuss the extent to which you agree with the directors' proposed accounting treatment for the audit fee. (5 marks)

(b) **Zamforeign plc** has an overseas subsidiary which has made a loss (adjusted for tax purposes and appropriately translated into Kwacha) of K3,000 million for the year ended 30 September 2020. Local tax legislation allows this loss to be relieved for tax purposes only against future profits of the same trade. Zamforeign has no other subsidiaries in the same tax jurisdiction as this subsidiary. The loss is primarily due to a reduction in revenue caused by a reduction in demand for the product that the subsidiary produces. There is little indication that demand will be restored to its former levels in the foreseeable future.

Zamforeign has recognised a deferred tax asset of K1,200 million in the draft financial statements, being the future tax consequences of the temporary difference of K3,000 million, measured at the local tax rate of 40%.

Required:

(i) Explain why permanent difference between accounting profits and taxable profits do not have deferred tax consequences. (2 marks)

(ii) Discuss the validity of the accounting treatment adopted by Zamforeign plc based on relevant International Financial Reporting Standards. You should clearly state what adjustment if any is needed in Zamforeign's financial statements. (3 marks)

(c) **Bonibank Ltd** purchased a 6% K50 million bond on 1 August 2020 at a 10% discount to par value. Expenses of purchase were K500,000. The bond is due for redemption on 31 July 2030 at par. The effective annual interest rate to maturity is 7.3%. Bonibank intends to hold the bond until its maturity date.

Required:

In accordance with *IFRS 9: Financial Instruments*, how much should be recognised in Bonibank financial statements in respect of the above transaction for the year ended 31 July 2021? (5 marks)

[Total: 20 Marks]

QUESTION THREE

(a) Segmental information reported externally is more useful if it conforms to information used by management in making decisions. The information can differ from that reported in the financial statements. Although reconciliations are required, these can be complex and difficult to understand. Additionally, there are other standards where subjectivity is involved and often the profit motive determines which accounting practice to follow. The directors have a responsibility to shareholders in disclosing information to enhance corporate value but this may conflict with their corporate social responsibility.

Required:

Discuss how the ethics of corporate social responsibility are difficult to reconcile with shareholder expectations. (4 marks)

(b) The Zambia ICT College (ZICTC) is the fastest growing higher learning institution in Zambia. The college is a Government institution and is the only specialised premier centre of Excellency for research and training in ICTs in Zambia. The college has four business areas (faculties) which are reported separately in its internal accounts provided to the Head-Finance and Administration. The four operating segments are: Information and Technology (IT), Business, Engineering and Open and distance learning (ODL). Operating segment information as at 31 December 2020 are as follows:

Operating Segments (Faculty)	Total Revenue K' million	Segment profit/loss K' million	Segment Assets K'million	Segment Liabilities K' million
IT	134	22	236	100
Business	20	(4)	36	150
Engineering	24	2	38	50
ODL	94	(12)	108	200
TOTALS	272	8	418	500

Required:

Discuss which of the operating segments of ZICTC constitute 'reportable' operating segments under IFRS 8 Operating Segments for the year ending 31 December 2020.

(6 marks)

(c) Muchinga Plc, a once high performing company, has been having financial challenges.

The Directors of Muchinga are disappointed by the profit in the draft financial statements for the year ended 30 September 2020. The company's assistant accountant has suggested two areas where she believes the reported profit may be enhanced:

(i) A major item of plant that cost K40 million to purchase and install on 1 October 2017 is being depreciated on a straight-line basis over a five-year period. The plant is wearing well and at the beginning of the current year (1 October 2019) the production manager believed that the plant was likely to last eight (8) years in total (i.e. from the date of its purchase). The assistant accountant has calculated that, based on an eight-year life the accumulated depreciation of the plant at 30 September 2020 would be K15 million (K40 million/8 years x 3). In the financial statements for the year ended 30 September 2019, the accumulated depreciation was K16 million (K40 million/5 years x 2). Therefore, by adopting an eight-year life, Muchinga can avoid a depreciation charge in the current year and instead credit K1 million (K16 million – K15 million) to the income statement in the current year to improve the reported profit. (5 marks)

(ii) Most of Muchinga's competitors value their inventory using the average cost (AVCO) basis, whereas Muchinga uses the first in first out (FIFO) basis. The value of Muchinga's inventory at 30 September 2020 (on the FIFO basis) is K40 million, however on the AVCO basis it would be valued at K36 million. By adopting the same method (AVCO) as its competitors, the assistant accountant says the company would improve its profit for the year ended 30 September 2020 by K4 million. Muchinga's inventory at 30 September 2019 was reported as K30 million, however on the AVCO basis it would have been reported as K26·8 million. (5 marks)

Required:

Comment on the acceptability of the assistant accountant's suggestions and quantify how they would affect the financial statements if they were implemented under International Financial Reporting Standards. **[Total: 20 Marks]**

QUESTION FOUR

(a) Twalumba enters into a contract on 1 December 2020 to construct a printing machine on a customer's premises for a promised consideration of K3,000,000 with a bonus of K200,000 if the machine is completed within 24 months. At the inception of the contract, Twalumba correctly accounts for the promised bundle of goods and services as a single performance obligation in accordance with IFRS 15.

At the inception of the contract, Twalumba expects the costs to be K1,600,000 and concludes that it is highly probable that a significant reversal in the amount of cumulative revenue recognised will occur. Completion of the printing machine is highly susceptible to factors outside of Twalumba's influence, mainly issues with the supply of components.

At 30 November 2021, Twalumba has satisfied 65% of its performance obligation on the basis of costs incurred to date and concludes that the variable consideration is still constrained in accordance with IFRS 15.

However, on 4 December 2021, the contract is modified with the result that the fixed consideration and expected costs increase by K220,000 and K120,000 respectively. The time allowable for achieving the bonus is extended by six months with the result that Twalumba concludes that it is highly probable that the bonus will be achieved and that the contract still remains a single performance obligation. Twalumba has an accounting year end of 30 November.

Required:

Discuss how the above contract should be accounted for under IFRS 15, up to 4 December 2021. (10 marks)

(b) On 1 January 2020, Twikatane Ltd applied to a government agency for a grant to assist with the construction of a factory in Kawambwa. The proposed construction cost of the factory was K52 million and the company projected that 350 people would be employed after completion. The land was already owned by Twikatane.

On 1 March 2020, the government agency offered to grant a sum amounting to 25% of the factory's construction cost to a maximum of K13 million. The grant aid was to be advanced on completion, and would be repayable on demand if total employment at the factory fell below 300 people within 5 years of completion. At the financial year end, 31 March 2020, Twikatane had accepted the offer of grant aid, and had signed contracts for the construction of the factory at a total cost of K52 million. Construction work was due to commence on 1 April 2020.

By 31 March 2021, the factory had been completed on budget, 400 people were employed ready to commence manufacturing activities, and the government agency agreed that the conditions necessary for the drawdown of the grant had been met.

On 1 April 2021, the factory was brought into use. It was estimated that it would have a ten-year useful economic life. On 1 June 2021, the government agency paid over the agreed K13 million. In addition, the company sought and was paid an employment grant of K1.2 million as employment exceeded original projections. This is expected to be payable annually for 5 years in total, at a rate of K12,000 per additional person employed over 300 in each year. There are no repayment provisions attached to the employment grant.

The Directors of Twikatane expect employment levels to exceed 350 people for at least 4 further years from 31 March 2022.

Required:

Explain and show how Twikatane Ltd should record the above transactions and events in its financial statements for years ended 31 March 2020, 2021 and 2022. (10 marks)

[Total: 20 Marks]

QUESTION FIVE

Poland Plc promoted their Finance Director and transferred him to Vanuatu Island. The company profitability appears to be good though sales revenue has not grown to expectation. You have been nominated to review the financial statements prepared by the director before he left and prepare a report to be included in the Annual Report.

The financial statements of Poland for current and preceding years are shown below:

STATEMENT OF FINANCIAL POSITION AS AT 31 DECEMBER

	2020	2019
	K'm	K'm
Non Current Assets:		
Property, Plant and equipment	965	846
Financial Assets	55	70
Investment in Subsidiary	120	185
	1140	1101
Current Assets:		
Inventories	155	130
Trade Receivables	145	125
Cash and Cash equivalents	385	325
	685	580
Total assets	**1, 825**	**1, 681**
Equity:		
K1.50 Ordinary shares	450	200
Revaluation reserve	40	105
Fair Value Adjust Reserve	(30)	15
Retained Earnings	905	716
	1365	1036
Non Current Liabilities:		
15% Loan Notes	100	150
Deferred Tax	30	45
	140	195
Current Liabilities:		
Trade Payables	260	385
Current Tax	70	65
	320	450
Total equity and Liabilities	**1, 825**	**1, 681**

STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME FOR THE YEAR ENDED 31 DECEMBER

	2020	2019
	K'm	**K'm**
Revenue	1550	1350
Cost of sales	(700)	(670)
Gross profit	850	680
Other operating income	30	--
Administrative expenses	(160)	(38)
Distribution costs	(35)	(24)
Other operating expenses	(20)	(15)
Operating profit	655	603
Finance costs	(15)	(12)
Investment income	25	15
Profit before tax	675	606
Income Tax expense	(165)	(135)
Profit for the year	510	471
Other comprehensive income:		
Revaluation of equity investment	(30)	15
Revaluation of property	(65)	25
Total Comprehensive Income	545	511

Additional information

1. Non-financial:

   The company has been experiencing employee high turnover and those still in employment are demotivated. Further, due to various economic factors, it is thought that the useful economic lives of non-current assets are actually twice as long as they should be.

2. Poland also invested in 10,000,000 shares of a listed company in January 2019 at a cost of K7.00 per share. Transaction costs relating to the investment were K800,000 and accounted for correctly in that year. Market share prices rose to K8.50 on 31 December 2019 and dropped to K5.50 on 31 December 2020. Movements in the carrying amount of the investment are taken to Other Comprehensive Income.

Required:

Analyse the financial performance and financial position of Poland plc.

[Total: 20 Marks]

END OF PAPER

Annuity Table

Present value of an annuity of 1 i.e. $\frac{1 - (1 + r)^{-n}}{r}$

Where r = discount rate
n = number of periods

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	1·970	1·942	1·913	1·886	1·859	1·833	1·808	1·783	1·759	1·736	2
3	2·941	2·884	2·829	2·775	2·723	2·673	2·624	2·577	2·531	2·487	3
4	3·902	3·808	3·717	3·630	3·546	3·465	3·387	3·312	3·240	3·170	4
5	4·853	4·713	4·580	4·452	4·329	4·212	4·100	3·993	3·890	3·791	5
6	5·795	5·601	5·417	5·242	5·076	4·917	4·767	4·623	4·486	4·355	6
7	6·728	6·472	6·230	6·002	5·786	5·582	5·389	5·206	5·033	4·868	7
8	7·652	7·325	7·020	6·733	6·463	6·210	5·971	5·747	5·535	5·335	8
9	8·566	8·162	7·786	7·435	7·108	6·802	6·515	6·247	5·995	5·759	9
10	9·471	8·983	8·530	8·111	7·722	7·360	7·024	6·710	6·418	6·145	10
11	10·37	9·787	9·253	8·760	8·306	7·887	7·499	7·139	6·805	6·495	11
12	11·26	10·58	9·954	9·385	8·863	8·384	7·943	7·536	7·161	6·814	12
13	12·13	11·35	10·63	9·986	9·394	8·853	8·358	7·904	7·487	7·103	13
14	13·00	12·11	11·30	10·56	9·899	9·295	8·745	8·244	7·786	7·367	14
15	13·87	12·85	11·94	11·12	10·38	9·712	9·108	8·559	8·061	7·606	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	1·713	1·690	1·668	1·647	1·626	1·605	1·585	1·566	1·547	1·528	2
3	2·444	2·402	2·361	2·322	2·283	2·246	2·210	2·174	2·140	2·106	3
4	3·102	3·037	2·974	2·914	2·855	2·798	2·743	2·690	2·639	2·589	4
5	3·696	3·605	3·517	3·433	3·352	3·274	3·199	3·127	3·058	2·991	5
6	4·231	4·111	3·998	3·889	3·784	3·685	3·589	3·498	3·410	3·326	6
7	4·712	4·564	4·423	4·288	4·160	4·039	3·922	3·812	3·706	3·605	7
8	5·146	4·968	4·799	4·639	4·487	4·344	4·207	4·078	3·954	3·837	8
9	5·537	5·328	5·132	4·946	4·772	4·607	4·451	4·303	4·163	4·031	9
10	5·889	5·650	5·426	5·216	5·019	4·833	4·659	4·494	4·339	4·192	10
11	6·207	5·938	5·687	5·453	5·234	5·029	4·836	4·656	4·486	4·327	11
12	6·492	6·194	5·918	5·660	5·421	5·197	4·988	4·793	4·611	4·439	12
13	6·750	6·424	6·122	5·842	5·583	5·342	5·118	4·910	4·715	4·533	13
14	6·982	6·628	6·302	6·002	5·724	5·468	5·229	5·008	4·802	4·611	14
15	7·191	6·811	6·462	6·142	5·847	5·575	5·324	5·092	4·876	4·675	15

Present Value Table

Present value of 1 i.e. $(1 + r)^{-n}$

Where r = discount rate
n = number of periods until payment

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	0·980	0·961	0·943	0·925	0·907	0·890	0·873	0·857	0·842	0·826	2
3	0·971	0·942	0·915	0·889	0·864	0·840	0·816	0·794	0·772	0·751	3
4	0·961	0·924	0·888	0·855	0·823	0·792	0·763	0·735	0·708	0·683	4
5	0·951	0·906	0·863	0·822	0·784	0·747	0·713	0·681	0·650	0·621	5
6	0·942	0·888	0·837	0·790	0·746	0·705	0·666	0·630	0·596	0·564	6
7	0·933	0·871	0·813	0·760	0·711	0·665	0·623	0·583	0·547	0·513	7
8	0·923	0·853	0·789	0·731	0·677	0·627	0·582	0·540	0·502	0·467	8
9	0·941	0·837	0·766	0·703	0·645	0·592	0·544	0·500	0·460	0·424	9
10	0·905	0·820	0·744	0·676	0·614	0·558	0·508	0·463	0·422	0·386	10
11	0·896	0·804	0·722	0·650	0·585	0·527	0·475	0·429	0·388	0·305	11
12	0·887	0·788	0·701	0·625	0·557	0·497	0·444	0·397	0·356	0·319	12
13	0·879	0·773	0·681	0·601	0·530	0·469	0·415	0·368	0·326	0·290	13
14	0·870	0·758	0·661	0·577	0·505	0·442	0·388	0·340	0·299	0·263	14
15	0·861	0·743	0·642	0·555	0·481	0·417	0·362	0·315	0·275	0·239	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	0·812	0·797	0·783	0·769	0·756	0·743	0·731	0·718	0·706	0·694	2
3	0·731	0·712	0·693	0·675	0·658	0·641	0·624	0·609	0·593	0·579	3
4	0·659	0·636	0·613	0·592	0·572	0·552	0·534	0·516	0·499	0·482	4
5	0·593	0·567	0·543	0·519	0·497	0·476	0·456	0·437	0·419	0·402	5
6	0·535	0·507	0·480	0·456	0·432	0·410	0·390	0·370	0·352	0·335	6
7	0·482	0·452	0·425	0·400	0·376	0·354	0·333	0·314	0·296	0·279	7
8	0·434	0·404	0·376	0·351	0·327	0·305	0·285	0·266	0·249	0·233	8
9	0·391	0·361	0·333	0·308	0·284	0·263	0·243	0·225	0·209	0·194	9
10	0·352	0·322	0·295	0·270	0·247	0·227	0·208	0·191	0·176	0·162	10
11	0·317	0·287	0·261	0·237	0·215	0·195	0·178	0·162	0·148	0·135	11
12	0·286	0·257	0·231	0·208	0·187	0·168	0·152	0·137	0·124	0·112	12
13	0·258	0·229	0·204	0·182	0·163	0·145	0·130	0·116	0·104	0·093	13
14	0·232	0·205	0·181	0·160	0·141	0·125	0·111	0·099	0·088	0·078	14
15	0·209	0·183	0·160	0·140	0·123	0·108	0·095	0·084	0·074	0·065	15

SUGGESTED SOLUTIONS

SOLUTION ONE

Zakeyo Plc Group CSFP as at 31.12.2020

		K'm
Assets		
Non current		
Property Plant and Equipment	(W1)	1,341.6
Goodwill (W2)		40
		1,381.6
Current	(150+175+200-25X25/125)	520
		1,901.6
Equity and Liabilities		
Equity		
Share Capital		250
Retained Earnings	(W4)	571.5
Other Reserves	(W5)	140
Equity attributable to owners of parent		961.9
Non controlling Interests (W6)		514.7
Total Equity		1,476.6
Non current liabilities (150+75+30)		255
Current liabilities (100+50+20)		170
Total equity and liabilities		1,901.6

Workings to the CSFP:

W1. PPE

	K'm
Given amounts:	
Zakeyo	500
Yobe	375
Mateyo	425
	1,300
Adjustments:	
Fair value gains on acquisition of:	

Yobe	(400-[125+230+32.5])	12.5
Mateyo	(550-[125+300+75])	50
Accum deprec on FV gains:		
Yobe	12.5/8X6	(9.6)
Mateyo	50/10X2	(10)
Revaluation of Zakeyo's PPE (43.5-44X39/41)		1.6
Yobe impairment loss attributable to PPE (W3)		(3.1)
		1,341.6

W2. Goodwill on acquisition of:

i) Yobe

	K'm
Cost of acquisition	250
NCI at acquisition	167
Less FV of identifiable NA	(400)
Goodwill at acquisition	17
Less impairment loss (W3)	(17)
Carrying amt at 31.12.2020	-

ii) Mateyo

		K'm
Cost of acquisition	(218.8+60%X125)	293.8
NCI at acquisition	(FV of 53% holding)	331.3
Less FV of identifiable NA at acquisition		(550)
Goodwill at acquisition		75.1
Impairment loss		(35.1)
Carrying amount at 31.12.2020		40

W3. Review of Yobe and Mateyo as CGUs for impairment:

i) Yobe

	K'm
Carrying amounts at 31.12.2020:	
Identifiable:	
Given (Equity)	575
Net FV gain (12.5-9.4)	3.1
Reversal of gain on invest. in Mateyo (150-125)	(25)
	553.1
Goodwill	17
Total	570.1

Recoverable amount (given in question)		550
Total loss	(570.1-550)	20.1
Allocated to Goodwill		(17)
Balance allocated to PPE		3.1

ii) Mateyo

			K'm
Carrying amounts at 31.12.2020:			
Identifiable:			
Given (Equity)			575
Net FV gain	(50-10)		40
Unrealised profit	25X25/125		(5)
			610
Grossed up Goodwill			75.1
Total			685.1
Recoverable amount (given)			650
Total loss	(685.1-650)		35.1
Allocated to gross goodwill (maximum)			(35.1)

W4 Group Retained Earnings

				K'm
Zakeyo RE				580
Share of post acquisition RE of				
Yobe	60%(400-230)			102
Mateyo	(35%[300-100]+47%[350-300])			93.5
Adjustments:				
Reversal of gains on remeasurement FVTPL assets				
- Zakeyo's investment in Yobe	(300-250)			(50)
- Zakeyo's investment in Mateyo	(230-100)			(130)
- Yobe's investment in Mateyo	(150—125)X60%			(15)
Gain on derecognition of Mateyo as associate:				
Fair Value at date of derecognition			218.8	
Carrying amt of associate (equity value):				
Cost		100		
Share of post acquisition				
RE	35%(300-100)	70		
Other reserves	35%(75-25)	17.5		
			(187.5)	31.3
Accum FV depreciation:				
- Yobe	9.4X60%			(5.6)
- Mateyo	10X47%			(4.7)
Unrealised profit in closing inventory	5X47%			(2.4)
Revaluation of Zakeyo's PPE:				
Total gain (W1)		1.6		

FV at revaluation		43.5		
Cost model carrying amt	55X39/50	42.9		
Amount before revaluation	44X39/41	41.9		
Therefore gain to report in P/L (hence RE)		(42.9-41.9)		
Impairment losses (W3):				
- Goodwill in Yobe 60%X17				(10.2)
- Goodwill in Mateyo				(4.7)
- PPE in Yobe	60%X3.1			(1.9)
				571.5

W5. Other Reserves

				K'm
Zakeyo other reserves				100
Share of post acquisition RE of				
Yobe	60%(50-32.5)			10.5
Mateyo	(35%[75-25]+47%[100-75])		29.3	
Revaluation of Zakeyo's PPE:				
Total gain (W1)		1.6		
Less gain in P/L (W4)		(1)		0.6
				140.4

W6. NCI in

i) Yobe

		K'm
At acquisition		167
Post acquisition changes:		
RE	40%(400-230)	68
FV depreciation	40%X9.4	(3.8)
Reversal of gain on investment in Mateyo	40%(150-125)	(10)
Share of Yobe's cost of investment in Mateyo	40%X125	(50)
Impairment losses on review of Yobe as a CGU:		
Goodwill loss	40%X17	(6.8)
PPE	40%X3.1	(1.2)
Other Reserves	40%(50-32.5)	7
		170.2

ii) Mateyo

		K'm
At acquisition		331.3
Post acquisition changes:		
RE	53%(350-300)	26.5

FV depreciation	53%X10	(5.3)
Goodwill loss	53%X35.1	(18.6)
Unrealised profits	53%X5	(2.7)
Other Reserves	53%(100-75)	13.3
		344.5

SOLUTION TWO

(a)

(i) IAS 37 states that a provision should not be recognized unless:

1. An entity has a present obligation (legal or constructive) as a result of past event.
2. It is probable that an outflow of resources embodying economic benefits will be required to settle the obligation.
3. A reliable estimate can be made of the amount of the obligation.

(ii)

Mwabombeni Limited

To: Directors
From: Financial Accountant
Date: Date for exam
Subject: Accounting treatment of estimated audit fee for the 2021 financial statements

1. Introduction

This report highlights the appropriate accounting treatment of the estimated audit fee for the 2021 financial statements amounting to K 30, 000. The discussion and conclusion is primarily based on:

i. IAS 37 *Provisions, contingent liabilities and contingent assets*
ii. IAS 8 Accounting policies, estimates and errors
iii. IAS 10 Events after the reporting period

2. Recognition and measurement

A liability is defined as a **present obligation** of the entity arising from past events. Obligations may be l**egally** enforceable due to **statutory** requirement. A **company requires an audit**, having **operated** during a financial year (**past events**) **imposes an obligation** to have an audit **performed**. Therefore, audit fees should be **accrued** for by an entity **statutorily required** to have an **audit performed**. One important to note is that every company as a **registered entity is mandated** to audit its financial at the end of each financial year. Therefore, if it is **mandatory** for a company to audit its financial (which makes **it legal**) it therefore means that audit fee must be **incurred** for that year hence to present the company's position it must accrue for the fees. IAS 37 create room for a **reasonable estimate** to be made if the amount is **not known**.

IAS 37, talks about an **obligating event** and this must be either **legal or constructive**. Constructive obligation is where a **valid expectation** has been created. If a company have created an expectation of auditing its account every year then, there is an obligating event (thus a present obligation) has been created irrespective of whether the company is by law to have its accounts audited. A provision must be recognised for that audit. The standard makes it clear that, a company must review its provision periodically and if for any reason the provisions are no longer required then it must be reversed.

On the other hand **no provision** should be recognized for any work that has **not yet been performed** at the reporting date. The reason for this is that IAS 37 requires (amongst other things) that there is an **obligation already** in existence at the reporting date that has arisen as a result of the past event. Until such time as the audit **work is performed**, there is no past event. IN fact it is an **executory** contract which is normally **excluded from the scope of IAS 37**. For the reasons above, it is **inappropriate** to recognize such provision.

However, in practice such provisions are likely to be **immaterial** and therefore sometimes companies do **recognize the provision on the basis** that standards **do not apply to immaterial items**. Hence it will be the matter of an **accounting policy**. In that case, Audit fees should be recognised **every year** as an expense (mostly a line item on its own under administration expenses or as part of professional expenses). Even when no fee notes have been received from the auditors, a provision is made any time during the financial year as providing for audit fees follows the **prudence principle** of accounting as well as **accruals concept**.

Therefore no need to **wait** for the auditors to come and audit the financials/auditors to raise the fee notes. It is a **recurring expense** that has to be incurred by every entity hence recognised on that basis. *Accounting estimates* are often included in historical *financial statements*

All **accounting rules** are subject to **interpretation and application** based on a **specific** situation. Considerations must be based on **company size, practices and materiality thresholds** as well as risk tolerance. If your company is **audited every year** and you have **historically accrued an annual amount** for audit fees on a monthly basis that closely reflects actual cost as incurred, there is nothing wrong with **continuing that practice**. It is the most **conservative**.

Audit fees should therefore be accrued in 2021, as there is legal obligations, amount can also be measured/estimated reliably and it is probable that there will be outflow of economic benefits in future. The company should also consider the materiality and the past practice.

Regards

Signed

Financial Accountant

(b)

(i)

IAS 12 Income taxes define deferred tax as the estimated future tax consequences of transactions and events recognised in the financial statements of the current and previous periods. The amount of current tax payable by an entity for an accounting period depends upon the entity's taxable profit for that period. However, this taxable profit will often be different from the profit shown in the financial statements (the accounting profit). Some of the income shown in the financial statements may not be chargeable to tax and similarly, some of the expenses shown in the financial statements may not be deductible for tax purposes. Permanent differences are one-off differences between accounting and taxable profits caused by certain items not being taxable or allowable, and therefore only impact the tax computation of one period (the period when the event or transaction occurs). Permanent differences therefore do not have a deferred tax consequence

(ii)

IAS 12 is clear on the circumstances in which a deferred tax asset can be recognised as a result of unused tax losses. A deferred tax asset should only be recognised to the extent that it is probable that future taxable profit will be available against which the unused tax losses can be utilised.

We are told in the question that there is little indication that demand will pick up in the foreseeable future, so we cannot say it is probable that future profits will be available.

No deferred tax asset should be recognised in respect of the taxable loss. The journal adjustment necessary will be:

DR Income tax expense in profit or loss K1, 200 million

CR Deferred tax non-current asset K1, 200 million

Being the writing off of the asset wrongly established in the deferred tax provision. It should be written off as part of the tax charge for the year.

(c)

This bond meets the criteria for classifying it as Amortized Cost. These are

- the cash flows to be derived from the instrument are solely interest and principal, and
- the entity intends to hold the instrument to draw the contractual cash flows. Hence the amortized cost method is appropriate. Fair value is irrelevant.

The initial carrying value of the bond will be as follows:

	Km
Purchase price (90% of K50)	45
Add: Purchase costs	0.5
Total asset cost recognized	45.5

Finance income will be recognized @ 7.3% of the opening carrying value 3.32

Financial assets measured at amortized costs

	Asset @ start	Finance Income (7.3%)	Interest Received (6%)	Asset @ end
	K	K	K	K
2020/2021	45.5	3.322	(3)	45.8

Profit or Loss (Extract) for the year ended 31/7/2021

	K
Finance Income	3.322

Statement of Financial Position as at 31/7/2021 extract

	K
Financial assets	45.8

SOLUTION THREE

(a)

Traditional ethical conduct relating to disclosure is insufficient when applied to corporate social responsibility (CSR) disclosure because the role of company is linked with the role of citizen, which is held to a higher ethical standard. Corporate citizens are companies acting on behalf of a social interest, which may or may not affect revenues. These socially beneficial actions

raise the ethical standard for such companies because of altruistic intentions, which is entirely different from the profit-generating purpose of a company. The ethical expectations of corporate citizens are thus more demanding than those for businesses without a social interest, especially in the way corporate citizens communicate their practices.

The ethics of corporate social responsibility disclosure are difficult to reconcile with shareholder expectations. Companies must remain profitable but there may be conflict. Maintaining integrity becomes more challenging when a company may report less profit and thus lower directors' bonuses. The problem that faces many companies is how to ethically, legally, and effectively disclose information while maintaining their market position.

It can be argued that increased CSR disclosure is in itself a form of socially responsible behaviour, and that by offering more information to the public, companies better meet their responsibilities to stakeholders. There are ethical implications of companies using CSR reporting for the sole purpose of improving revenue. The ethical implications are exacerbated if the desired effects of disclosing responsible conduct are solely to improve profitability. Disclosing good conduct solely for profit is unacceptable because it exploits something of much higher value (right conduct) to promote something which may be thought as being of lower value (profit).

(b)

IFRS 8 defines an operating segment as follows. An operating segment is a component of an entity:

- that engages in business activities from which it may earn revenues and incur expenses (including revenues and expenses relating to transactions with other components of the same entity)
- whose operating results are reviewed regularly by the entity's chief operating decision maker to make decisions about resources to be allocated to the segment and assess its performance and for which discrete/separate financial information is available.

IFRS 8 requires an entity to report financial and descriptive information about its reportable segments. Reportable segments are operating segments or aggregations of operating segments that meet specified criteria:

- its reported revenue, from both external customers and intersegment sales or transfers, is 10 per cent or more of the combined revenue, internal and external, of all operating segments; or
- the absolute measure of its reported profit or loss is 10 per cent or more of the greater, in absolute amount, of (i) the combined reported profit of all operating segments that did not report a loss and (ii) the combined reported loss of all operating segments that reported a loss; or
- its assets are 10 per cent or more of the combined assets of all operating segments.

If the total external revenue reported by operating segments constitutes less than 75 per cent of the entity's revenue, additional operating segments must be identified as reportable segments (even if they do not meet the quantitative thresholds set out above) until at least 75 per cent of the entity's revenue is included in reportable segments.

At 31 December 2020 three of the four operating segments are reportable operating segments:

- The IT and ODL segments meet the definition on all size criteria.
- The Business segment is separately reported due to its loss being greater than 10% of total segments in profit (4/24 or 16.7%).

Although the Engineering segment falls below the 10% thresholds it can still be reported as a separate operating segment if management believes that information about the segment would be useful to users of the financial statements. Alternatively, the college could consider amalgamating it with the IT segment, providing the two operating segments have similar economic characteristics and share a majority of the 'aggregation' criteria, which, may be the case. Otherwise it would be disclosed in an 'All other segments' column.

(c)

(i) The main issue here is the estimate of the useful life of a non-current asset. Such estimates form an important part of the accounting estimate of the depreciation charge. Like most estimates, an annual review of their appropriateness is required and it is not unusual, as in this case, to revise the estimate of the remaining useful life of plant. It appears, from the information in the question, that the increase in the estimated remaining useful life of the plant is based on a genuine reassessment by the production manager. This appears to be an acceptable reason for a revision of the plant's life, whereas it would be unacceptable to increase the estimate simply to improve the company's reported profit. That said, the assistant accountant's calculation of the financial effect of the revised life is incorrect. Where there is an increase (or decrease) in the estimated remaining life of a non-current asset, its carrying amount (at the time of the revision) is allocated over the new remaining life (after allowing for any estimated residual value). The carrying amount at 1 October 2019 is K24 million (K40 million – K16 million accumulated depreciation) and this should be written off over the estimated remaining life of six years (eight years in total less two already elapsed). Thus a charge for depreciation of K4 million would be required in the year ended 30 September 2020 leaving a carrying amount of K20 million (K24 million – K4 million) in the statement of financial position at that date. A depreciation charge for the current year cannot be avoided and there will be no credit to the income statement as suggested by the assistant accountant. It should be noted that the incremental effect of the revision to the estimated life of the plant would be to improve the reported profit by K4 million being the difference between the depreciation based on the old life (K8 million) and the new life (K4 million).

(ii) The appropriateness of the proposed change to the method of valuing inventory is more dubious than the previous example. Whilst both methods (FIFO and AVCO) are acceptable methods of valuing inventory under IAS 2 *Inventories*, changing an accounting policy to be consistent with that of competitors is not a convincing reason. Generally changes in accounting policies should be avoided unless a change is required by a new or revised accounting standard or the new policy provides more reliable and relevant information regarding the entity's position. In any event the assistant accountant's calculations are again incorrect and would not meet the intention of improving reported profit. The most obvious error is that changing from FIFO to AVCO will cause a reduction in the value of the closing inventory at 30 September 2020 effectively reducing, rather than increasing, both the valuation of inventory and reported profit.

A change in accounting policy must be accounted for as if the new policy had always been in place (retrospective application). In this case, for the year ended 30 September 2020, both the opening and closing inventories would need to be measured at AVCO which would reduce reported profit by K800, 000 ((K40 million – K36 million) – (K30 million –K26·8 million) – i.e. the movement in the values of the opening and closing inventories). The other effect of the change will be on the retained earnings brought forward at 1 October 2019. These will be restated (reduced) by the effect of the reduced inventory value at 30 September 2019 i.e. K3·2 million (K30 million – K26·8 million). This adjustment would be shown in the statement of changes in equity.

SOLUTION FOUR

Twalumba accounts for the promised bundle of goods and services as **a single performance** obligation satisfied over time in accordance with IFRS 15. At the inception of the contract, Twalumba expects the following:

Transaction price K3,000,000

Expected costs K1, 600,000

Expected profit **(46·7%)** K1,400,000

At contract inception, Twalumba excludes the K200,000 bonus from the transaction price because it cannot conclude that it is highly probable that a significant reversal in the amount of cumulative revenue recognised will not occur. Completion of the printing machine is highly susceptible to factors outside the entity's influence. By the end of the first year, the entity has satisfied 65% of its performance obligation on the basis of costs incurred to date. Costs incurred to date are therefore K1, 040,000 and Twalumba reassesses the variable consideration and concludes that the amount is still constrained.

Therefore at **30 November 2021**, the following would be recognised: **Revenue K1,950,000**, **Costs K1,040,000** and **Gross profit K910,000**

However, **on 4 December 2021**, the contract is **modified**. As a result, the fixed consideration and expected costs increase by K220,000 and K120,000, respectively. The total potential consideration after the modification is **K3,420,000** which is K3,220,000 fixed consideration + K200,000 completion bonus. In addition, the allowable time for achieving the bonus is extended by six months with the result that Twalumba concludes that it is highly probable that including the bonus in the transaction price will not result in a significant reversal in the amount of cumulative revenue recognised in accordance with IFRS 15. Therefore the bonus of K200,000 can be **included in the transaction price**. Twalumba also concludes that the contract remains a single performance obligation. Thus,Twalumba accounts for the contract modification as if it were part of the original contract. Therefore, Twalumba updates its estimates of costs and revenue as follows:

Twalumba has satisfied **60·5%** of its performance obligation (K1,040,000 actual costs incurred compared to K1, 720,000 total expected costs). The entity recognises additional revenue of K119,100 [(60·5% of K3,420,000) – K1,950,000 revenue recognised to date] at the date of the modification as a cumulative catch-up adjustment. As the **contract amendment took place after the year end, the additional revenue would not be treated as an adjusting event.**

(b) Year ended 31 March 2020:

No accounting entry is made in this financial year, as no transaction has yet been entered into. A capital commitment exists, and should be disclosed in the notes. The grant approval should be disclosed also.

Year ended 31 March 2021:

At this date, the factory should be recorded at its cost of K52 million. As all conditions for the payment of the grant have been met, recognition should be made of this amount receivable also. As the factory has not yet been brought into use, no depreciation will be charged for the year. Similarly, no amortisation of the grant will take place in the period.

Recognition of factory:

Dr Property, plant & equipment K52 million

Cr Cash K52 million

(New factory constructed as a cost of K52 million)

Recognition of grant:

Option 1

Dr Government grant receivable (current asset) K13 million

Cr Property, plant & equipment K13 million

(Government grant approved, not received yet)

Option 2

Dr Government grant receivable (current asset) K13 million

Cr Deferred income – current liability K1.3 million

Cr Deferred income – non-current liability K11.7 million
(Government grant approved, not received yet)

Assuming the factory has a useful life of 10 years, as stated, 10% of the amount will be recognised as income within the next financial year. This amount should be treated as a current liability.

Year end 31 March 2022:
There are a number of transactions to record based on the new factory. These are (1) depreciation and (2) amortisation of the grant. In addition, the cash was received from the government agency.

Receipt of grant:

Dr Cash K13 million

Cr Government grant receivable K13 million

(Receipt of cash grant from government agency)

Option 1

Depreciation of factory:

Dr Profit or loss K3.9 million

Cr Accumulated Depreciation – PPE K3.9 million

(Depreciation of cost of factory net of grant over 10 years)

Option 2

Depreciation of factory:

Dr Profit or loss K5.2 million

Cr Accumulated Depreciation – PPE		K5.2 million

(Depreciation of gross factory cost over 10 years)

Amortisation of grant:

Dr Deferred income	K1.3 million	
Cr Profit or loss		K1.3 million

(Amortisation of grant over 10 years, reflecting the proportional expensing of the factory to which the grant relates)

The employment grant relates entirely to the cost of employing staff in that year.

Hence it should be entirely recognised as income in the year ended 31 March 2021.

Recognition of employment grant:

Dr Cash	K1.2 million	
Cr profit or loss		K1.2 million

(Recognition of employment grant as income as received)

SOLUTION FIVE

	2019	2020
Gross Profit margin (percentage) GP /Sales x 100		
	850/1550 x 100	680/1350 x 100
	= 54.8%	= 50.3%
Net Profit margin (percentage) NP /Sales x 100		
	665/1550 x 100	603/1350 x 100
	= 42.9%	= 44.7%
Return on Capital Employed (percentage) NP /{Equity + Debt} x 100		
Capital Employed	1365 +100 = 1465	1036 + 150 = 1186
	665/1465 x 100	603/1186 x 100
	= 45.4%	= 50.8%
Leverage (percentage) Equity /{Equity + Debt} x 100		
Capital Employed	1365 +100 = 1465	1036 + 150 = 1186
	1365/1465 x 100	1036/1186 x 100
	= 93.2%	= 87.3%
Asset Turnover Sales Revenue/ Non Current Assets		
	1550/965	1350/846
	= 1.6	= 1.59

Note (more ratios to be computed/submitted by the examiner)

Commentary:

The company can boast of high gross profit margin and the net profit margin. However, there appears to be an unusually small size of expenses because the net profit margin is only 9% less than gross profit margin in 2020, and 6% less than gross profit margin in 2019. It is most likely that depreciation cost are grossly understated because the economic life of the assets is twice as much as they should be. Further, the fact that the company experiences high turnover of employee suggests that employees are not paid economic salaries, and so administration costs are also grossly understated.

These costs would likely reduce net profit margin by about 10% or 15%. The movements in fair values of shares have been misclassified in Other Comprehensive income. However, if they were included in their right classification area for finance costs, the net profit margin would still not be affected.

Conclusion: If salaries were increased to economic amounts, employees would be motivated even to increase the sales revenue. The company would achieve employee retention as well because it will have happy workers. The calculation of depreciation should immediately be revised so that the true cost of using non-current assets can be reflected in the accounts. This would enable the company to comply with IAS 16 Accounting for non-current assets.

END OF SOLUTION

CA ZAMBIA PROGRAMME EXAMINATIONS

CA ADVISORY PROFESSIONAL IN ACCOUNTANCY

CA 3.2: ADVANCED AUDIT AND ASSURANCE

THURSDAY 17 JUNE 2021

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

INSTRUCTIONS TO CANDIDATES

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

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

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

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

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

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

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

8. Present legible and tidy work.

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

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

SECTION A

This question is compulsory and must be attempted.

QUESTION ONE – (COMPULSORY)

Chris & Associates have been the auditors of G & S Import and Export Plc. for the past five (5) years. The Company is in the wholesale and retail of a wide range of goods, most of which are imported.

G & S Import and Export Plc. put the offering of audit services to tender. Chubri Chartered Accountants was nominated to be auditor of G & S Import and Export Plc. During the bid presentation with the Audit Committee of G & S Import & Export Plc. the firm informed the Committee that in view of the size of the company the firm needed to expand and recruit more staff because it will require more staff to carry out the audit.

The firm faced liquidity problems to manage this growth and the Board of Directors of G & S Import & Export Plc. authorized a three (3) year loan to Chubri Chartered Accountants and this loan would be repaid by recoveries from the audit fees for the next three (3) years. Chubri Chartered Accountants was nominated to be auditor of G & S Import & export Plc. because of the experience that the firm has in auditing clients in this industry. The Partner who is expected to be assigned Engagement Partner for this audit is currently engagement partner of the audit for a chain store company operating throughout the Country and before joining the audit firm three (3) years ago, he worked for G & S Import and Export as Finance Director for many years.

Before accepting appointment, Chubri Chartered Accountants sought and obtained permission from G & S Import & Export to communicate with Chris & Associates. The firm wrote to Chris & Associates seeking clearance but before getting a reply from Chris & Associates, accepted appointment. It later transpired that Chris & Associates did not respond because they were not granted a go ahead to respond by G & S Import and Export Plc.

On accepting appointment as auditors of G & S Import & Export, Mary, the wife to the Partner who is poised to be engagement partner of this audit sold half of the shares that she and the husband in G & S Import & Export Plc. and have retained a 12% interest.

G & S Import & Export Plc. imports most of its inventory from the Republic of South Africa from a company in which the major shareholders of G & S Import and Export Plc. have a controlling interest and sells to wholesalers and it has a chain of retail outlets around the country. The goods dealt with include groceries including perishable food stuffs the bulk of which have a specified shelf life from date of manufacture.

During the year under review, two (2) trucks carrying an energy drink were impounded by the Zambia Bureau of Standards (ZABS) for transporting a suspected prohibited energy drink. This drink was introduced by G & S Import and Export three (3) months ago.

G & S Import & Export has an Internal Audit department which carries out financial and operational audits. Management of the Company wants its External Auditors to either use the work of internal audit or seek direct assistance from the internal auditors in order to reduce external audit costs.

The Company borrowed $5million from a Development Bank secured on the properties, five (5) years ago at a floating interest rate of 14% for the purpose of constructing two (2) warehouses in Lusaka and the loan is still not fully paid. The loan is repayable in dollars and the depreciating local currency has had an adverse impact on the liquidity of the company. At the time of contracting the loan the exchange rate was K11/US$1 the current exchange rate is K20/US$1. At the moment one (1) of the two (2) warehouses in Lusaka is not used by G & S Import & Export and is let out on a three (3) year agreement to a fertilizer distributor.

At the end of the financial year, the Company carries out physical inventory count of all inventories. There is a significant reduction in inventory in the current year arising from supply chain problems. Due to the Coved 19 pandemic, there is a significant reduction in production in South Africa and the Company has experience problems in terms of hiring transport to bring merchandise to Zambia.

During the current year, G & S Import & Export Plc. acquired Ishmael General Dealers, a family owned business, which the owners have decided to sell because they are migrating back to their country of origin. The consideration included cash and contingent payments. The company carried out a fair value exercise of the assets of Ishmael General Dealers. The adjustments arising from the fair value exercise have been incorporated in the current year financial statements.

In a meeting with the Audit Committee of G & S Import and Export Plc., it was established that the sales for the year have significantly dropped because of an influx of cheaper goods imported from China and distributed through many outlets in Lusaka and other major towns across the County. It was further established that the Company has large inventory of the energy drink that is suspected to be prohibited and if found prohibited all inventory will require to be destroyed.

Required:

(a) Identify and explain five (5) ethical issues in the audit of G & S Import and Export Plc. and suggest suitable safeguards. (15 marks)

(b) Identify and explain five (5) audit risks in in the audit of the financial statements of G & S Import and Export Plc. and suggest suitable audit responses. (10 marks)

(c) Identify and explain four (4) business risks in G & S Import and Export Plc. (6 marks)

(d) Describe the difference between audit risk and the risk of material misstatement in the audit of the financial statements of G & S Import and Export Plc. (4 marks)

(e) Distinguish, giving examples, between using the work of Internal Audit and seeking direct assistance of Internal Audit by the External Auditors. (5 marks)

[Total: 40 Marks]

SECTION B

There are four (4) questions in this section.

Attempt any THREE questions in this section.

QUESTION TWO

(a) You work for PK Chartered Accountants, a firm involved in consultancy and carrying out audits of financial statements. The firm has three (3) Partners, two (2) Audit Managers, five (5) Audit Seniors and ten (10) Audit Assistants.

The consultancy division of the firm offers, among other services, due diligence to clients buying or selling businesses. The firm maintains a client bank account into which client funds are deposited.

The Managing Partner of your firm called a meeting of all Senior Staff Members at which he informed them that the firm risks closing if sued by clients for professional negligence unless it takes appropriate insurance. He is particularly worried that increased numbers of investors rely on audited financial statements in making investment decisions. He has stated that he received a letter from an Institutional Shareholder who claimed that the Company bought shares relying in financial statements audited by PK Chartered Accountants. The Company in which the shares were bought was liquidated a year after buying the shares resulting in the loss of the investment for the Institutional shareholder.

Required:

(i) Advise and explain the forms of insurance that the firm can take in line with the requirements of the Zambia Institute of Chartered Accountants (ZICA). (2 marks)

(ii) Describe the chances of succeeding if the Institutional Investor sued PK Chartered Accountants for professional negligence. (6 marks)

(b) You have been recruited as Training and Quality Control Manager in Thrift & Co Chartered Accountants. The firm has five branches in Zambia with each branch headed by a Branch Manager.

The five (5) branches operate autonomously and each Branch Manager assigns audits to Partners. The Engagement Partner on each assignment is responsible for the quality of the audit work that is carried out. The firm does not have written down manuals on the quality control systems that should be followed. Currently the firm has no Human Resources Department and employees are recruited on behalf of the firm by a Recruitment Agency. Adverts are placed by the Recruitment Agency on requests from Branch Managers. Interviews and final selection is done by the Recruitment Agency. The firm has fixed pay scales for the different categories of staff and annually each Branch Manager decides on the salary increases for all employees depending on the inflation levels in the Country.

During audit assignments, there is little supervision of junior staff because most of the Audit Seniors are assigned more than one audit at a time and so they do not have sufficient time to supervise and direct the audits. A review of the firm's working papers for audits that have been completed indicates that there are some issues that appear to remain unresolved before finalization of the audits. Due to inadequate numbers of staff at the branches, there are no peer reviews of working papers that are carried out.

The Managing Partner of Thrift & Co Chartered Accountants recently returned from a workshop for all Country Leaders at the firm's headquarters abroad. The purpose of the workshop was to appraise the Country Leaders on the importance of quality control in the respective country branches and during the audit assignments. It was resolved at this meeting that all country offices should, within a period of six (6) months, put in place quality control systems which should comply with the relevant standards on quality control.

The Managing Partner has requested you as newly appointed Training and Quality Control Manager to lead the introduction of quality control systems in Thrift & Co Chartered Accountants.

Required:

(i) Distinguish quality control at the firm level and quality control at the individual audit level. (4 marks)

(ii) Evaluate the quality control systems in Thrift & Co Chartered Accountants and suggest improvements that will comply with the relevant standards on quality control. (8 marks)

[Total: 20 Marks]

QUESTION THREE

Your firm has been appointed auditor of Mutti Chemicals Plc, a highly regulated Company. The Company obtained a ten (10) year loan five (5) years ago and due to financial constraints it defaulted in paying the last quarterly amount due. The lender is threatening to take legal action and enforce the security on the loan.

The Company has engaged a debt collecting Company to recover the debt from the receivables. The age analysis shows that 15% of the receivables are over 120 days old. Mutti Chemicals Plc. holds substantial amounts of finished products and work in progress. The Company does not conduct a physical count of inventory at the period end but instead relies on perpetual inventory count records to determine the value of closing stock. An External Expert is engaged to determine the value of work in progress at the period end.

You are the Audit Manager in the audit of the financial statements of Mutti Chemicals Plc. An audit team has been put in place and you called for a pre-audit meeting at which you want to brief the team on the work that you plan to carry during planning for this audit. At this meeting, you wish to stress the importance of assessing risk and need for the audit team to maintain professional skepticism throughout the audit.

During the pre-audit meeting, one of the Audit Assistants stated that in accordance with the provisions of ISA 250 *Consideration of laws and regulations in an audit of financial statements,* it is the responsibility of Management to adhere to all relevant laws and regulations and that the firm has no responsibility with regards to laws and regulations because this would amount to the firm taking on Management responsibilities.

A Senior Auditor in the firm observed that in the event that the auditors come across non- compliance with laws and regulations, they should inform Management and should not report any non-compliance to the Regulatory Authorities because this will be in breach of the fundamental principle of confidentiality.

Required:

(a) Identify and explain four (4) matters that your firm will need to gain an understanding of at the planning stage of the audit of the financial statements of Mutti Chemicals Plc. (4 marks)

(b) Describe four (4) audit risks that should be considered at the planning stage of the audit of the financial statements of Mutti Chemicals Plc. (6 marks)

(c) Discuss the assertion by the Senior Auditor that non-compliance with laws and regulations should be reported to management and not the Regulatory Authorities. (4 marks)

(d) Explain the responsibilities of the Management of Mutti Chemicals Plc. And Ernest & Co with regards to compliance with laws and regulations by Mutti Chemicals Plc. (6 marks)

[Total: 20 Marks]

QUESTION FOUR

(a) Trina & Mary Chartered Accountants is a medium sized firm of chartered accountants which has been carrying out audits manually over the years. There is pressure on audit firms to reduce audit fees for clients who feel they are not paying for value.

You work for an Information Technology consulting firm. Trina & Mary Chartered Accountants have approached your firm for consultation on two (2) matters as follows:

1. The firm cutting down on audit costs by moving to using Computer Assisted Audit Techniques (CAATs) in the audit of their clients who are computerized.
2. How big data and data analytics can benefit the firm and reduce costs and also reduce sampling risk in the audit of client financial statements.

Required:

(i) Explain two (2) ways in which the use of Computer Assisted Audit Techniques (CAATs) can help in reducing the costs of audit for Trina & Mary Chartered Accountants. (4 marks)

(ii) Explain the meaning of big data and data analytics and describe how this could reduce detection risk in an audit of financial statements by Trina & Mary Chartered Accountants. (6 marks)

(b) You are the Audit Manager on the audit of the financial statements of Kimberly Plc. for the year ended 31 December 2020.

The audit is in its final stage and the file has been passed on to you for review. The Audit Senior has also drafted the audit report for your review. He has proposed an unmodified audit report with a modified qualified opinion. During the audit the team communicated a number of matters to Management in accordance with ISA 260 *Communication with Those Charged with Governance*. In the Senior Auditor's view there are no significant matters that the team came across during the audit requiring disclosure in the Key Audit Matters (KAM) paragraph.

Management of Kimberly Plc. has concluded that there is a material uncertainty with regards to the ability of the company continuing as a going concern. Kimberly Plc. has prepared the financial statements on the going concern basis but the matter of concern is material and in the view of the Senior Auditor the financial statements should have been prepared on the alternative basis. Adequate disclosure was made regarding the material uncertainty in the notes to the financial statements.

Extract from draft audit report

Opinion
Except for the inadequacy of the provisions for litigation, the financial statements give a true and fair view.

Basis for Opinion
The audit was conducted in accordance with international standards on auditing and we obtained sufficient appropriate evidence for the basis of the opinion.

The reason for the above opinion surrounds the uncertainty regarding the provision made for the case outstanding at the period end but this uncertainty does not impact negatively the decisions of users of the financial statements.

Emphasis of matter paragraph

We draw the attention of the users of the financial statements to the material uncertainty regarding the ability of Kimberly Plc. as a going concern.

This has been adequately disclosed by management in note 10 of the financial statements and the basis for the preparation of the financial statements is valid and this is not the basis for the modification of the opinion.

Required:

(i) Distinguish between an unmodified report and a modified report. (2 marks)

(ii) Evaluate the extracts from the draft audit report and opinion based on the information given and suggest any changes necessary. (8 marks)

[Total: 20 Marks]

QUESTION FIVE

You are an Audit Manager in Chibote & Co. and you are currently working on the following assignments:

1. **Presentation on Customer Due Diligence and Tipping-off**
   The Zambia Institute of Chartered Accountants (ZiCA) is organizing a seminar for CA Zambia graduates entitled "Money laundering regulations in Zambia – A case for newly qualified accountants". The Secretary & Chief Executive Officer of ZiCA has asked you to present the subjects of "Customer Due Diligence (CDD)" and "Tipping-off".

2. **Finalizing the financial statement audit for Kadimba Ltd**
   You are about to complete the financial statement audit for Kadimba Ltd for the year ended 30 September 2020. The draft financial statements show profit before tax for the year of K8 million and total assets of K67 million.

   The following matters relating to uncorrected misstatements remained un resolved resulting in the Engagement Partner calling for a meeting with the Audit Committee:

   (i) As at 30 September 2020, a company's foreign customer owed US$30,000. This amount was translated into Kwacha at an exchange rate of K22 per U$1 which was the ruling exchange rate at the date of the transaction. The ruling exchange rate on 30 September 2020 was K18 per US$1.

   (ii) Inventory is valued at a cost of K5 million as at 30 September 2020. Included in this amount is inventory that cost K900,000 but during the inventory count it was identified that these goods were damaged and as a result the selling price was reduced. The goods are now believed to have a selling price of K750,000 and will require rectification costs of K8,000.

   (iii) On 15 August 2020, a legal action was brought against Kadimba Ltd for breach of employment contract by one of the Senior Managers. The outcome was decided on 8 October 2020 and as a result Kadimba Ltd will have to pay costs and damages totaling K2 million. No provision was made for this event in the financial statements for the year ended 30 September 2020.

3. **Provision of internal audit services**
   Mupeta Plc, entered into an internal audit outsourcing agreement with Chibote & Co. to carry out internal audit activities. Chibote & Co. will use individuals who are not part of the external audit team to provide the internal audit services. Mupeta Plc will designate one of the Senior Management to be responsible for internal audit and to acknowledge responsibility for designing, implementing and maintaining internal control.

Required:

(a) Explain any relevant points you would include in your presentation to the CA Zambia graduates regarding "Customer Due Diligence (CDD)" and "Tipping-off". (5 marks)

(b) Discuss the matters in (2) above relating to uncorrected misstatements that will be discussed with the Audit Committee. (9 marks)

(c) Advice whether Chibote & Co. should provide internal audit services to Mupeta Plc. (6 marks)

[Total: 20 Marks]

END OF PAPER

CA 3.2 : ADVANCED AUDIT AND ASSURANCE SUGGESTED SOLUTIONS

SOLUTION ONE

(a) Ethical Issues in the audit of G & S Import and Export Plc:

1. **Partner recently worked for G & S Import & Export Plc:**
   The only partner of Chubri Chartered Accountants worked for G & S import and Export Plc in a senior position three (3) years ago. This will give rise to a self-review threat as well as a familiarity threat in that most of the employees he left may still be in employment.

   Safeguard:
   The firm should resign because the Partner will not be objective in performing his duties for reasons explained above.

2. **Accepting appointment before clearance from previous auditor:**
   Accepting appointment before getting a response from the outgoing auditors was an unethical act.

   Safeguard:
   Chubri Chartered Accountants should have declined appointment. Alternatively the firm should have made a follow up of the letter written to Chris & Associates, the former auditors before deciding on the cause of action to take.

   Chubri Chartered Accountants should discuss the matter with the Client Management if not satisfied with the explanation consider resigning from the assignment because Management's integrity is questionable.

3. **Shares in G & S Import and Export Plc:**
   The wife of the partner in Chubri Chartered Accountants is a close relative of the Partner of the firm. Further, they have retained a joint ownership of 12% shareholding in Client Company. This gives rise to a self-interest threat.

   Safeguard:
   The shares should be disposed of or the Partner should not be assigned to the audit of the financial statements of G & S Import & Export Plc. Alternatively the working papers should be reviewed by a different partner who will not be involved in the audit of the financial statements of G & S Import & Export Plc.

4. **Three (3) year loan to Chubri Chartered Accountants:**
   The authorization of the three (3) year loan to the firm will give rise to a self-interest threat to the firm. Guidance on ethics provides that there should be no loan arrangement between audit firms and their clients unless the client is a financial institution and the loan is given at no favorable terms as would apply to any other customer. In this case H & S Import & Export Plc. is not a financial institutions and so the approved loan cannot fall into this exception.

   Safeguard:
   The firm should not enter into this loan arrangement and must source the needed funds from other sources and not G & S Import & Export Plc.

5. **Conflict of interest between clients:**
   Chubri Chartered Accountants is currently auditor of another company of chain stores. This gives rise to a conflict of interest of the two (2) audit clients. The firm should ensure that the conflict of interest between two (2) competing clients is resolved before accepting to audit the financial statements of both companies. It is possible that either or both companies may not want to be audited by the same firm of auditors.

   Safeguard:
   The firm should communicate to both companies and seek their agreement to audit both of them. If either of the two (2) competing companies is unwilling to be audited by the same firm then this should be respected and the firm should decide which company they wish to audit.

(b) Audit risks in the audit of G & S Import and Export Plc:

1. **Related party transactions:**
   G & S Import and Export Plc buys the bulk of its products from a South African company with which it is jointly owned with G & S Import and Export Plc.
   There is a risk with regards disclosure requirements for related parties and the extent of related party transactions in the year under review.

   Audit response:
   During the substantive audit stage of the audit, the audit tea should be alert and look out for dealings with the related party and review the draft financial statements to confirm adequate disclosures of related party relationship and the extent of dealings with the related party.

2. **Valuation of inventory:**
   G & S Import and Export Plc deals in perishable food stuff which have expiry dates. There is a risk that expired items which will fetch almost nothing may be valued at cost which is likely to be higher than the net realizable value. This is likely to result in a material misstatement of the inventory figure in the financial statements.

Audit response:
Review the inventory count instructions for adequacy with regards expired food stuffs and attend the year-end inventory count and observe the adherence with the inventory count instructions. Finally review the valuation of inventory to confirm that expired foods are valued at the net realizable value and not at cost.

3. **Default on repayment of loan:**
G & S Import and Export Plc defaulted in repaying the loan for the second time in the year under review. The development bank may decide to execute the security against which the loan was obtained. This has going concern implications for the company if it fails to raise new funding.

Audit response:
Read the loan agreement and evaluate the conditions relating to the security and its enforcement. Discuss the matter with Management and if necessary obtain written representations regarding the failure to repay the principal amount and interest and how Management hopes to deal with this. Evaluate the assumptions made by Management in concluding that the company is a going concern.

4. **Impounding of trucks by the ZABS:**
The impounding of trucks carrying a prohibited energy drink suggests that there is non-compliance with laws and regulations on the part of G & I Import and Export Plc. There is a risk that the company will be subject to sanctions that go with importing a prohibited product. It is likely provisions may be misstated and the value of inventory being misstated in view of the prohibited energy drink which would not be allowed to be sold and subsequently destroyed.

Audit response:
Discuss with the in-house lawyers if any or seek independent legal advice regarding the financial impact of importing a prohibited drink. Further, attend the year-end inventory count and establish the procedures for determining the stocks of the prohibited drink at the warehouse and at all the outlets of the company.

5. **Warehouse let out to fertilizer distributor:**
The warehouse that is let out to a fertilizer distribution company should be treated and accounted for as an investment property. There is a risk that this may not be the case in the financial statements of Limpopo Plc. in which case the financial statements may be misstated to that extent.

The investment property should be accounted for in accordance with IAS 40 *Investment property* and appropriate disclosures made.

Audit response:
There will need to confirm that the letting of the warehouse meets the definition of investment properties in accordance with IAS 40 and to confirm through reviewing

the draft financial statements that it has been accounted for according to the accounting standard.

6. **Acquisition of Ishmael General Dealers:**
   At the acquisition of the subsidiary company G & S Import and Export Plc. will have recognized goodwill arising at recognition. There is a risk that this may have been computed contrary to the provisions of IFRS 3 *Business combinations.* This could have an impact on the financial statements and may cause the financial statements to be misstated.

   Audit response:
   Obtain the calculations for goodwill on acquisition from Management and recalculate to ensure that they are mathematically correct and also review the components of the workings such as the consideration payable for correctness.

7. **Fair value exercise at acquisition of subsidiary:**
   The determination of fair values of the assets of the acquired subsidiary requires estimations of fair value. There is an audit risk that the fair values determined by Management may not be realistic and could result in the misstatement of financial statements.

   Audit response:
   There will be need to obtain the calculations or determination of fair values from Management and test for reasonableness by evaluating the basis of arriving at the fair values.

8. **Presentation of loan:**
   There is a risk that the loan obtained may not be correctly repsneted between amount owing within one year and the amount beyond that in accordance with the relevant accounting standard.

   Audit response:
   Review the draft financial statements and discuss with management ensuring correct classification between amount owing within one year and beyond.

(c) Business risks in G & S Import and export Plc.:

1. **Floating rate loan:**
   The floating interest rate of 14% on the loan obtained will adversely impact the company in that if the interest rates increase then the company will end up paying more money in interest than originally expected. This will have an impact on the ability of the company to repay the loan and increased interest payments will result in profitability of the company being affected.

2. **Dollar denominated loan:**
   The denomination of the loan into dollars will adversely affect the liquidity of the company and may have going concern implications for the company. The company will require more of the local currency to be able to repay the loan and unless the additional cost of borrowing can be passed on to the consumer this will adversely affect the ability of the company meeting its objectives.

3. **Supply chain problems:**
   The supply chain problems being experienced by the South African suppliers will impact negatively the business of G & I Import & Export. The sales revenue are likely to reduce significantly and this may result in a drop in revenue which will not meet the expected expenditure and could have going concern implications for the company.

4. **Imports of cheap goods from China:**
   The introduction of cheap import of goods from China will impact on the sales of G & I Import and Export Plc. and this could result in some customers switching suppliers to those importing cheap goods.

(d) Difference between audit risks and the risk of material misstatement:

Audit risk is the risk that the auditor of G & I Import & Export Plc. may issue an inappropriate audit opinion on the financial statements. It has three (3) components namely inherent risk, control risk and detection risk.

The risk of material misstatement on the other hand is the risk that the financial statements of G & I Import & Export Plc. may be misstated for reasons other than that the auditor fails to detect material misstatements. It is the risk before the audit and involves inherent and control risks only.

(e) Using the work of internal audit:

This relates to the external auditor relying on the effectiveness of the internal audit department is designing the nature and extent of substantive audit procedures to be performed.

For **example** in deciding on the extent of the substantive audit procedures that should be undertaken the auditors take into account the effectiveness of the internal controls. One of the internal controls in G & I Import & Export Plc. is the existence of the internal audit department. The external auditors of G & I Import and Export Plc. can assess the effectiveness of the internal audit department and if evidence suggests that it is effective, the auditors may wish to reduce the extent of detailed tests and rely instead on the effectiveness of the internal audit department.

Seeking direct assistance of internal audit:
Seeking direct assistance of the internal audit department of G & I Import and Export Plc. means that the external auditors may use the services of the internal audit department to perform some procedures which the external auditors may wish to perform.

This will be under the supervision of the audit team. For **example** the audit team may request that the internal audit team attends inventory count at locations that the external auditors may not attend and carry out procedures as determined by the external auditors.

SOLUTION TWO

(a) (i) Forms of insurance that CK Chartered Accountants may take:

CK Chartered Accountants is required to take appropriate cover according to the Accountants Act of 2008 as follows:

Professional indemnity Insurance – This cover is taken by auditing firms to cover losses that the firm may suffer due to negligence in the performance of professional work. In this case the firm carries out audits of client financial statements and if sued and found guilty as a result of negligence by any of the firm's employees this would be covered by this form of insurance.

Fidelity Guarantee Insurance – This is a form of insurance that covers the firm arising from dishonesty by any of its employees in respect to client moneys. In this case the firm has a bank account into which it manages client funds and if there is fraud or other criminality and the firm is sued this form of insurance will cover this.

(ii) Chances of the institutional investor succeeding is its claim:

The contract for audit services is with the firm and the Client Company. It is assumed that the auditor owes a duty of care to the company being shareholders as a whole.

The Caparo case is a leading authority with regards the position of third parties suing the auditors. It was held that with regards third parties, the auditors do not owe a duty of care to investors who rely on financial statements audited by a firm. In order for a third party to succeed in suing the auditor the following is the position:

Duty of care – this is not implied and the third party should prove that the auditors owe the third party a duty of care.

Brach of duty of care – The third party should prove to the court that the firm was in breach of the duty of care.

Suffering loss – the third party will need to prove that they suffered loss as a result of the breach of duty by the auditors.
The institutional investor in this case is treated as at third party. The investor would need to prove all three criteria in order to succeed in suing the auditors for professional negligence.

In conclusion it should be observed that it is much difficult for a third party to successively sue the auditors for professional negligence.

(b)(i) Distinction between quality control at the firm level and the individual level:

Quality control at the firm level relates to the whole firm rather than individual assignments.

Guidance on quality control at the firm level is provided by ISQC 1 *Quality control for firms that perform audits and reviews of financial statements.* The standard deals with quality control at the firm level whereby the top leadership in the firm is expected to lead by example and create a culture which considers quality in the firm important. In most cases the firm will appoint a senior person with knowledge of ISQC1 to be the focal person and quality champion.

Quality control at the individual level relates to quality control when performing audit assignment. The engagement partner is responsible for quality control at the individual audit level. The engagement partner is responsible for ensuring that the provisions of the standard are followed throughout the performance of the audit. Guidance on quality control at the individual level is provided by ISA 220 *Quality control for an audit of financial statements*.

(ii) Evaluation of quality control in Thrift & Co Chartered Accountants:

The evaluation of the quality control policies in Thrift & Co Chartered Accountants will be measured against ISQC 1 *Quality control for firms that perform audits and reviews of financial statements.*

1. **Lack of leadership at the top:**
   Clearly there is no clear responsibility at the firm level in terms of quality control. Each office manager handles quality control matters at their respective offices.

   In accordance with the requirements of ISQC 1 the firm should appoint a quality champion who will be responsible for all quality work in accordance with ISQC 1.

2. **No documented policy on quality control:**
   The firm does not have documented quality control procedures in place. This means that staffs have no clear guidance on matters relating to quality.

   Thrift & Co Chartered Accountants should appoint a quality champion at the firm level who should arrange to document quality control policies in the firm. The manual should be available to all staff who should be familiar with the provisions contained.

3. **Policy on recruitment and remuneration of audit staff:**
   Human resources are an important element of quality control in the audit firm. Matters relating to human resources encamps among others recruitment and remuneration.

   The firm is using a recruitment agency to select staff for recruitment and nobody in the firm is involved. There is a risk that employment may not be on merit resulting in staff with no relevant skills and competences being employed.
   The firm should be involved in the final selection of audit staff to ensure that staff of a high caliber are employed.

4. **Salary increases should be performance based:**
   The current remuneration policy where branch managers give salary rises based on inflation does not motivate staff to perform better in their work. This suggests that even staff who perform below expectation are awarded salary increases as a result of the inflation recorded.

   In order to motivate staff guidance suggests that salary rises should be based on performance. It would be recommended that annual staff appraisal be conducted and salary increments be based on the results of the staff appraisals.

5. **Unresolved issues remain at the end of audits:**
   As part of quality control, the standard provide that when three is a dispute over a matter within the audit team, such dispute should be resolved before finalization of the audit. The evidence in the working papers that some issues remain unresolved suggests that there are no clear policies and guidelines on how disputes will be resolved.

   The firm should put in place clear guidelines on dispute resolutions should be done. Staff should know the policy in place for the resolution of disputes and all work done including how the dispute was resolved should be documented.

6. **Lack of peer reviews of working papers:**
   The firm does not have policies regarding peer reviews of audit working papers. Peer review are the review of audit working papers by an individual who was not involved in the audit and they are an important element of a firm's quality control policies. Further, in the audit of listed companies, it is a requirement that peer reviews are carried out.
   Thrift & Co Chartered Accountants should consider introducing peer reviews of audit working papers and the policies should be documented.

SOLUTION THREE

(a) Matters to gain an understanding of in the audit of Mutti Chemicals:

In assessing the risk of material misstatement in the audit of Mutti Chemicals Plc. at the planning stage there is need to gain an understanding of the following matters:

1. The relevant laws and regulations that apply to the company particularly those that have an impact on the financial statements.
2. The audit team should gain an understanding of the internal control activities in Mutti Chemicals Plc. and the general control environment.
3. The risk assessment systems that are followed by the company.
4. The nature of the industry that Mutti Chemicals Plc. is involved in including matters related to financing, financial reporting and general operations.

(b) Audit risks in the audit of Mutti Chemicals:

1. Non-compliance with laws & regulations:
   Mutti Chemicals Plc. is in a highly regulated industry particularly environmental legislation because of the nature of the industry. There is a risk that the company may be non-compliant with some laws and regulations and this may result in the company suffering the penalties that go with non-compliance.

   In the event of known noncompliance the company may make provisions at the period end if the matter is still unresolved then and there is a risk that such provisions may be materially misstated.

2. Mutti Chemicals Plc. uses the services of a Management expert to determine the value of work in progress at the period end. There is a risk that the value of work in progress may be materially misstated for among other reasons lack of competence of the Management expert of the lack of independence resulting in the loss of objectivity.

3. The company has a substantial amount due from Agro Dealers who have not paid for supplies to them. Some of the debt has been outstanding for over two years and efforts to contact the dealers have failed resulting in engaging bailiffs to try and collect the debts from the dealers.

   The receivables figure in the financial statements of Mutti Chemicals Plc. financial statements may be misstated due to the inadequacy of the provision that may be made by Management.

4. The chemical industry that Mutti Chemicals Plc. is involved in deals with substances that expire if not used within a specified time period. Mutti Chemicals Plc. conduct an annual inventory count at which any expired or nearing expiry chemicals are identified and separated during the inventory count.

   There is a risk that identification of such chemicals is not done correctly which may result in a material misstatement of the inventory figure because of valuing such inventory at cost which may be higher than the realizable value.

(c) Assertion by the senior auditor on reporting noncompliance with laws & regulations:

One of the fundamental principles that should be followed by the auditors is that of confidentiality. This requires that the auditors should not disclose to third parties information that comes to their attention during the course of their work without the permission of the client.

Guidance to the general principles provides exceptions where the auditor may disclose information to third parties without obtaining permission of the client. The third parties could be the users of the audit report or the regulatory authority.

In the case of Mutti Chemicals Plc. the auditors established that the company used a substance that is banned in manufacturing one of the chemicals. The use of the said chemical is a serious offence which could lead to the withdrawal of the license to operate.

One of the exceptions to confidentiality is when the client commits a crime in which case the auditors have a duty to report to the appropriate authority. If in doubt the auditors can seek legal advise on how to proceed with reporting the non- compliance.

Conclusion:

The audit senior is correct in suggesting that the noncompliance discovered by the auditors should be reported to Management. It is not correct, however, to suggest that the matter should not be reported to the regulators. The above arguments on reporting criminal activities suggest that the firm would be in order to report and the firm will not be in breach of the fundamental principles of confidentiality.

(d) Management responsibilities with regards laws & regulations:

Management of Mutti Chemicals Plc. is has the primary responsibility to comply with the relevant laws and regulations governing the company.

Management should put in place controls that will help the company adhere to the laws and regulations.

ISA 250 *Consideration of Laws and Regulations in the Audit of Financial Statements* gives guidance on the responsibility of the auditor with regards compliance with laws & regulations.

The standard provides that the auditor:

- Is required to obtain sufficient appropriate evidence that the financial statements are not materially misstated arising from noncompliance with laws and regulations. In so doing the auditor should establish those laws and regulations that have an impact on the financial statements.
- Should perform specified audit procedures which will help the auditor identify instances of noncompliance with laws and regulations that have an impact on the

financial statements. The audit procedures should be documented in the working papers of the auditor.

- Should respond appropriately to nay instances of non-compliance or suspected non-compliance with laws and regulations identified during the audit. Responding could include considering the impact on the audit report and reporting to relevant authorities.

SOLUTION FOUR

(a)(i) Ways CAATs can reduce audit cost:

1. Through performing tests faster because of using CAATs in performing procedures that would otherwise have been performed manually. Computer assisted audit techniques are capable of performed any procedures much **faster** and this can result in reduced man hour costs and subsequently the cost of audits.

   The audit firm will be able to reduce detection risk through testing larger samples at a reduced cost.

2. The use of computer assisted audit techniques suggests that most of the detailed tests that the auditors would otherwise perform manually could be done by the use of the computer. This means there will be less need for the same number of staff in an audit firm. This is likely to significantly cut done on the cost of audits.

(ii) Meaning of big data and data analytics:

Big data refers to the availability of large volumes of data brought about as a result of the internet. Because of connectivity brought about by the internet there is massive data which companies can use to suit their needs.

Data analytics refers to the ability to be able to access big data and use it for making decisions by companies. For example a company can use big data relating to the demography of the population and easily obtain vital statistics which can enable the company to plan its production of cloths in the case of a clothing factory.

How big data and data analytics can reduce audit risk:
Audit risk may give an inappropriate opinion in an audit of financial statements. This can arise through any of the three elements of audit risk namely inherent risk, control risk and detection risk. Audit risk increases because of auditors not being able to test 100% of transactions or balances. The closer to 100% testing for the auditor the lower will be detection risk and ultimately audit risk.

The statutory auditor can take advantage of big data and data analytics in the performance of audits. Because of declining costs of Information Technology, many companies have computerized their accounting systems. This means the auditors can interrogate the data and information in client computer systems using computer assisted audit techniques.

Through the use of CAATs and data analytics, auditors can perform audit procedures on far more items than usual. The auditors can actually test 100% of transactions and balances in some cases. The closer to 100% testing the lower the sampling risk which is the risk that the results from sample tests may be different from the results had all items in the population been tested.

(b)(i) Distinction between unmodified report and modified report:

An unmodified report is one with the elements contained in the standard unmodified report in accordance with ISA 700 *Forming an opinion and reporting on financial statements.*

The inclusion of an Emphasis of Matter paragraph or an Other matter paragraph in accordance with the provisions of ISA 706 *Emphasis of matter paragraphs and other matter paragraphs in the independent auditor's report* results in the audit report becoming a modified report because the two are not part of the unmodified report elements.

(ii) Evaluation of proposed audit report/opinion:

Following the review of the draft audit report by the audit senior the following matters are highlighted:

1. The audit senior should note that because the draft report contained an emphasis of matter paragraph then it is not an unmodified report as intended but rather a modified report.

2. The reason for the modification of the opinion is not appropriate for a qualified opinion. The fact that there is a material uncertainty with regards the going concern ability of the company and that the basis for preparing financial statements is not appropriate, regardless of the fact there is adequate disclosure in the financial statements an adverse opinion is the one that is appropriate.

   A qualified opinion would have been appropriate if the alternative basis of preparing financial statements had been used but there was inadequate disclosure in the financial statements.

3. The title **Opinion** should be changed to the form of modification that has been used. In this case since the opinion should be adverse, the title of the opinion paragraph will change to **adverse opinion**.

4. The title **basis for opinion** paragraph should change to **Basis for adverse opinion.**

5. The fact that the audit senior concluded that there are no key audit matters and even if indeed there are none is not reason not to include a Key audit matters paragraph. Kimberly Plc. is a listed company and according to ISA 701 *Key Audit Matters* it is mandatory to have this paragraph and mention can be made that there were no key audit matters.

6. The contents of the Emphasis of matter paragraph are not supposed to be included in this paragraph. The audit report has a separate paragraph **Going concern** wherein these matters should be included.

SOLUTION FIVE

(a) Customer Due Diligence (CDD):

Customer due diligence (CDD) is the process that enables the audit firm to understand their clients business well enough to spot any unusual/suspicious business activity or transaction.

The CDD information normally includes:

- Who the client is
- Who controls it
- The purpose and intended nature of the business relationship
- The nature of the client
- The client's source of funds
- The client's business and economic purpose

CDD requirements have increased significantly since the introduction of money laundering regulations in Zambia.

Tipping off:

Tipping off is an offence which involves the Money Laundering Reporting Officer (MLRO) or any individual discloses something that might prejudice any investigations. It is a defence if the person did not know or suspect that it was likely to prejudice the investigation.

(b) Matters to consider with regards uncorrected misstatements:

(i) Translation of US$30,000

IAS 21 *The effects of changes in foreign exchange rates* states that monetary items such as receivables should be retranslated using the rate ruling at the end of each accounting period. The uncorrected misstatement is K120, 000 [(K22 – K18) X US$30,000]. This represents 1.5% of the profit before tax (K120, 000/K8, 000,000 X 100%) and 0.2% of total assets [(K120, 000/K67, 000,000 X 100%].

The matter is immaterial to both the statement of profit or loss and statement of financial position. If it remains uncorrected, the audit opinion will be unmodified.

(ii) Inventory

IAS 2 *Inventories* states that inventories should be measured at the lower of cost and net realizable value. The cost of the inventory in question is K900, 000 while the net realizable value is K742, 000 (K750, 000 – K8, 000). The uncorrected misstatement is K158, 000. This represents 2% of the profit before tax (K158, 000/K8, 000,000 X 100%) and 0.2% of total assets [(K158, 000/K67, 000,000 X 100%].

The matter is immaterial to both the statement of profit or loss and statement of financial position. If it remains uncorrected, the audit opinion will be unmodified.

(iii) Legal action

According to IAS 10 *Events after the reporting period* the decision on 8 October 2020 is an adjusting event which provides evidence of a condition which existed at the period end. A provision must therefore be made in line with IAS 37 *Provisions, contingent liabilities and contingent assets.*

The uncorrected misstatement represents 25% of the profit before tax (K2, 000,000/K8, 000,000 X 100%) and 3% of total assets [(K2, 000,000/K67, 000,000 X 100%].

The matter is material to both the statement of profit or loss and statement of financial position. If it remains uncorrected, the audit opinion will be modified and a qualified opinion may be issued.

(c)Advice on providing internal audit services to Mupeta Plc.:

Provision of internal audit services will create a self-review threat especially if Chibote & Co. goes on to use the internal audit work during the external audit. The firm is expected to use the same degree of professional skepticism when evaluating the internal audit work as would be used if the internal audit work was performed by individuals who are not part of the firm.

Chibote & Co. will use individuals who are not part of the external audit team to provide the internal audit services as a safeguard against self-interest threat. In addition, Mupeta Plc. will designate one of the Senior Management to be responsible for internal audit and to acknowledge responsibility for designing, implementing and maintaining internal control. This is an important safeguard to ensure Chibote & Co. does not take over managerial responsibilities.

However, Mupeta Plc. is a public interest entity and the rules are stricter. Hence, it will be advisable for Chibote & Co. to decline this request in order to be seen to be independent and avoid unnecessary misunderstandings.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

CA ADVISORY PROFESSIONAL IN ACCOUNTANCY

CA 3.4: ADVANCED TAXATION

THURSDAY 17 JUNE 2021

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

INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading and planning time. Use it to study the examination paper carefully so that you understand what to do in each question. DO NOT write in your answer booklet during this TIME.

2. This paper is divided into TWO (2) sections:

   Section A: ONE Compulsory Question.
   Section B: FOUR (4) Optional Questions. Attempt any THREE (3) questions from Section B.

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

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

5. **Cell phone**s are **NOT** allowed in the examination room.

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

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

8. Present legible and tidy work.

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

10. A Taxation table is provided from page 2 to page 6 of the question paper.

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

Taxation Table for paper CA3.4– Advanced Taxation (2021 Examinations)

Income Tax

Standard personal income tax rates

Income band	Taxable amount	Rate
K1 to K48,000	first K48,000	0%
K48,001 to K57,600	next K9,600	25%
K57,601 to K82,800	next K25,200	30%
Over K82,800		37.5%

Income from farming for individuals

K1 to K48,000	first K48,000	0%
Over K48,000		10%

Company Income Tax rates

On income from manufacturing and other	35%
On income from farming	10%
On income of Banks and other Financial Institutions	35%
On income from mineral processing	30%
On income from mining operations	30%
On income from manufacture of products made out of copper cathodes	15%

Mineral Royalty

Mineral Royalty on Copper

Range of Norm Price	Mineral Royalty Rate
Less than US$4,500	5.5% of norm value
From US$4,500 to less than US$6,000	6.5% of norm value
From US$6,000 to less than US$7,500	7.5% of norm value
From US$7,500 to less than US$9,000	8.5% of norm value
From US$9,000 and above	10% of norm value

Mineral Royalty on other minerals

Type of mineral	Mineral Royalty Rate
Base Metals (Other than Copper, Cobalt and Vanadium)	5% of norm value
Cobalt and Vanadium	8% of norm value
Energy and Industrial Minerals	5% of gross value
Gemstones	6% of gross value
Precious Metals	6% of norm value

Capital Allowances

Implements, plant and machinery and commercial vehicles:

Wear and Tear Allowance –	Plant used normally	25%
	Used in Manufacturing and Leasing	50%
	Used in farming and agro-processing	100%
	Used in mining operations	20%

Non- commercial vehicles

Wear and Tear Allowance	20%

Industrial Buildings:

Wear and Tear Allowance	5%
Initial Allowance	10%
Investment Allowance	10%

Low Cost Housing **(Cost up to K20,000)**

Wear and Tear Allowance	10%
Initial Allowance	10%

Commercial Buildings

Wear and Tear Allowance	2%

Farming Allowances

Development Allowance	10%
Farm Works Allowance	100%
Farm Improvement Allowance	100%

Presumptive Taxes

Turnover Tax 4%

Presumptive Tax for Transporters

Seating capacity	Tax per annum	Tax per day
	K	K
From 64 passengers and over	10,800	29.60
From 50 to 63 passengers	9,000	24.70
From 36 to 49 passengers	7,200	19.70
From 22 to 35 passengers	5,400	14.80
From 18 to 21 passengers	3,600	9.90
From 12 to 17 passengers	1,800	4.90
Less than 12 passengers and taxis	900	2.40

Property Transfer Tax

Rate of Tax on Realised Value of Land, Land and Buildings and shares	5%
Rate of Tax on Realised Value on a transfer or sale of a mining right	10%
Rate of Tax on Realised Value on a transfer of Intellectual Property	5%

Value Added Tax

Registration threshold	K800,000
Standard Value Added Tax Rate (on VAT exclusive turnover)	16%

Customs and Excise duties on used motor vehicles

	Aged 2 years but below 5 years		Aged 5 years and over	
Motor vehicles for the transport of ten or more persons, including the driver	**Customs duty**	**Excise duty**	**Customs duty**	**Excise duty**
	K	**K**	**K**	**K**
Sitting capacity of 10 but not exceeding 14 persons including the driver	17,778	22,223	8,889	11,112
Sitting capacity exceeding 14 but not exceeding 32 persons	38,924	0	13,840	0
Sitting capacity of 33 but not exceeding 44 persons	86,497	0	19,462	0
Sitting capacity exceeding 44 persons	108,121	0	43,248	0

	Aged 2 years but below 5 years		Aged 5 years and over	
Motor cars and other motor vehicles principally designed for the transport of persons including station wagons and racing cars	**Customs duty**	**Excise duty**	**Customs duty**	**Excise duty**
	K	**K**	**K**	**K**
Sedans				
cylinder capacity not exceeding 1000 cc	12,490	10,824	7,136	6,185
Cylinder capacity exceeding 1000 cc but not exceeding 1500 cc	16,058	13,917	8,564	7,422
Cylinder capacity exceeding 1500 cc but not exceeding 2500 cc	16,545	21,508	8,423	10,950
Cylinder capacity exceeding 2500 cc but not exceeding 3000 cc	18,049	23,463	10,528	13,687
Cylinder capacity exceeding 3000 cc	22,561	29,329	12,032	15,642
Hatchbacks				
cylinder capacity not exceeding 1000 cc	10,705	9,278	7,136	6,185
Cylinder capacity exceeding 1000 cc but not exceeding 1500 cc	14,274	12,371	8,564	7,422
Cylinder capacity exceeding 1500 cc but not exceeding 2500 cc	15,041	19,553	8,423	10,950
Cylinder capacity exceeding 2500 cc but not exceeding 3000 cc	16,545	21,508	10,523	13,687
Cylinder capacity exceeding 3000 cc	19,553	25,419	12,032	15,642
Station wagons				
cylinder capacity not exceeding 2500 cc	16,545	21,508	9,024	11,731
Cylinder capacity exceeding 2500 cc but not exceeding 3000 cc	18,049	23,463	13,357	17,598

Cylinder capacity exceeding 3000 cc but not exceeding 2500 cc	22,561	29,329	18,049	23,463

SUVs				
Cylinder capacity not exceeding 2500 cc	21,057	27,374	9,024	11,732
Cylinder capacity exceeding 2500 cc but not exceeding 3000 cc	24,065	31,284	13,357	17,598
Cylinder capacity exceeding 3000 cc	28,577	37,150	18,049	23,463
	Aged 2 years but below 5 years		**Aged 5 years and over**	
Motor vehicles for the transport of goods - with compression-ignition internal combustion piston engine (diesel or semi-diesel):	**Customs duty**	**Excise duty**	**Customs duty**	**Excise duty**
	K	**K**	**K**	**K**
Single cab				
GVW exceeding 1.0 tonne but not exceeding 1.5 tonnes	21,926	9,501	8,770	3,801
GVW exceeding 1.5 tonnes but not exceeding 3.0 tonnes	26,311	11,402	15,348	6,651
GVW exceeding 3.0 tonnes but not exceeding 5.0 tonnes	30,697	13,302	17,541	7,601
Double cabs GVW exceeding 3 tonnes but not exceeding 5 tonnes	30,274	0	24,119	10,452
Double cabs GVW exceeding 3.0 tonnes but not exceeding 5.0 tonnes, **with spark ignition internal combustion piston engine**	30,697	13,302	24,119	10,452
Panel Vans				
GVW exceeding 1.0 tonne but not exceeding 1.5 tonnes	15,348	6,651	8,770	3,801
GVW exceeding 1.5 tonnes but not exceeding 3.0 tonnes	17,541	7,601	15,348	6,651
GVW exceeding 3.0 tonnes but not exceeding 5.0 tonnes	21,926	9,501	17,541	7,601
Trucks				
GVW up to 2 tonnes	21,926	9,501	10,963	4,751
GVW exceeding 2.0 tonnes but not exceeding 5.0 tonnes	28,504	12,352	13,156	5,701
GVW exceeding 5.0 tonnes but not exceeding 10.0 tonnes	24,724	18,955	10,817	8,293
GVW exceeding 10.0 tonnes but not exceeding 20.0 tonnes	30,905	23,694	11,744	9,004
GVW exceeding 20 tonnes	51,898	0	19,461	0
GVW exceeding 20 tonnes, **with spark ignition internal combustion piston engine**	37,086	28,432	13,907	10,662

Surtax

On all motor vehicles aged more than five (5) years from year of manufacture	K2,000

Customs and Excise on New Motor vehicles

Duty rates on:

1. Motor cars and other motor vehicles (including station wagons) principally designed for the transport of less than ten persons, including the driver:

Customs Duty:	
Percentage of Value for Duty Purposes	30%
Minimum Specific Customs Duty	K6,000
Excise Duty:	
Percentage of Value for Duty Purposes for Excise Duty Purposes	
Cylinder capacity of 1500 cc and less	20%
Cylinder Capacity of more than 1500 cc	30%

2. Pick-ups and trucks/lorries with gross weight not exceeding 20 tones:

Customs Duty	
Percentage of Value for Duty Purposes	15%
Minimum specific Customs Duty	K6,000
Excise Duty:	
Percentage of Value for Duty Purposes for Excise Duty Purposes	10%

3. Buses/coaches for the transport of more than ten persons

Customs Duty:	
Percentage of Value for Duty Purposes	15%
Minimum Specific Customs Duty	K6,000
Excise Duty:	
Percentage of Value for Duty Purposes for Excise Duty Purposes	
Seating Capacity of 16 persons and less	25%
Seating Capacity of 16 persons and more	0%

4. **Trucks/lorries with gross weight exceeding 20 tonnes**

Customs Duty:	
Percentage of Value for Duty Purposes	15%
Excise Duty:	
Percentage of Value for Duty Purposes for Excise Duty Purposes	0%

SECTION A

This question is compulsory and must be attempted.

QUESTION ONE

Citrus Ltd holds 100% of the share capital in three (3) companies, Orange Ltd, Lemon Ltd and Guava Ltd. Citrus Ltd, Orange Ltd and Lemon Ltd are all resident in Zambia while Guava Ltd is resident in a foreign country known as Pestovia.

The Chief Executive Officer of Citrus Ltd is Amos Mulenga, who is resident and ordinary resident in Zambia. He owns some shares in Citrus Ltd and Guava Ltd. In the year ended 31 December 2021, his annual gross director's emoluments were K560,000. He also received net dividends of K30,600 from Citrus Ltd and dividends of K49,600 from Guava Ltd net of withholding tax at the rate of 38% deducted in Pestovia. There is no double taxation convention between Zambia and Pestovia. Any double taxation relief is given by means of unilateral relief.

For the year ended 31 December 2021, the four companies' sales revenue and purchases and expenses were as follows:

	Citrus Ltd	**Orange Ltd**	**Lemon Ltd**	**Guava Ltd**
	K'000	K'000	K'000	K'000
Sales Revenue	991,000	913,500	175,000	682,500
Purchases and expenses	532,800	387,000	265,350	245,925

All of the companies are registered for Zambian VAT where applicable and all of the above amounts are exclusive of VAT where applicable. 90% of Citrus Ltd's supplies are standard rated while the remainder are exempt supplies. All of the supplies made by Orange Ltd are zero rated while all of the supplies made by Lemon Ltd are exempt supplies. Guava Ltd makes only standard rated supplies of software installation services. The purchases and expenses for all the companies are standard rated.

The following information is also available:

(1) During the year, Citrus Ltd sold standard rated goods worth K3.6 million to Orange Ltd. This transaction has not been included in the sales revenue of Citrus Ltd and in the purchases and expenses of Orange Ltd shown above.

(2) Citrus Ltd charged management fees of K87 million to Orange Ltd and K76 million to Lemon Ltd to cover the costs of the central treasury function. The amounts of management fees are not included in the sales revenue of Citrus Ltd and in the purchases and expenses of both Orange Ltd and Lemon Ltd.

(3) Citrus Ltd incurred standard rated overheads of K196 million which have are not been included in the purchases and expenses of Citrus Ltd shown above.

(4) 40% of Guava Ltd sales revenue shown above represents supply of software installation services made by Guava Ltd during the year to Citrus Ltd, Orange Ltd and Lemon Ltd in equal proportions. None, of the three companies have accounted for the

supply of these services in each company's purchases and expenses shown above. Guava Ltd does not have a tax paying agent in Zambia.

(5) During the year, Orange Ltd transferred a commercial plot of land to Citrus Ltd as part of the internal reorganization of the group. At the time of transfer, the plot of land was valued at K5.8 million.

Future plans

Citrus Ltd plans to make the following acquisitions and disposals of subsidiaries and other transactions next year:

(1) Citrus Ltd plans to acquire 100% of the share capital of a manufacturing company known as Banana Ltd which was incorporated and is resident in a foreign country. Immediately after its acquisition of the 100% stake, Citrus Ltd will make a loan of K60 million to Banana at an interest rate that is lower than the commercial rate of interest, to enable Banana Ltd to set up a new manufacturing plant. The loan will be repaid after five years.

(2) After the acquisition of its interest in Banana Ltd, Citrus Ltd will also start exporting components to Banana Ltd, which will be used by that company in one of its production processes. These components will be transferred at a transfer price that is equal to the full production cost of the components to Citrus Ltd. Citrus Ltd normally makes a margin of 30% on all sales of these components on the Zambian market.

(3) Citrus Ltd plans to dispose of Lemon Ltd next year and use the proceeds to purchase a new Zambian resident company engaged in manufacturing known as Mango Ltd. The directors of Citrus Ltd are keen to know what the taxation implications of both the disposal of Lemon plc and acquisition of Mango Ltd will be for the group.

Required:

(a) Based on the information available:

(i) Calculate the Zambian VAT position of each of the companies **Citrus Ltd**, **Orange Ltd**, **Lemon Ltd** and **Guava Ltd**, for the year ended 31 December 2021 and show the net VAT position for the group. (15 marks)

(ii) Advise Orange Ltd of the property transfer tax implications of the transfer of the commercial plot of land to Citrus Ltd. (2 marks)

(b) Advise on the VAT implications of the supplies of services made by Guava Ltd to Citrus Ltd, Orange Ltd and Lemon Ltd, supported by appropriate calculations. (4 marks)

(c) In relation to the acquisition of Banana Ltd explain the taxation implications that will arise for Citrus Ltd from:

(i) Making the K60 million loan to Banana Ltd at an interest rate that is lower

Than the commercial rate of interest after the acquisition of the company.

(2 marks)

(ii) Exporting components to Banana Ltd after its acquisition, at a transfer price that is equal to the full production cost of the components to Citrus Ltd

(2 marks)

(d) Explain the taxation implications that will arise for the group on the:

(i) Disposal of Lemon Ltd (6 marks)

(ii) Acquisition of Mango Ltd. (3 marks)

(e) Compute the amount of income tax payable by Amos Mulenga in the tax year 2021.

(6 marks)

[Total: 40 Marks]

SECTION B

There are FOUR (4) questions in this section. Attempt Any THREE (3) questions.

QUESTION TWO

Belinda and Melinda are the sole owners of BeMel Ltd a Value Added Tax registered company trading in electronic equipment, office and home furniture. Belinda owns 90% of the ordinary shares of BeMel Ltd, whilst Melinda owns the remaining 10%. Belinda is a full time Working director of BeMel Ltd, whilst Melinda is neither an employee nor a director of the company.

In the year ended 31 December 2021, the company provided the following benefits to Belinda and Melinda.

(1) In January 2021, Belinda purchased household electrical appliances, with a market value of K50,000 under a credit facility allowing her to pay for the goods in 36 months' time.

(2) In April, 2021 BeMel Ltd provided an interest free loan to Belinda of K600,000 to finance the purchase of her own personal residential plot. The loan can be repaid by Belinda in three years' time.

(3) In September 2021, Melinda purchased a home theatre musical system at a discounted price of K10,000. The open market value of the musical system was K18,000.

(4) In December 2021, BeMel Ltd paid the annual rentals for Melinda's private residential accommodation amounting to K96,000.

Future plans

Belinda is thinking of acquiring a pool motor car for the use of the employees of the company, at a cost of K348,000 VAT inclusive. She is considering the following two finance options for the car:

(1) Purchase the motor car outrightly using a 3-year bank loan at an annual interest of 26% per annum.

(2) Obtain the motor car under an operating lease agreement, paying annual lease rentals of K46,400 VAT inclusive. The lease agreement will be renewable every year.

Required:

(a) In the context of company income taxation, explain what constitutes a loan to an effective shareholder. (2 marks)

(b) Advise Belinda and Melinda, with appropriate supporting computations, of the taxation implications for the company of each of the above benefits provided to each individual during the tax year 2021. (12 marks)

(c) In relation to Belinda's future plans, advise her of the taxation implications if the pool motor car was acquired:

(i) Out rightly using a 26% Bank loan. (3 marks)

(ii) Under operating lease agreements. (3 marks)

[Total: 20 Marks]

<u>QUESTION THREE</u>

For this part of the question, you should Assume today's date is 15 December 2020.

Letticia and Felicia are the sole owners of Tisha Ltd, a Value Added Tax registered trading company. Letticia owns 95% of the company's ordinary share capital, whilst Felicia holds the remaining 5%. Letticia is a full-time working director of Tisha Ltd, whilst Felicia is neither an employee nor a director of the company.

Letticia is now thinking of acquiring a motor vehicle for use for both business and private purposes. She is considering:

(1) Whether she should acquire the vehicle as her own personal private motor vehicle to be used partly for business purposes, or whether the vehicle should be acquired by Tisha Ltd and then provided to her for both business and private use.

(2) Whether the vehicle should be a motor car or a motor van.

Letticia anticipates that she will travel 50,000 kilometres in the tax year 2021 out of which 45,000 kilometres will be for business purposes and the remainder for private purposes.

The vehicle will have an estimated cost of K290,000 (VAT inclusive) with a cylinder capacity of 2500cc regardless of whether it is a motor car or a motor van and whether it is acquired by her personally or by the company.

The standard rated motor car running costs associated with the vehicle are estimated to be K20,880 (VAT inclusive) per year. The motor car running expenses will be paid by her personally if she acquires the vehicle herself as personal private vehicle and, in the event that it is acquired by Tisha Ltd, then they will be paid by the company.

Letticia will have a monthly salary of K30,000 in the tax year 2021. The company is expected to be sufficiently profitable and will prepare its accounts for years ending on 31 December, with the first accounts being prepared for the year ending 31 December 2021.

Felicia is further thinking of making investments in Government of Zambia bonds, Certificates of deposits, and ordinary shares of companies listed on the Lusaka Securities Exchange (LuSE). She is keen to know what the taxation implications of making these investments would be.

Required:

(a) Assuming that Letticia acquires a motor car, as her own personal private vehicle to be used partly for business purposes, advise her of the personal income tax and Value Added Tax implications arising for both her personally as well as for Tisha Ltd. (4 marks)

(b) Assuming that Tisha Ltd acquires a motor car and provides it to Letticia for both business and private use, advise her of the personal income tax, and Value Added Tax implications arising for her personally and for Tisha Ltd. (5 marks)

(c) Advise Letticia of how your answers to both parts (a) and (b) above would be different if the vehicle acquired in each case was instead, a motor van. (5 marks)

(d) Advise Felicia of the taxation implications of investing in:

(i) Government of Zambia bonds (2 marks)

(ii) Certificates of deposit (2 marks)

(iii) Ordinary shares of companies listed on LuSE (2 marks)

[Total: 20 Marks]

QUESTION FOUR

LMA Mining Plc is a Zambian resident company engaged in mining of emeralds in Zambia. LMA Mining Plc is a subsidiary of LMA International a foreign multinational mining company based in Europe. The Management of LMA International is concerned with the sharp depreciation of the kwacha against the US dollar in the recent past and is planning to hedge the exposure of the company to currency risk. They are however not sure of the tax treatment of any income or losses which may arise from hedging.

The group financial statements are prepared in United States Dollars. The company generated a profit before taxation of K385,166,000 for the year ended 31 December 2021.

This figure was arrived at after charging depreciation on non- current assets of K125,630,000, mineral royalty tax of K250,000, provision for environmental expenditure of K78,600, installation of street lights in a town outside the mining township at a cost of K150,000 and impairment of goodwill K99,000. Other expenses charged to profit or loss were all allowable operating expenses of K147,980.

Fixed deposit interest income of K5,356,000 (gross) was credited to the statement of profit or loss for the year.

Capital allowances for the year were K92,745,000.

Additional information

(1) The company incurred a tax adjusted loss from mining operations of K342,500,000

(2) The indexation formula for mining losses is given below:

$$1+\frac{(R_2 - R_1)}{R_1}$$

(3) The following Zambian kwacha per US Dollar (K/US$) mid exchange rates have been provided by the Bank of Zambia and approved by the Commissioner General:

Date	**Exchange rate** ZK/US $
31 December 2020	18.50
31 December 2021	19.00

Required:

(a) Explain any four (4) tax incentives available to companies such as LMA Mining plc engaged in mining. (4 marks)

(b) Advise the directors of the tax treatment of income and losses arising from hedging. (4 marks)

(c) Compute the taxable business profits for the tax year 2021 and advise the directors of LMA Mining Plc of the amount of company income tax payable for the tax year 2021. (12 marks)

[Total: 20 Marks]

QUESTION FIVE

For the purposes of this question you should assume that today's date is 1 November 2022

You are employed as a Tax Manager in a firm of Chartered Accountants. You are dealing with the tax affairs of GLT Limited, a new client of the firm. The directors of the company have informed you that they recently received a letter from the Zambia Revenue Authority giving them notice of their intention to perform a tax audit on the affairs of the company. This letter also warned that penalties and interest may be payable, should the audit uncover any undeclared income or tax defaults.

GLT Ltd is engaged in manufacturing and commenced operations a year ago. In January 2021, the directors of the company estimated the provisional taxable income for the tax year 2021 to be K9,500,000. However, due to the adverse effects of the Corona Virus Pandemic (COVID 19) on the performance of the company the directors revised the provisional taxable income to only K6,500,000.

The company submitted the return of provisional income in respect of the tax year 2021 on 10 April 2021 and paid the provisional income tax relating to the first quarter on this date. The second and third instalments of provisional income tax relating to the second and third quarters were both paid on 30 September 2021, whilst the final instalment of provisional income tax relating to the fourth quarter was paid on 31 December 2021.

The directors have informed you that for the year ended 31 December 2021, the company generated a profit before taxation as as per accounts of K6,900,000 and they calculated the actual amount of the company income tax liability for the tax year 2021 based on this profit figure. The directors also computed the balance of income tax payable for the tax year 2021, on this basis and paid this on 21 June 2022. The self-assessment income tax return in respect of the tax year 2021 was also submitted on 21 June 2022.

They have provided you with the financial statements for the year ended 31 December 2021 and using these, you have established that the actual tax adjusted profit for the company for the tax year 2021 was K12,500,000. You computed the correct amount of the company income tax liability and the balance of the income tax payable for the tax year 2021. The directors paid the amount of tax which was underpaid on 21 October 2022.

Whilst performing work on this assignment, you noticed that the directors omitted a significant amount of income from the company's previous year's (i.e. the tax year 2020) self assessment return. You have approached the directors and advised them to make the necessary corrections and submit an amended return, but they have refused and instead, they have offered you K200,000 cash, to keep this information to yourself and not disclose it to anyone in line with your professional duty of confidentiality.

You should assume that the Bank of Zambia discount rate is 8.5% per annum and that the tax regulations for the tax year 2021, apply throughout

Required:

(a) Advise the directors of GLT Ltd of the company's exposure to penalties and interest. Your answer should be supported by calculations of the amount of interest and penalties arising as far as the information provided permits. (10 marks)

(b) Evaluate the ethical and profession issues you face in relation to the undisclosed income by GLT Limited and the directors offer of money to you, recommending any appropriate course(s) of action that should be taken. (6 marks)

(c) Describe any four (4) audit procedures a tax auditor should carry out to uncover any hidden income when performing a tax audit on the affairs of a tax payer. (4 marks)

[Total: 20 Marks]

END OF PAPER

CA 3.4: ADVANCED TAXATION SUGGESTED SOLUTIONS

SOLUTION ONE

(a) (i) CITRUS' VAT POSITION

	K'000	K'000
Output Tax		
Sales Revenue:		142,704
(K991m x 90%) x 16%		
Intragroup sales		576
(K3.6m x 16%)		
Management fees:		
(K87m + K76m) x 16%		26,080
Total output VAT		169,360
Input VAT		
Purchases and expenses		
(K532.8m x 16%)	85,248	
Overheads		
(K196m x16%) x 90%	28,224	
Commercial Plot of land (K5.8m x 16%)	928	
Total recoverable input VAT		(114,400)
VAT payable		54,960

ORANGE'S VAT POSITION

	K'000	K'000
Output Tax		
Sales Revenue (K93.5m x 0%)		Nil
Commercial Plot of land (K5.8 x 16%)		928
Total Output Tax		928
Input VAT		
Purchases and expenses		
(K387m x 16%)	61,920	
Intra-group purchases		
(K3.6m x 16%)	576	
Management fees		
(K87m x 16%)	13,920	
Total recoverable input VAT		(76,416)
VAT repayable		(75,488)

LEMON LTD'S POSITION

This company makes only exempt supplies. It cannot therefore register for VAT and as a result, it cannot charge VAT or recover any input VAT.

GUAVA Ltd's

This company is not resident in Zambia. It cannot therefore register for VAT in Zambia. It has neither VAT payable nor repayable in Zambia.

NET VAT POSITION OF THE GROUP COMPANIES

	K'000
VAT payable by Antelope Ltd	54,960
VAT repayable to Gazelle Ltd	(75,488)
Net VAT repayable	(20,528)

(ii) Because Orange Ltd and Citrus Ltd are members of a group and both companies are resident in Zambia, the transfer of property by Orange Ltd to Citrus Ltd may be determined to have no realized value. This is because the transfer was made as part of the internal re-organisation of the group. Therefore, Orange Ltd will not be required to pay Property Transfer Tax.

(b) The supplies of services made by Guava Ltd to Citrus Ltd, Orange Ltd and Lemon Ltd, will result in each of the three Zambian resident companies being subjected to reverse Value Added Tax (VAT).

Reverse VAT will arise because Guava Ltd does not have a tax paying agent in Zambia. If Guava Ltd had a tax paying agent in Zambia, then reverse VAT would not arise on the value of services that the three Zambian companies import from Guava Ltd.

Each of the three companies will have to calculate reverse VAT as output VAT. The amount of reverse VAT for each company will be as follows in the year ended 31 December 2021:

Reverse VAT = 40% x K682,500,000 x 16% x 1/3

= K14,560,000

Citrus Ltd, Orange Ltd and Lemon will not be able to recover the above amount of reverse VAT of K3 each as input VAT.

(c) (i) Tax implications of Loan to Banana Ltd

Anti-avoidance Tax legislation requires that when a Zambian resident company makes a loan to a foreign related company, it must charge interest on that loan at a commercial rate.

When loan interest is charged at less than the commercial lending rate, the company receiving the loan interest is deemed to have received interest at the commercial rate. This means that the difference between the commercial rate of interest and the actual rate of interest used on such loans must be treated as a disallowed amount when computing taxable business profits for the Zambian resident company.

Therefore, once the loan of K60 million is made to Banana Ltd, Citrus Ltd will be deemed to be receiving interest at the commercial rate and the difference between the commercial rate of interest and the actual rate of interest used will be treated as a disallowed amount when computing taxable business profits for Citrus Ltd.

(ii) Tax implications exporting components to Banana Ltd

Anti-avoidance tax legislation requires that when a Zambian resident company transfers goods produced in Zambia to a company that is resident abroad, then the transfer price should be equal to at least the market value of the goods.

When transfer prices are different from the actual market values of the goods being transferred, then the profit element must be added when calculating the taxable profits.

Therefore, when Citrus Ltd transfers goods to Banana Ltd at a transfer price equal to the full production cost it will be deemed to have sold the components at the open market value and the profit margin on any of the components transferred will be disallowed when computing the taxable profits of Citrus Ltd i.e. the difference between the open market value of those components and their full production cost to Citrus Ltd will be treated as a disallowed amount when computing the taxable business profits of the company.

(d) (i) Taxation implications of the disposal of Lemon Ltd

The taxation implications of the disposal of Lemon Ltd will depend on whether it will be sold as a going concern or not as going concern.)

(1) If Lemon is disposed of as a going concern, then all the assets of that company will be taken over by the new owners. The business will continue operating but under new owners. For taxation purposes, the only taxation implications will be that:

(i) Lemon Ltd will be deemed to have ceased trading in the year of disposal and therefore, the company income tax assessment for the company in the year of disposal will be made using cessation rules.

(ii) No VAT is chargeable on all assets held by Lemon Ltd which are taxable supplies for VAT purposes

(iii) No PTT is chargeable on assets meeting the definition of chargeable property for PTT purposes

(2) If on the other hand Lemon Ltd is sold not as a going concern, this will mean that it will be the individual assets of the company that will be disposed of as opposed to selling the subsidiary as a whole. In that case the taxation implications will be that:

(i) VAT will be payable on all taxable assets for VAT purposes.

(ii) Property transfer tax will be chargeable on the transfers of property by that company.

(iii) (ii) Taxation Implications of the acquisition of Mango Ltd

(1) When a new company is acquired by a group and joins the group, that company is assessed separately for company income tax purposes. Therefore, Mango Ltd will be assessed separately for company income tax purposes upon acquisition and will be required to complete its own tax returns for each relevant tax year, though it will be expected to prepare its accounts to a common accounting date with Citrus Ltd and the rest of the group.

(2) In the year Mango Ltd will be acquired and therefore enters the group, it will make its company income tax assessments using commencement rules.

(3) Citrus Ltd and other existing members of the group will continue being be taxable individually and separately.

(e) MULENGA'S

PERSONAL INCOME TAX COMPUTATION FOR THE TAX YEAR 2021

	K	K	
Income from foreign sources			
Gross director's emoluments		560,000	
Dividends (K49,600 x 100/62)		80,000	
		640,000	
Income Tax			
On first K82,800		9,960	
On excess (K640,000 – K82,800) x 37.5%		208,950	
Zambian income tax charge		218,910	
Less Double Taxation Relief foreign dividends		(26,546)	(W)
Income Tax Payable		192,364	

WORKINGS

Double taxation relief on the dividends from foreign sources:

This will be the lower of:

(i) The foreign tax paid on the dividends:

K80,000 x 38% = K30,400; and

(ii) The Zambian Tax Charge attributed to the dividends computed as:

$$\left(\frac{K80,000}{[K640,000 + (K30,600 \text{ x} \frac{100}{85})]}\right) \text{x } [K218,910 + \left(K30,600 \text{ x} \frac{15}{85}\right)]$$

$$\left(\frac{K80,000}{K676,000}\right) \text{x } K224,310$$

= K26,546

DTR will therefore be K26,546 being the lower amount.

SOLUTION TWO

(a) A loan to an effective shareholder under the Income Tax Act include:

(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 is convertible into cash or not
(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 affective shareholder

(b) TAX IMPLICATIONS OF BENEFITS PROVIDED TO BELINDA:

Purchase of household electrical appliances on credit

(1) BeMel Ltd will be deemed to have made a loan to an effective shareholder of the company given that Belinda holds more than 5% of the ordinary shares of the company, (his shareholding being 90%).

(2) The amount of the loan will be deemed to be equal to the extent of the credit facilities provided, which is K50,000, as the definition of a loan to an effective shareholder under the Income Tax Act includes the extent of credit facilities provided to the shareholder.

(3) The company will be required to pay income tax equal to the difference between the amount of the grossed-up equivalent of this amount and the **actual amount of the loan**.

The amount of income tax chargeable on the company will be:

K50,000 x 37.5/62.5 = K30,000

Alternatively, this can also be computed as:

	K
Grossed up equivalent of loan amount (K50,000 x 100/62.5)	80,000
Actual amount of loan	(50,000)
Income Tax chargeable on company	30,000

The due date for the payment of the tax will be 14 February 2021.

(4) There will be no Tax implications for Belinda.

Provision of interest free loan

(1) Belinda holds more than 5% of the ordinary shares of the company, (his shareholding being 90%) and is therefore an effective share holder of the company.

(2) BeMel Ltd will therefore be deemed to have made a loan amounting to K600,000 to an effective shareholder.

(3) The company will be required to pay tax equal to the difference between the amount of the grossed-up equivalent of the loan and the **actual amount of the loan**.

The amount of tax the company will be required to pay will be:

K600,000 x 37.5/62.5 = K360,000;

Alternatively, the amount of income tax chargeable on the company can be computed as:

	K
Grossed up equivalent of loan amount	
(K600,000 x 100/62.5)	960,000
Actual amount of loan	(600,000)
Income Tax chargeable on company	360,000

(4) There will be no Tax implications for Belinda.

TAX IMPLICATIONS OF BENEFITS PROVIDED TO MELINDA:

Purchase of home theatre

(1) Melinda holds more than 5% of the ordinary shares of the company, (her shareholding being 10%) and is therefore an effective share holder of the company. BeMel Ltd will therefore be deemed to have made a loan to an effective shareholder.

(2) This is because the definition of a loan to an effective shareholder under the Income Tax Act includes, the difference between the open market value, as determined by the Commissioner General, of an asset transferred to an effective shareholder and the amount paid for that asset at the date of transfer.

(3) The amount of the loan BeMel Ltd will be deemed to have made to Melinda will be equal to the difference between the open market value, of the Musical theatre system which is K18,000 and the amount of K10,000 paid by Melinda for the asset. The amount of the loan will therefore be K8,000 (i.e. K18,000 - K10,000).

(4) BeMel Ltd will be required to pay income tax on the amount of K8,000. The income tax payable will be equal to the difference between the amount of the grossed-up equivalent of this amount and the actual amount of the loan.

The amount of income tax chargeable on the company will be:

K8,000 x 37.5/62.5 = K4,800

Alternatively, this can also be computed as:

	K
Grossed up equivalent of loan amount (K8,000 x 100/62.5)	12,800
Actual amount of loan	(8,000)
Income Tax chargeable on company	4,800

(5) There will be no Tax implications for Melinda.

Payment of accommodation rental

(1) BeMel Ltd will be deemed to have made a loan to an effective shareholder as she holds more than 5% of the ordinary shares of the company, (her shareholding being 10%).

(2) This is because the definition of a loan to an effective shareholder under the Income Tax Act includes, the difference between the cost of providing any benefit or advantage and the amount paid for such benefit or advantage when provided.

(3) The amount of the loan will be taken to be equal to the difference between the cost to Bemel Ltd of providing the benefit to Melinda, which is the amount of the rentals paid by the company of K96,000 and the amount paid by Melinda to the company for this benefit. Since Melinda did not pay the company any amount for the rentals. The amount BeMel Ltd will be deemed to have provided as a loan to Melinda will be the whole amount of K96,000.

(4) BeMel Ltd will be required to pay income tax equal to the difference between the amount of the grossed-up equivalent of this amount and the actual amount of the loan.

The amount of income tax chargeable on the company will be:

K96,000 x 37.5/62.5 = K57,600

This can also be computed as:

	K
Grossed up equivalent of loan amount	
(K96,000 x 100/62.5)	153,600
Actual amount of loan	(96,000)
Income Tax chargeable on company	57,600

(5) There will be no Tax implications for Melinda.

(c) (i) TAX IMPLICATIONS OF OUTRIGHT PURCHASE USING BANK LOAN

(1) The company will not be able to claim the input VAT on the cost of the pool car as input VAT on motor cars is irrecoverable.

(2) The company will be able to claim capital allowances based on the VAT inclusive cost of the motor car. The capital allowances would be:

20% x K348,000 = K69,600

(3) Interest on the bank loan will be disallowed, as the loan will be for capital purposes

K348,000 x 26% = K90,480

(ii) TAX IMPLICATIONS OF USING OPERATING LEASING

The taxation implications will be as follows:

(1) The company will not be able to recover input VAT on the lease rentals because VAT on motor cars is irrecoverable.
(2) The VAT inclusive operating lease rentals will be allowable deductions when computing the taxable business profits.
(3) The company will not be able to claim any capital allowances on the cost of the motor cars as these will be claimed by the lessor.

SOLUTION THREE

(a) (i) TAX POSITION FOR LETTICIA

The tax implications for Leticia of acquiring a motor car as her own private motor car personally will be as follows:

(1) She will be able to claim as an allowable deduction from her gross emoluments capital allowances on the VAT inclusive cost the motor car at the rate of 20%, restricted to the proportion of business use of the motor
The amount of the capital allowance will be:

(K290,000 x 20%) x 45,000/50,000 = K52,200.

(2) She will be able to claim as deductions from her gross emoluments for the tax year 2021, a proportion of the motoring expenses restricted to the business use of the vehicle and this will amount to

K20,880 x 45,000/50,000 = K18,792.

(3) She will not be able to claim a recovery of any amount of VAT incurred on the motoring expenses as she will be a final consumer and will therefore bear the whole amount of VAT.

TAX POSITION FOR TISHA LTD

Since Letticia would meet both the cost of the motor car, as well as all the motor car running expenses from her emoluments from the company, there will be no specific tax implications for Tisha Ltd.

(b) THE TAX POSITION FOR LETTICIA

If the motor car will be acquired by Tisha Ltd, then there would be no specific tax implications for Letticia as the company will bear both the cost of the motor car and all the motor car expenses.

THE POSITION FOR TISHA LIMITED

(1) The company will be able to claim capital allowances at the rate of 20% based on the VAT inclusive cost of the motor car without any restriction for private use as Leticia is only an employee of the company.

(2) The amount of the capital allowances which will be deductible when computing table profits would be:

20% x K290,000 =K58,000

(3) The company will also be able to claim a deduction in the computation of its taxable profits in respect of the motoring expenses of K18,000 without any restriction for private use. i.e K20,880 x 25/29 = K18,000.

(4) As the motor car will be use by Letticia for both business and private motoring to the exclusion of other employees, it will be a personal to holder motor car. The company will be assessed to income tax on a benefit of K30,000 per annum.

(5) As the company is registered for VAT purposes, it will be able to claim a recovery of VAT on all the motoring expenses, but not on the cost of the motor car as well.

(c) If the vehicle acquired is a van the position would be as follows:

MOTOR VAN ACQUIRED BY LETTICIA

(1) Letticia will now be able to claim as an allowable deduction from her gross emoluments capital allowances on the VAT inclusive cost the motor car at the rate of 25%, instead of 20% but restricted to the proportion of business use of the motor.

(2) The amount of the capital allowances will be:

(K290,000 x 25%) x 45,000/50,000 = K65,250.

MOTO VAN ACQUIRED BY TISHA LTD

If the van were acquired by Tisha Limited the above answer will need to be modified as follows:

(1) Input VAT on the cost of the motor van will now be recovered by the company and it will amount to = K290,000 x 4/29 = K40,000.

(2) The capital allowances will now be claimed at 25% on the VAT exclusive cost and would now amount to:

K290,000 x 25/29 x 25%= K62,500.

(3) There would be no taxable benefit in kind on the company as a result of the provision of a motor van for use by Letticia on a personal to holder basis.

(d) The taxation implications will be as follows:

(i) Investing in GRZ bonds

(1) The interest receivable is subjected to withholding tax at a rate of 15% which is the final tax for individuals. This means that interest will be received net of tax at 15%.

(2) On transfer of the bonds there is no property transfer tax to be charged because bonds fall outside the scope of PTT.

(ii) Certificates of deposits

(1) The interest receivable is subjected to withholding tax at a rate of 15% which is the final tax for individuals. This means that interest will be received net of tax at 15%.

(2) On transfer of the certificates of deposit, there is no property transfer tax to be charged because certificates of deposit fall outside the scope of PTT.

(iii) Investing in equity shares of Zambian listed companies

(1) The dividends receivable are exempt from income tax. This means that the dividends are received gross.

(2) On transfer (sale) of shares there is no property transfer tax to charge because transfer of share listed on the Lusaka Securities Exchange is exempt from PTT.

SOLUTION FOUR

(a) Tax incentives for mining companies

(1) Reduced tax rate of company income tax of 30% on mining profits
(2) Carry forward of losses for a period of ten year as compared to five years for other businesses
(3) Indexation of capital allowances if financial statements are prepared in US dollars
(4) Indexation of mining losses to maintain the real value of losses
(5) 20% deduction of capital expenditure in a mining township.
(6) Guaranteed input claim for ten years on preproduction expenditure for exploration companies in the mining sector.
(7) Capital allowances at a rate of 25% on other implements, plant & machinery excluding non-commercial vehicles.

(b) Tax treatment of gains and losses arising from hedging

Hedging gains

Hedging gains or hedging income is taxed as a separate source of income from mining operations being carried on.

The rate of tax applicable to income from hedging is 30%.

Hedging losses

When a loss is incurred from hedging, the loss can be carried forward and deducted from future hedging income.

Unrelieved hedging losses can be carried forward for up to ten years as they are still treated as losses from mining

© LMA MINING PLC
TAXABLE MINING PROFIT FOR TAX YEAR 2021

	K000	K000
Profit before taxation		385,166
Add :		
Mineral royalty tax	250	
Depreciation	125,630	
Impairment of goodwill	99	
street lights installation	150	
		126,129
		511,295

Less:			
Fixed deposit interest	5,356		
Capital allowances	92,745		
		(98,101)	
Adjusted mining profit		413,194	
Less: mining loss relief		(206,597)	(W)
Taxable mining profit		206,597	
Fixed deposit income		5,356	
Taxable business profits		211,953	

COMPUTATION OF INCOME TAX PAYABLE

	K'000
Company income tax on interest income	
(K5,356,000 x 35%)	1,875
Company income tax on mining profits	
(K206,597,000 x30%)	61,979
Company income tax payable	63,854
Less WHT on interest income	
(K5356000 x 15%	(803)
	63,051

Working

Indexed mining loss	
(1 + (19.00 – 18.50)/18.50) x K342,500,000	351,757
Loss to be relieved is restricted to:	
(K413,194 x 50%)	(206,597)
Balance of loss to be carried forward to 2022	145,160

SOLUTION FIVE

(a) GLT is exposed to penalties and interest due to late payments of taxes. The company is also exposed to penalties for late filling of returns and for filling incorrect returns as explained below:

(1) Return of provisional income

The Provisional income tax return for the first quarter was submitted on 10 April 2021, when it should have been submitted on 31 March 2021. It was therefore submitted late by 10 days.

A penalty of 2,000 (K600) penalty units per month or part thereof running from the due date to the date when filed is chargeable as GLT is a company. The amount of penalty will be: 2,000 penalty units or K600.

(2) The second instalment of provisional income tax

The second instalment of provisional income tax for the second quarter of 2021 was paid late. It was paid on 30 September 2021, when it should have been paid by 10 July 2021. It was therefore paid late by 2 months and 20 days.

A penalty of 5% of the tax due per month or part thereof will arise. The amount of penalty payable will be: 5% x K568,750 (W) x 3 = K85,313.

Additionally, interest on the overdue tax will arise. The amount of interest will be 2% above the BOZ policy rate per annum. The amount of interest payable will be:

(8.5% + 2%) = 10.50% x K568,750 x 82/365 = K13,416

WORKINGS:
COMPUTATION OF PROVISIONAL INCOME TAX PAYABLE:

	K
Provisional Income Tax (K6,500,000 x 35%)	2,275,000
Provisional income tax payable per quarter is: (K2,275,000/4)	568,750

(3) Penalties and interest will be chargeable on the underpaid tax for the tax year 2021 of (K12,500,000 – K6,900,000) x 35% = K1,960,000 running from 21 June 2022 to 21
October 2022, the date when the tax was paid.

The penalty will be: 5% X K1,960,000 x 4 = K394,000

The interest will be: 10.50% x K1,960,000 x 122/365 = K68,788

(4) Filing incorrect returns

The self-assessment return was incorrect as the net profit for year was used and not the taxable profit. If the incorrect returns are determined to be fraudulent, a fine for submitting fraudulent returns may be charged.

(b) Ethical issues

A professional accountant is expected to demonstrate the highest level of integrity in his work and in all his dealings. Integrity means being straightforward and honest in all professional and business relationships.

The principle of integrity also imposes an obligation on the practitioner not to mislead or deceive and truthfulness. Therefore, in providing tax services to the company, the practitioner must not knowingly be associated with reports, returns, communications or other information where your firm believes that the information contains a materially false or misleading statement or calculation and contains statements or information furnished recklessly.

The action by the directors of GLT of not reporting significant amount of income is an offence which borders on tax evasion and therefore constitutes a criminal offence.

You should report the offer of K200,000 cash to your supervisor. This offer should not be accepted.

Your firm should take careful thought to its own position and seek legal advice on the matter.

Your firm will also have a statutory duty to report the offence to the proper authorities immediately, which will override the duty of confidentiality.

(c) Procedures performed to uncover hidden income

In order to uncover hidden income, the auditor consider will mainly consider third parties who have dealings with the taxpayer. Specifically, the auditor can perform the following procedures:

(1) Request the taxpayer to provide a statement of affairs setting out all of their assets and liabilities on a specified date to help assess the financial position and financial performance of the tax payer.

(2) Request third parties, such as suppliers and customers, to deliver or to make available for inspection any books and records or information and explanations in relation to a taxpayer that may be relevant to the taxpayer's liability to tax.

(3) Request financial institutions to make available details of accounts and financial transactions, of the tax payer, which may be material in determining the taxpayer's liability.

(4) Use financial ratios, industry benchmarks, business standards and profiles to assess the reasonableness of a tax payer’s declared income as business of comparable size and nature should have similar financial performance.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

CA ADVISORY PROFESSIONAL IN ACCOUNTANCY

CA 3.5: ADVANCED MANAGEMENT ACCOUNTING

TUESDAY 15 JUNE 2021

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

INSTRUCTIONS TO CANDIDATES

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

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

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

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

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

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

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

8. Present legible and tidy work.

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

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

SECTION A

This Question is compulsory and must be attempted

QUESTION ONE - (COMPULSORY)

Company information and mission
Nzara Shumba (NS), a sub-regional business, which originates from Zaland, is best-known food service retailing company in Southern Africa with more than 200 'fast-food' outlets in over seven (7) countries. As market leader in a fiercely competitive and constantly evolving industry, NS has strategic strengths of instant international brand recognition, experienced and highly trained management, site development expertise and advanced technological systems.

NS's mission statement is 'to create value for shareholders through delighting customers with good service and value and to be a good employer in each community in which it has a restaurant'.

Sharon Daka was recently appointed as the chief executive officer (CEO) and tasked to address a decline in NS's share price in the last 3 years. The CEO has stated that in the uncertain environment in which NS operates, the business must focus on optimising its value generation. She has developed an improvement programme for NS.
You are a performance management expert within NS and the CEO has tasked you with assisting her on two areas of the improvement programme.

Critical success factors (CSFs) and key performance indicators (KPIs)
The CEO believes that performance could be improved by ensuring that NS's mission statement flows down into the performance management of the business. NS currently has the following CSFs and associated KPIs:

CSF	**Associated KPI**
– Serve customers quickly	– Minutes between customer placing an order and receiving the order
– Match or undercut major competitors on price	– Average price per meal compared to major competitors
– Good staff retention	– Staff turnover

Firstly, the CEO wants you to evaluate the relationship between NS's mission, CSFs and KPIs and to recommend, with reasons, any changes that could be made to its CSFs and KPIs.

Geographical Division Performance
NS has a divisional structure based on the four geographical regions North, South, East and West. The CEO is concerned that it is the underperforming North division that is strongly contributing to NS's declining share price. She has decided that in order to improve performance, the North division should carry out a benchmarking exercise against the South division. The South has been the best performing of the four divisions for the past three years. A junior analyst has gathered the data for the most recent accounting period for use in this benchmarking exercise (Appendix 1).

For the second task, the CEO would like you to use the KPIs given in the scenario plus any other relevant measures to benchmark the North against the South. She would also like you to evaluate the approach to benchmarking used.

The CEO has always said that budgeting may be viewed as a relevant technique in facilitating the assessment of business performance from initial planning to actual results. It will be necessary, however, to consider how to overcome factors that may limit its effectiveness.

Required:

(a) Evaluate the relationship between NS's mission, CSFs and KPIs and recommend, with reasons, any changes that could be made to its CSFs and KPIs. (13 marks)

(b) Benchmark the North division against the South division using the KPIs given in the scenario plus any other relevant measures. (7 marks)

(c) Discuss the arguments for the use of budgeting in the implementation of four aspects of the performance cycle. (8 marks)

(d) Explain three (3) advantages that may be claimed for the use of activity based budgeting rather than a traditional incremental budgeting system. (6 marks)

(e) Suggest four (4) reasons why advocates of a 'Beyond Budgeting' philosophy may not regard a major annual budget preparation exercise as an effective use of resources. (6 marks)

[Total: 40 Marks]

Appendix 1

Benchmarking data

	North division	South division
Average number of customers per day	500	490
Average number of minutes between customers placing an order and receiving order	8	3
Average price per meal compared to main competitors	12% higher	3% higher
Staff turnover per annum	30%	29%
Average number of customers per day rating service as 'good' or 'better than good'	200	350
Average number of customers per day rating visit as providing 'value for money'	300	340
Average wage compared to similar employers in the local community	15% lower	17% lower

SECTION B

Attempt any THREE (3) questions in this section

<u>QUESTION TWO</u>

Kagema Plc(K Plc) is a highly diversified and divisionalised organization. It has five (5) divisions, namely, A, B, C, D and E and has been operating for the past 25 years.

Division A is located in Mpongwe on the Copperbelt and deals in gemstones such as emeralds, amethyst, aquamarine, rose quartz, etc. and metals such as gold. Lots of customers come from Europe, West Africa and Asia to come and buy the stones and gold. Division A management is facing a new challenge because there are emerging gemstone miners in Mpongwe, Mwinilunga, Petauke and Mumbwa, and existing rivals are selling their products on the internet.

The shopping of these products online or On Line Shopping(OLS) is presenting electronic learning challenges to the staff as well as customers.

Nevertheless, the OLS has advantages such as saving customers' time , saving customers' travelling cost to and from the shops and providing more flexibility to customers. But this is without disadvantages which include:

(i) Technical support and staff time will be required to change precious stone information (e.g. using scanning loupe for stone magnification to ascertain genuineness of the product) if the OLS is adopted.

(ii) Division A will need to continually update its databases for polished gemstones for customer convenience.

(iii) The design and maintenance of the OLS facility needs a lot of investment in electronic hardware and software.

Division A management have noted that staff and customers are not yet convinced of the advantages of the OLS and as a result are not committed to its development. In spite of this observation, Division A has set aside considerable funds for staff development for the OLS. However, only the more computer literate members of staff have taken this advantage of developmental training.

A stakeholder called the Association of Precious Stones Miners has been pressuring Division A management to assure them that the OLS facility will continue operating in the foreseeable future. But Division A management is not comfortable with the forcing of the OLS on their workers because of their resistance as noted above, i.e. there is no commitment. The impression given to the future and existing customers, in an increasingly competitive and regional/international market place, is far from impressive. The current partial and unsystematic use of the OLS is becoming a significant competitive disadvantage.

Required:

(a) Discuss the appropriate approaches that Division A management could use to reconcile the different stakeholders and their views of the OLS. You are advised to make use of the Mendelow's matrix in the evaluation in addition to any other suitable model. (8 marks)

The remaining four divisions, Divisions B, C, D and E, manufacture consumer goods. These divisions produce the following products:

Division B – Personal Care Division

This division produces a range of high quality personal care products such as skin care, hair care and deodorants to leading supermarkets, with stores in every provincial capital of Zambia.

Division C – Refreshments Division

Division C produces a narrow range of refreshment products such as mineral water and munkoyo.

Division D – Homecare Division

It is involved in the home care products which include of a range of cleaning products (e.g. bleachers, liquid/paste dish washers, toilet cleansers, etc.)

Division E – Vegetarian Food Division

It produces food that does not use animal based products. These include veggie loaf (with mashed potatoes and vegetables), veggie burgers and soya chunks. These are produced and packaged for a well-known label called Zambezi copper brand label.

Further additional quantitative information about the divisions is provided below:

K'millions

Year to 31 Dec	Division	B	Division	C	Division	D	Division	E
	Market Share	**Revenue**	**Market Share**	**Revenue**	**Market Share**	**Revenue**	**Market Share**	**Revenue**
2016	360	20	37.80	27	130	5.0	52.0	1.80
2017	420	24	38.60	28	138	5.4	54.40	1.80
2018	520	36	39.20	29	156	5.6	55.20	1.84
2019	550	50	39.60	30	184	5.8	56.00	1.88
2020	620	60	40.80	32	192	6.0	58.00	1.80

Additional information for the year 2020 is provided for the purposes of comparison:

Division:	Division B	Division C	Division D	Division E
Market leader percentage share	14%	78%	22%	28%

(b) Assess the competitive position of K Plc's divisions, i.e. Divisions B, C, D and E, using the BCG matrix. (12 marks)

[Total: 20 Marks]

QUESTION THREE

BC is a food producer that makes low cost processed food that it sells to supermarkets. BC produces only one type of processed food product and production techniques have remained largely unchanged for a number of years.

Over recent months, sales have been falling steadily. Consumer tastes are changing to favour natural ingredients and supermarkets have reflected this in the products that they offer for sale.

BC is keen to address the decline in sales and recently held a meeting to discuss the performance of the organisation. The Management Accountant suggested to the Managing Director that the performance of BC could be improved by implementing Total Quality Management (TQM) principles and adopting Kaizen costing concepts. Currently the control systems of BC focus on material price and usage.

The Managing Director is sceptical of the Management Accountant's suggestions and is unclear as to whether they are suitable for the company

As a result the Managing Director has suggested purchasing new equipment costing K460,000, which will produce a product with the following expected sales:

Year	**1**	**2**	**3**	**4**
Sales volume (units)	10,000	12,500	12,500	7,500

The sales price in year 1 is expected to be K30 per unit with a variable production cost of K12 per unit. Sales prices are subject to inflation of 3% per annum while variable costs are expected to rise by 5.5% per annum.

After 4 years the equipment is expected to be sold for K70,000. The new product will require an immediate investment in working capital of K45,000 and shall be maintained at 20% of revenue.

Corporation tax is at the rate of 35%, payable one year in arrears, and writing down allowances are available on a reducing balance basis at 20%.

Required:

(a) Explain two (2) concepts of Kaizen costing and also explain two (2) conditions that must exist for TQM to be successfully implemented at BC. (4 marks)

(b) Evaluate the financial performance of the Managing Director's suggestion based on the net present value and using a cost of capital of 10%. (11 marks)

(c) Value for Money (VFM) generally signifies the three (3) elements of economy, efficiency and effectiveness relating to the internal operations of an organization and its use of money. Not for profit organisations do have multiple objectives and measure their performance in terms of VFM. As an example, the following sub-objective is taken from the University of Mbiaza:

> " *To engage and maintain staff that is caring and provides support for students and meets their educational goals and objectives".*

Required:

Explain the meaning of **economy**, **efficiency** and **effectiveness** for a university, incorporating specific examples for each of the 3 E's. (5 marks)

[Total: 20 Marks]

QUESTION FOUR

Solwezi Plc (S Plc) is engaged in several areas of business. There is a contract manufacturing division (Chongwe Division or C Division) and a computer bureau (Mpongwe Division or M Division) which deals in providing computer services to businesses of all sizes. These two divisions are having problems and the divisions need your help to sort them out since you are their management accountant.

Division C

Whilst you are helping out with Division M problems, the directors provide you with the following information about the performance of Division C together with the information for the computer bureau sector.

	Actual Results	**Computer Bureau Sector Average Results**
	K'000	K'000
Sales revenues	20,000	40,000
Staff costs	12,000	28,000
Other operating costs specific to the Division	1,400	2,000
Staff training	600	4,000
Number of staff	1,440	2,000
Staff resignations	288	20
Average clients per year	1,000	800
Clients gained this year	100	10
Clients lost this year	300	50
Average age of equipment	4 years	1.5 years

The Solwezi Plc Directors are concerned by the high losses of clients this year but overall are happy with the division. They point out that it is their rigid cost control which has produced profits as high as those of the sector for 50% of the turnover and claim that they are clearly efficient with a good level business which will continue for the foreseeable future.

Required:

(a) For Division M and the sector, come up with EIGHT areas requiring performance measurement and calculate the performance measures appropriate to those areas. (9 marks)

(b) Evaluate the performance measures and conclude what they show about the business. (9 marks)

(c) Suggest two (2) action plans to ensure future survival. (2 marks)

[Total: 20 Marks]

QUESTION FIVE

Laser Prints Ltd (LPL) manufactures various types of colour laser printers in a highly automated facility. The market for laser printers is competitive. The various colour laser printers in the market are comparable in terms of features and price. The company believes that satisfying customers with products of high quality at low costs is key to achieving its target profitability. For 2019, LPL plans to achieve higher quality and lower costs by improving yields and reducing defects in its manufacturing operations. LPL will train workers and encourage and empower them to take the necessary actions in this regard.

Currently, a significant amount of LPL's capacity is used to produce products that are defective and cannot be sold. It expects that higher yields will reduce the capacity that it needs to manufacture products. LPL does not anticipate that improving manufacturing will automatically lead to lower costs because the company has high fixed costs. To reduce fixed costs per unit, LPL could lay off some employees and sell equipment, or it could use the capacity to produce and sell more of its current products or improved models of its current products.

LPL's balanced scorecard (initiatives omitted) for the year of 2020 is provided below:

Objectives	Measures	Target Performance	Actual Performance
Financial perspective			
Increase shareholder value	1. Operating income changes from productivity improvements	K2,000,000	K800,000
	2. Operating income changes from growth	K3,000,000	K1,200,000
Customer perspective			
Increase market share	Market share in colour laser printers	5%	4.6%
Learning and growth perspective			
Develop process skills	Percentage of employees trained in process and quality management	90%	92%
Enhance information system capability	Percentage of manufacturing process with real time feedback	85%	87%

Internal business processes perspective			
Improve manufacturing quality	Percentage Yield	82%	85%
Reduce delivery time to customers	Order delivery time	25 days	22 days

Required:

(a) Discuss to what extent LPL was successful in implementing its strategy in 2020. (6 marks)

(b) Evaluate the appropriateness of the balanced scorecard developed by LPL identifying the drop in market share in 2020. (8 marks)

(c) Recommend the suitable modifications for the existing balanced scorecard. (6 marks)

[Total: 20 Marks]

END OF PAPER

Modified Internal Rate of Return

$$MIRR = \left[\frac{PV_R}{PV_I}\right]^{\frac{1}{n}}\left(1 + r_e\right) - 1$$

The Black-Scholes option pricing model

$$c = P_a N(d_1) - P_e N(d_2)e^{-rt}$$

Where:

$$d_1 = \frac{\ln(P_a / P_e) + (r + 0.5s^2)t}{s\sqrt{t}}$$

$$d_2 = d_1 - s\sqrt{t}$$

The Put Call Parity relationship

$$p = c - P_a + P_e e^{-rt}$$

Present Value Table

Present value of 1 i.e. $(1 + r)^{-n}$

Where r = discount rate
n = number of periods until payment

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	0·980	0·961	0·943	0·925	0·907	0·890	0·873	0·857	0·842	0·826	2
3	0·971	0·942	0·915	0·889	0·864	0·840	0·816	0·794	0·772	0·751	3
4	0·961	0·924	0·888	0·855	0·823	0·792	0·763	0·735	0·708	0·683	4
5	0·951	0·906	0·863	0·822	0·784	0·747	0·713	0·681	0·650	0·621	5
6	0·942	0·888	0·837	0·790	0·746	0·705	0·666	0·630	0·596	0·564	6
7	0·933	0·871	0·813	0·760	0·711	0·665	0·623	0·583	0·547	0·513	7
8	0·923	0·853	0·789	0·731	0·677	0·627	0·582	0·540	0·502	0·467	8
9	0·941	0·837	0·766	0·703	0·645	0·592	0·544	0·500	0·460	0·424	9
10	0·905	0·820	0·744	0·676	0·614	0·558	0·508	0·463	0·422	0·386	10
11	0·896	0·804	0·722	0·650	0·585	0·527	0·475	0·429	0·388	0·305	11
12	0·887	0·788	0·701	0·625	0·557	0·497	0·444	0·397	0·356	0·319	12
13	0·879	0·773	0·681	0·601	0·530	0·469	0·415	0·368	0·326	0·290	13
14	0·870	0·758	0·661	0·577	0·505	0·442	0·388	0·340	0·299	0·263	14
15	0·861	0·743	0·642	0·555	0·481	0·417	0·362	0·315	0·275	0·239	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	0·812	0·797	0·783	0·769	0·756	0·743	0·731	0·718	0·706	0·694	2
3	0·731	0·712	0·693	0·675	0·658	0·641	0·624	0·609	0·593	0·579	3
4	0·659	0·636	0·613	0·592	0·572	0·552	0·534	0·516	0·499	0·482	4
5	0·593	0·567	0·543	0·519	0·497	0·476	0·456	0·437	0·419	0·402	5
6	0·535	0·507	0·480	0·456	0·432	0·410	0·390	0·370	0·352	0·335	6
7	0·482	0·452	0·425	0·400	0·376	0·354	0·333	0·314	0·296	0·279	7
8	0·434	0·404	0·376	0·351	0·327	0·305	0·285	0·266	0·249	0·233	8
9	0·391	0·361	0·333	0·308	0·284	0·263	0·243	0·225	0·209	0·194	9
10	0·352	0·322	0·295	0·270	0·247	0·227	0·208	0·191	0·176	0·162	10
11	0·317	0·287	0·261	0·237	0·215	0·195	0·178	0·162	0·148	0·135	11
12	0·286	0·257	0·231	0·208	0·187	0·168	0·152	0·137	0·124	0·112	12
13	0·258	0·229	0·204	0·182	0·163	0·145	0·130	0·116	0·104	0·093	13
14	0·232	0·205	0·181	0·160	0·141	0·125	0·111	0·099	0·088	0·078	14
15	0·209	0·183	0·160	0·140	0·123	0·108	0·095	0·084	0·074	0·065	15

CA 3.5: ADVANCED MANAGEMENT ACCOUNTING SUGGESTED SOLUTION

SOLUTION ONE

Nzara Shumba (NS)

(a) Mission and CSFs.

An organisation's mission outlines the broad direction that the organisation will follow and summarises the reasons and values that underlie the organisation. The mission, once set, should form the basis of the organisation's strategic objectives. Critical success factors(CSFs)should then be identified. These are the vital areas 'where things must go right' for the organisation in order for them to achieve their strategic objectives. The achievement of CSFs should allow the organisation to cope better than rivals with any changes in the competitive environment and to maximise performance. NS's mission is 'to create value for shareholders through delighting customers with good service and value and to be a good employer in each community in which it has a restaurant'.

This mission partly flows down to its current CSFs:

1. Serving customers quickly

   - Serving customers quickly is one aspect of delighting customers with good service. Quick service should also assist in keeping costs down, thereby also helping to deliver value to customers.

   - However, good customer service is not solely about serving customers quickly. Customers will also rate how 'good' the service is based on other aspects of performance. For example, CSFs relating to the accuracy of what is served, customer satisfaction with the person serving them and the use of technology to assist and improve the customer experience may be relevant for NS.

2. Match or undercut major competitors on price

   - Matching or undercutting major competitors on price is one aspect of delighting customers through value.

   - However, value does not necessarily mean to be a low/ the lowest cost provider. Instead, it means delighting customers by providing a good customer experience for the price charged. Therefore, even though value will mean different things for different organisations, for NS it may also include CSFs such as getting the taste of the food and drink correct or creating a pleasing restaurant environment.

3. Good staff retention

   - Good staff retention would probably indicate a good level of staff satisfaction since unsatisfied staff are more likely to leave NS.

   - However, staff satisfaction is only one aspect of being a good employer in each community. Other aspects such as the provision of a competitive salary/attractive benefits package or NS's contribution to the local community (for example, through donations to local charities) may also be identified as important CSFs.

KPIs Key performance indicators (KPIs) are the measures that indicate whether or not the CSFs are being achieved. Taking each CSF and associated KPI in turn:

- Minutes between customer placing an order and receiving order partly captures the CSF of serving customers quickly. However, it ignores other important factors such as queuing time. The KPI should include this queuing time.
- Average price per meal compared to major competitors does capture the CSF of matching or undercutting major competitors on price. However, the comparison may be inappropriate due to differences between NS and its major competitors or the choice of competitors used. If this measure is to be used, then NS should ensure that they are comparing like with like and that a suitable group of major competitors is chosen for comparison. If this is not possible, then it may be more appropriate to change the KPI.
- Staff turnover is a good measure of staff retention and would be deemed an appropriate KPI in this case. It is worth noting that appropriate SMART targets should be established for each KPI. In addition, if a further set of CSFs is established (as per the recommendations above) then new KPIs will need to be aligned with these. So, for example, 'average wage compared to similar employers in the local community' may be a good measure of being a good employer in each community. Finally, it is worth noting that NS may need to review its mission statement to ensure that it still reflects the organisation's environment. If the market or key stakeholders have changed since the mission was written, then it may no longer be appropriate.

Key answer tips:

This requirement is very reflective of how mission may be examined. It is really important that you understand that the organisation's mission must be aligned to its CSFs and relevant KPIs. In this question, you are asked to 'evaluate' the relationship and therefore, you are expected to discuss both the positive and the negative aspects of NS's relationship between its mission, CSFs and KPIs. Finally, remember to answer both parts of the requirement; leave yourself enough time to recommend any changes that could be made to the CSFs and KPIs.

(b) Benchmarking of the North division against the South division.

The North division has been benchmarked against the South division using the six KPIs below:

- The average number of minutes between customers placing an order and receiving their order is more than double for the North division compared to the South division (8 minutes compared to 3 minutes). An 8-minute wait may be considered unacceptable by customers in a fast food outlet and may be contributing to customer dissatisfaction in the North and ultimately a decline in performance and share price.
- North and South division customers may perceive value to be lower than competitors since the average price per meal in both divisions is higher than their main competitors. Charging a higher than average price may lead to short- term performance gains but long-term profitability may be impacted if the perception of 'value' is poor. The North division's average is four times higher than the South division's average (12% higher in the North and 3% higher in the South) and so even though a poor perception of value in both divisions could be contributing to a fall in share price, the impact of North's high prices on share price may be greater than the South's.

- Staff turnover per annum is similar for the North Division and the South Division (30% compared to 29% respectively). This level of staff turnover does appear high (although some comparison to industry average or competitor data would be useful) and could be contributing to a decline in NS's performance and hence share price.
- The average number of customers per day rating the service as 'good' or 'better than good' is 40% in the North division ((200 ÷ 500) × 100) compared to 71% in the South division ((350 ÷ 490) × 100). The relative poor performance of the North division could be a contributor to the decline in NS's share price.
- The average number of customers per day rating the visit as providing 'value for money' is slightly lower for the North division at 60% ((300 ÷ 500) × 100) compared to 69% ((340 ÷ 490) × 100) for the South division. North is underperforming relative to South and this could be contributing to a decline in NS's performance and hence share price.
- Finally, the average wage compared to similar employersin the local community is lower for both the North and the South division (15% and 17% lower respectively). Paying a lower wage may contribute to short-term cost savings but it may be impacting NS's ability to attract and retain the best staff and to motivate staff and hence long-term performance would be impacted. The North is performing slightly 'better' than the South here but both divisions may be seen as underperforming. Overall, the South Division is performing better than the North in five of the six areas above. Therefore, it may be true that it is the underperforming North division that is strongly contributing to NS's declining share price. However, this benchmarking exercise does come with its own limitations (see below). Evaluation of the approach to benchmarking NS has decided to carry out an internal benchmarking exercise since it is using the South division as the benchmark against the North division.

This approach has the following advantages for NS:

- It is a straightforward approach since the performance data will be readily accessible.
- Any changes that are thought to be required as a result of the benchmarking exercise should be quite straightforward to implement since the processes and activities that are thought to be working well are already being carried out within the organisation. Therefore, no major re-engineering of processes and activities should be required.
- The factors above should mean that the cost of the benchmarking exercise can be kept down (cost control is important for NS so this is a definite advantage) and the exercise should be able to be completed on a timely basis (also important for NS due to the fast moving and uncertain business environment in which it operates).

However, it is worth noting that the benchmarking exercise is limited in its scope (and therefore usefulness) and has a number of other disadvantages:

- Only six KPIs have been calculated and compared. It would be useful to have access to additional financial and non-financial performance data for each of the divisions so that a fuller range of KPIs could be calculated. In addition, the veracity of the data used to calculate the measures should be checked.
- Although the relative performance of the divisions can be compared, it would be useful to have access to information on divisional targets, competitor performance

data and industry averages for performance. In addition, differences between the North and the South divisions may make direct comparison less meaningful.

- Innovative solutions may not be developed as a result of this type of benchmarking since the solutions will be based on actions already carried out within the organisation. It is likely that NS's performance problems are due to negative factors that exist across the whole company and therefore, solely implementing actions based on the South's working practices may not result in the significant performance gains that may be required.
- Although the cost and time involved with this type of benchmarking may be lower than, say, competitor benchmarking, the exercise will still have an associated cost (good cost control is an in important factor for NS) and will take time (this will divert resources from other areas of the business).
- The fast moving nature of this industry means that what is good today may not be good tomorrow. It may be better from NS to focus on future actions and performance gains rather than implementing changes based on current business practices.
- Finally, the North division's employees may feel criticised as a result of the benchmarking exercise resulting in a possible fall in motivation. This will particularly be the case if they consider that many of the factors are outside of their control.

Key answer tips

The examiner expects you to be able to 'apply and evaluate the methods of benchmarking performance'. Be ready to carry out a benchmarking exercise, to discuss the steps involved in the benchmarking process and to evaluate benchmarking both in general and also the different approaches to benchmarking.

(c)Budgeting may be viewed as of use in planning, co-ordination, control, motivation and performance evaluation.
As a planning aid, the budgeting process allows for the quantification of the business plan. Alternative planning scenarios may be examined and a "what-if" analysis applied. This feed-forward view will enable a proposed plan to be compared with the level of achievement that is required in order to provide the level of return required by the organisation. If necessary amendments can be made in order that the agreed plan will achieve the required level of return.
It may be argued that the identification and quantification of factors such as customer satisfaction may limit the level of accuracy achieved.
The co-ordination of business activities will be aided through the budgeting process. Areas of imbalance, for example between production capacity available and that required to satisfy demand, may be identified and investigated. The co-ordination process should also avoid individual members of management making planning that are sub-optimal for the business as a whole.
The achievement of co-ordination benefits may be diminished because of factors such as lack of adequate communication, both internally between management members and externally through inadequate links with suppliers.
The control of business activities may be aided through the comparison of actual results against the budget plan. Any differences may be investigated and corrective action taken.
This process may not be effective because of factors such as the type of budgeting system in use or the lack of management expertise in the interpretation of the information. For example, is actual data compared against a suitably flexed budget?

The budget should act as a motivating device. This should be enhanced through the feeling of involvement which participation in the budgeting process will promote. Management is more likely to identify and work toward achieving, targets that has agreed in advance. It is possible however, that management may view the budget as a pressure device in trying to get them to achieve a level of performance that they do not see as achievable.
Budgets may be used a base against which to measure actual performance. The measures may be quantitative in both monetary and non-monetary terms. Examples might be the monitoring of cash flow or the percentage of material losses incurred. The trend of variances between budget and actual may be monitored in order to help identify whether an 'in control' or 'out of control' situation exists.
The usefulness of the measures may be limited through factors such as lack of relevant information and/or management style and attitudes.

(Alternative relevant uses and comments would be accepted.)

(d)Advantages claimed for the use of activity based budgeting include the following:

- Resource allocation is linked to a strategic plan for the future, prepared after considering alternative strategies. Traditional budgets tend to focus on resources and inputs rather than on objectives and alternatives.
- New high priority activities are encouraged, rather than focusing on the existing planning model. Activity based budgeting focuses on activities. This allows the identification of the cost of each activity. It also allows the ranking of activities where financial constraints limit the range of activities that may be achieved.
- There is more focus on efficiency and effectiveness and the alternative methods by which they may be achieved. Activity based budgeting assists in the operation of a total quality philosophy.
- It avoids arbitrary cuts in specific budget areas in order to meet the overall financial targets. Non-value added activities may be identified as those which should be eliminated.
- It tends to increase management commitment to the budget process. This should be achieved since the activity analysis enables management to focus on the objectives of each activity. Identification of primary and secondary activities andnon-value added activities should also help in motivating management in activity planning and control.

The effectiveness of activity based budgeting may be limited because of its complexity and its acceptance by management. For example accurate identification of activities and the cost drivers which determine the level of resources required for each activity may be difficult to achieve.

(e)Some research on budgeting indicates that some organisations claim that they have abandoned the major annual budget preparation exercise ('Beyond Budgeting' – Hope & Fraser (2003). It has been argued that a number of adverse impacts result from the budget. Examples of such impact are:

- Annual budgeting adds little value and takes up too much valuable management time.
- Too heavy reliance on budgetary control in managing performance has an adverse impact on management behaviour.
- The use of budgeting as a base for communicating corporate goals, setting objectives, assisting continuous improvement, etc. is seen as contrary to its original purpose as a financial control mechanism.
- Most budgets are not based on a rational causal model of resource consumption and are, therefore, of little use in determining strategy.

- The process has insufficient external focus from which to derive targets or benchmarks.
- The argument may be put that increased focus on knowledge or intellectual capital through competent managers, skilled workforce, effective systems, loyal customers and strong brands is more likely to yield improved business effectiveness.

(Alternative relevant uses and comments would be accepted in all parts of the answer).

SOLUTION TWO

(a) Like any other organisation, Division A has internal, connected and external stakeholders with different objectives.

In the given case, the Division is evaluating the opinion of the different kinds of stakeholders on its strategy for starting an OLS facility for its customers.

The stakeholders of Division A affected by the OLS strategy include:

- Division A customers
- Division A staff members
- Division A management
- The Association of Precious Stones Miners

1. Division A Customers

Considering the following benefits of OLS, it is expected that Division A will get a good response from the customers:

- it saves customers' time
- it saves the travelling cost that customers incur to come to the precious stones shop
- it provides more flexibility to customers

However, there is the possibility that OLS may result in an increase in price for the products of Division A. In addition, customers may expect frequently polished designs.

Customers are high interest stakeholders. In addition, they exercise a lot of power. This is because, if there are no customers, there will be no business and no money incoming. Therefore according to Mendelow's shareholders mapping matrix, customers are **key players.**

2. Division A staff

This is the group of stakeholders which is against the strategy. Like any other change, they are resisting the introduction of OLS. They play an important role in the formulation and implementation of the strategy. Without their cooperation it is not possible to successfully implement the OLS facility.

However, the issue is not so critical that they will take strict action. Therefore, they have little influence over the decision. When compared with customers they have less influence.

Therefore, they can be categorised as **"keep informed"** group.

3. Division A management

The objective of management is to remain in competition and to make a good profit. According to management, OLS will result in an increase in Division A's profits.

However, this objective conflicts with opinions of the staff.

The management of Division A will fall into the group of **key players** because they have both power and influence regarding the move to OLS.

4. **The Association of Precious Stones Miners**

Since the association falls into the category of external stakeholders, it has low interest in the precious stones and gold issues. However, being a regulatory body, it has considerable high power.

Therefore, Division A management should **keep the association satisfied**.

(b) BCG matrix competitive position assessment

Division	**% increase in cash flows**	**Division's Market share**	**Market leader market share**
Division B	200%	10%	14%
Division C	19%	78%	78%
Division D	20%	3%	22%
Division E	0%	3%	28%

The management could use 'the BCG matrix in order to classify its subsidiaries in terms of their rate of market growth and relative market share.

The model has four categories these are:

Stars

A star product has a relatively high market share in a high growth market.

Division B is experiencing strong growth in a rapidly growing market.

It has a 10% market share and therefore it seems reasonable to categorise it as a star.

Problem child

They have a relatively low market share in a high growth market. Division D would appear to fall into this category. The market leader enjoys a 22% share whilst it appears to be struggling to achieve growth in turnover and hence profits.

Cash cow

A cash cow is characterised by a relatively high market share in a low growth market and should generate significant cash flows.

Division C appears to be a cash cow since it has a very high market share in what can be regarded as a low growth market. Division C is a very useful division and cash it generates should be invested in rising stars.

Dog

A dog is characterised by a relatively low market share in a low growth market and might well be loss making. Division E would appear to fall into this category since its market share is very low and it has low growth.

K plc has a dog and a problem child that both require immediate action. Competitors within the sector will resist any attempts to reduce their share of a low growth or declining market. But if things come to the worst, the division may have to be closed and the veggie food replaced by another food division, e.g. baby foods division. As far as the problem child is concerned, management need to come up with appropriate strategies to convert it into stars.

SOLUTION THREE

Part (a)
Kaizen is a concept that promotes continuous improvements in performance with such improvements not necessarily being very big but incremental. The concepts provides for suitable working conditions that promote learning and improvements on previous performance targets.

Total Quality Management involves the establishment of a quality culture within the entire organisation from the top to the bottom. A quality awareness belief form part of the working system. In TQM system, staff aim to get things right the first time to avoid costs of reworking. This concept also works well with continuous improvements.

Part (b)
NPV

	Y0	Y1	Y2	Y3	Y4	Y5
Sales volume		10,000	12,500	12,500	7,500	
Price		30	31	32	33	
Variable cost		12	13	13	14	
Contribution		18	18	18	19	
Total Contribution		180,000	225,000	237,500	142,500	
Capital Allowances		(92,000)	(73,600)	(58,880)	(165,520)	
Taxable profit		88,000	151,400	178,620	(23,020)	
Tax@35%			(30,800)	(52,990)	(62,517)	8,057
After tax CF		180,000	194,200	184,510	79,983	8,057
Working capital	(45,000)	(15,000)	(17,500)	(2,500)	30,500	
W/C recovery					49,500	
Investment /Disposal	(460,000)				70,000	
Net cash flow	(505,000)	165,000	176,700	182,010	229,983	8,057
DF@10%	1.000	0.909	0.826	0.751	0.683	0.621
PV	(505,000)	149,985	145,954	136,690	157,078	5,003

Advice: ......The project should be accepted because the NPV is positive.................................	**NPV = 89,710(1**

(c) 3's explanation for a university, incorporating specific examples for each of the 3 E's.

Value For Money for a university would be measured in terms of the three E's as follows:

Economy – concerned with economic use of **inputs**. This is about being frugal; balancing the cost with the quality of resources. Therefore, the university will review areas such as the cost of books, computers and teaching compared with the quality of these resources. This VFM characteristic recognises that the university must consider its expenditure but should not simply aim to minimize costs, e.g. low cost but poor quality teaching or books will hinder student performance and will damage the reputation of the university.

Efficiency. – concerned with efficient **processing.** This focuses on the efficient use of any resources required. e.g.

- What is the utilization of IT resources?
- What percentage of their working time does academic staff spend lecturing and researching?
- How often are the library books bought by the university taken out by students?

Efficiency. – concerned with achieving **Outputs or goals.** It measures the achievement of goals/objectives.

Examples:

- % of students achieving a target grade
- % of graduates who find full time employment with 6 months of graduating.

SOLUTION FOUR

(a) The following performance areas may be identified and performance measurements calculated:

	Actual Results	Sector Average Results
	K'000	K'000
Net profit (K'000)	6,000	6,000
Net profit (%)	30	15
Average staff salary (K)	8,333	14,000
Training per staff member (K)	417	2,000
Staff turnover (%)	20	1
Fees per member of staff (K)	13,889	20,000
Average fees per client (K)	20,000	50,000
% of clients lost In the year	30	6.25
% of clients gained in year	10	1.25

(b) Based on the above figures and performance measurements, inferences can be drawn.

Profitability

The division's net profit is as high as the industry in general, despite the sales being half the average. This has resulted in a very impressive net profit percentage of 30% against an industry average of 15%. Cost control is tight, as shown by the low average salary and training costs per member of staff and the much lower operating costs for the division as a whole. Equipment age is on average 4 years against sector of 1.5. This indicates tight control of working capital and a resolute refusal to update equipment until absolutely necessary. This careful cost control and investment appraisal has enabled Division M to boost profits and gain such an impressive net profit %.

Quality of service

This can be divided into different areas.

Quality of employees

Low training costs, low average salary and low sales per employee will be the first point of reference here. Low training cost suggests a low commitment on the part of the division to their staff and to training them to meet the demands of the job, so that they provide a quality service to the clients. The company could argue that high staff turnover does not justify spending large amounts of money on staff. However, high staff turnover could be reduced by providing better training and then higher salaries to encourage well-trained employees to remain with the division. Paying low salaries will tend to lead to lower quality, less motivated staff being recruited. Higher-quality, more motivated staff will tend to apply to organisations offering training and higher salaries, this bureau is left with the lower quality. Low productivity is the result of this demotivation caused by low rewards and poor training; the sales per employee are only 69% (13,889÷20,000) of sector average. Low salaries and low training have resulted in high levels of staff turnover, showing low commitment on the part of employees to a company that does not value them. All these points suggest Division M is not committed to providing a quality workforce in this service industry.

Quality of work and service

The division has suffered high losses of clients this year compared to a generally loyal client base in the sector. New clients are being generated, though at a lower rate than they are leaving, which suggests that they are initially attracted by the low price of the service offered, but leave once they find the service is of lower quality than they expect. This probably arises from the low motivation of staff to provide the proper service when it is required. Low motivation of staff and the aim of cost control will also result in an unwillingness to provide flexibility of service to clients. Similarly, the age of the equipment compared to sector average means that competitors can offer a more sophisticated, if expensive, service which will encourage more clients to go to those businesses. Refusal to invest in new equipment suggests a low commitment to clients which clients will not welcome. So while the price is low, quality too, is low which leads to a poor service and large defections of clients to competitors.

(c) **Two** actions plans to ensure future survival.

As clients are being lost faster than they are being gained and as quality of provision is as important as cost, the following steps need to be taken to avoid complete loss of confidence in the division:

1. Improve staff salaries to recruit higher-calibre staff and improve the motivation of existing staff
2. Step up training provision to improve quality of service and staff appreciation of what is required.
3. Invest in up to date equipment to improve quality of provision and flexibility of service.
4. Reduce the emphasis on cost and profit from primary aim to equal aim with quality
5. Provide cash now to meet these aims.

SOLUTION FIVE

a) A strategy is a course of action, including the specification of resources required, to achieve a specific objective. Implementing a strategy has the following three elements:

(i) Organising or structuring the firm. For example, how autonomous should divisions be?

(ii) Enabling an organisation's resources should support the chosen strategy. For example, appropriate human resources and fixed assets need to be acquired and (iii) Most strategic planning and implementation will involve change, so managing change, in particular employees' fears
and resistance, is crucial.

The balanced scorecard allows top management to review the organisation using four perspectives which provide information on four strategic issues. The financial perspective seeks to resolve how the organisation creates value for its shareholders. The innovation and learning perspective answers the question of how the organisation can continue to improve and create value. The customer perspective looks at what customers value from the organisation and finally the internal perspective considers what internal processes the organisation must do well at to achieve the financial and customer objectives. Under each perspective goals are set, such as improving manufacturing quality excellence and specific measures used to monitor outcomes.

It appears from the scorecard that LPL was not successful in implementing its strategy in 2019. Although it achieved targeted performance in the learning and growth and internal business process perspectives, it significantly missed its targets in the customer and financial perspectives. LPL has not had the success it targeted in the market and has not been able to reduce fixed costs.

b) The balanced scorecard is an approach which explicitly combines financial and non-financial performance indicators. Its four perspectives of: financial; customer; internal business; and innovation and learning. By integrating the four perspectives, the scorecard highlights the importance of satisfying customer needs, internal business process efficiency, and learning and development in contributing to the overall financial success of a company. As such, the scorecard suggests the importance of setting non financial performance targets, and measuring performance against those targets, as well as measuring traditional financial performance targets.

The use of a balanced scorecard has the following benefits:

- It provides a more balanced approach to managing the performance of an organisation. This should encourage a longer-term view of performance management.
- There is a link to the strategy of the organisation.
- It considers both financial and non-financial measures and goals.
- It attempts to identify the needs and concerns of customers to identify new products and markets.

However, it has the following limitations

- Difficulty in selecting which measures to include.
- Difficulty in interpretation of the overall performance because of too many indicators.
- The needs of internal stakeholders (staff) are not explicitly included.

LPL's scorecard does not provide any explanation of why the target market share was not met in 2020. The scorecard is not helpful for understanding the reasons underlying the poor market share.

LPL may want to include some measures in the customer perspective (and internal business process perspective) that get at these issues. These measures would then serve as leading indicators (based on cause-and-effect relationships) for lower market share.

c) LPL should include a measure of employee satisfaction to the learning and growth perspective and a measure of new product development to the internal business process perspective. The focus of its current scorecard measures is on processes and not on people and innovation.

- Improving employee-related measures results in improved internal-business process measures, market share and financial performance.
- Adding new product development measures with improved quality to internal business processes is also important. Hence, the scorecard should contain some measure to monitor progress in new product development. Improving quality without developing and selling new products (or downsizing) will result in weak financial performance.

END OF SOLUTION

CA ZAMBIA PROGRAMME EXAMINATIONS

CA ADVISORY PROFESSIONAL IN ACCOUNTANCY

CA 3.6: ADVANCED FINANCIAL MANAGEMENT

FRIDAY 18 JUNE 2021

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

INSTRUCTIONS TO CANDIDATES

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

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

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

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

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

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

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

8. Present legible and tidy work.

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

10. Formulae, Present Value, Annuity and normal distribution tables are attached at the end of the question paper.

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

SECTION A

This question is compulsory and must be attempted.

QUESTION ONE – (COMPULSORY)

(a) BioPharma Ltd, a multinational pharmaceutical company which is involved in international trade has been operating in four (4) countries: Zambia, Kenya, UK and the USA. The management of BioPharma Ltd is considering diversifying its operations. An investment project in the retail sector is under consideration. Project specific information has been collected including a market research at a cost of K200,000 in order to forecast the future cash flows of the investment project. The appropriate debt to Equity of the project is 40% adjusted for any project financing. BioPharma has determined that an equity beta of 1.2 is appropriate for the investment project and that tax at 30% shall be payable one (1) year in arrears. The risk rate is 5% and the market return is 9.2%

The investment project has an expected life of four (4) years with the following cash flows:

Year	1	2	3	4
Sales revenue (K'000)	2,250	2,570	6,890	4,530
Costs (K000)	500	1,000	3,500	2,750

The capital cost of the investment project, payable at the start of the first year, will be K6.3 million and this amount shall be financed by debt with a coupon interest of 8% and financing costs of 10%. The financing costs are tax deductible and tax is paid or claimed one (1) year in arrears. The investment project will have zero scrap value at the end of the fourth year. The level of working capital investment at the start of each year is expected to be 10% of the sales revenue in that year.

Capital allowances at the rate of 25% on a reducing balance basis, are available on 79.36% of the capital cost of the investment project. BioPharma normally uses the weighted average cost of capital to evaluate projects, however, for this project a more appropriate appraisal technique is being considered.

Required:

(i) Calculate the ungeared cost of capital for the project, clearly explaining any Assumptions you make. (5 marks)

(ii) Evaluate the investment project, clearly explaining the suitability of the appraisal technique used. (15 marks)

(b) Over the last two (2) years, the Kwacha has depreciated substantially against the US Dollar. This has impacted adversely on the financial performance of some of the multinational companies in Zambia.

One of the key policies for multinational companies is to decide on the price at which goods and services are transferred from one group member to another. The parent company of BioPharma and the subsidiaries have decided to use transfer pricing policy.

BioPharma Ltd has obtained a license for the manufacturing of a drug for COVID - 19 which will be developed over a three (3) year period. The resulting drug sales less costs have an expected net present value of K4 million at a cost of capital of 10% per annum. BioPharma Ltd has an option to acquire the ownership of the drug at an agreed price of K24 million, which must be exercised within the next two (2) years.

Carrying out preparatory and research work immediately will be risky as the project has a volatility attaching to its net present value of 25%.

One source of risk is the potential for absolute control over C0VID - 19 by people taking vaccines and wearing masks. The World Health Organisation is expected to make a pronouncement within the next two (2) years, on whether the disease will be eradicated or not. The risk free rate of interest is 5% per annum.

Required:

(i) As the Financial Adviser of BioPhama Ltd, outline remedial measures that should be taken to minimize the company's foreign exchange risk. (5 marks)

(ii) Advise the company on the internal and external factors that will facilitate the transfer of goods and services from one member of the group to another. (10 marks)

(iii) Describe the variables that would determine the value of a real option for BioPharma Ltd? (5 marks)

[Total: 40 Marks]

SECTION B

There are four (4) questions in this section. Attempt any THREE (3) questions.

QUESTION TWO

LWANGWA Plc is an investment company that is listed on the Lusaka Securities exchange. The company invests in shares and bonds issued by other Zambian companies.

Currently, LWANGWA Plc is evaluating bond X and bond Y in order to select one and invest in it. The bonds are being issued by two companies which operate in the agricultural sector in Zambia. Both bonds, bond X and bond Y have a par value of K1,000 and will pay coupon interest on an annual basis. Bond X has a market price of K1,081.25 and it has a coupon rate of 8%. Bond X will be redeemed at its par value of K1,000 in five (5) years' time.

Bond Y has a coupon rate of 6% and it will be redeemed at its par value of K1,000 in five (5) years' time.

Bond X and bond Y are expected to have the same yield to maturity.

LWANGWA Plc is concerned about the impact of interest rate risk on the bonds and wishes to use duration as a way of taking account of this risk.

Required:

(a) Estimate the Macaulay duration of each of the two (2) bonds LWANGWA Plc is considering for investment. (9 marks)

(b) Calculate the effect on the price of each of the two (2) bonds of a general rise in interest rates by 50 basis points. (3 marks)

(c) Discuss how useful duration is as a measure of the sensitivity of a bond's price to changes in interest rates. (8 marks)

[Total: 20 Marks]

QUESTION THREE

The Government of the Republic of Zambia has recently signed a trade agreement with a major Middle East country to supply 15 million goats per year at a unit price of K500 per goat. The contract with the Middle East country was signed in Dollars valued at $375 million. The Government of Zambia has encouraged SMEs to take advantage of this opportunity and venture into exporting to the Middle East.

JAS Co.is a medium-sized agro-poultry company based in Zambia whose ordinary shares are all owned by the members of one family. The company has recently begun exporting to the Middle East through the Government trade agreement. JAS Co. has sold a total of 2,500 goats to the Middle East and expects to receive payment in line with the contract agreement in six (6) months' time. The prospect of increased exports to the Middle East means that JAS Co.

needs to expand its existing business operations in order to be able to meet future orders. All of the family members are in favour of the planned expansion, but none are in a position to provide additional finance. The company is therefore seeking to raise external finance of approximately $1 million (about K20 million presently).

Required:

(a) Discuss the reasons small and medium-sized entities (SMEs) might experience less conflict between the objectives of shareholders and directors than large listed companies. (7 marks)

(b) Discuss the factors that JAS Co. should consider when choosing a source of debt finance and the factors that may be considered by providers of finance in deciding how much to lend to the company. (9 marks)

(c) Discuss the extent to which JAS Co. maybe exposed to Political and Economic risks. (4 marks)

[Total: 20 Marks]

QUESTION FOUR

PAL Plc plans to make a bid for the entire share capital of FTG Plc, a company in the same industry. It is expected that a bid of K800m for the entire share capital of FTG plc will be successful. The Directors share the view that once the Shareholder Value Analysis (SVA) is conducted, the results will show that the acquisition is a step in the right direction.

The acquisition is expected to increase PAL's after tax operating cash flows (i.e pre-interest) over the next few years as follows:

Year	1	2	3	4
	K'million	K'million	K'million	K'million
Net cash flow	65	81	85	90

The cash flows after the end of year 4 are expected to constantly grow by 7% per year. Both companies have similar gearing levels of 18.9% (debt as a % of total finance). FTG Plc has K16.5 million, 10% irredeemable debentures trading at par value of K1,000. PAL Plc has an asset beta of 0.96, the risk free rate is 6.85% and the market return is 15%. Corporation tax is at 30% per year.

Required:

(a) Assess whether the acquisition will enhance the wealth of shareholders in FTG Plc. (13 marks)

(b) Explain the concept of Shareholder Value Analysis (SVA) and the factors that can affect the valuation. (7 marks)

[Total: 20 Marks]

QUESTION FIVE

(a) The Government of Zambia has been borrowing in the international financial market by issuing "Eurobonds" to finance projects in Zambia. There has been extensive debate on the levels of indebtness by the Zambian Government.

Required:

(i) Explain what is meant by a Eurobond. (3 marks)

(ii) Discuss three (3) benefits for Government borrowing using Eurobonds. (3 marks)

(iii) Discuss four (4) demerits borrowing internationally, using Eurobonds in Zambia. (4 marks)

(b) There are many possible reasons management would want to restructure a company's finances. A financial reconstruction scheme might be implemented when a company is in severe financial distress or facing Liquidation.

Required:

(i) Distinguish between a leveraged buy - out and leveraged - recapitalisation. (4 marks)

(ii) Briefly discuss the three (3) types of corporate restructuring. (3 marks)

(c) Describe the strategies or solutions that are generally implemented when devising a financial reconstruction scheme. (3 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

$$S_1 = S_0 \times \frac{(1 + h_c)}{(1 + h_b)} \qquad F_0 = S_0 \times \frac{(1 + i_c)}{(1 + i_b)}$$

Modified Internal Rate of Return

$$MIRR = \left[\frac{PV_R}{PV_I}\right]^{\frac{1}{n}}\left(1 + r_e\right) - 1$$

The Black-Scholes option pricing model

$$c = P_a N(d_1) - P_e N(d_2)e^{-rt}$$

Where:

$$d_1 = \frac{\ln(P_a / P_e) + (r + 0.5s^2)t}{s\sqrt{t}}$$

$$d_2 = d_1 - s\sqrt{t}$$

The Put Call Parity relationship

$$p = c - P_a + P_e e^{-rt}$$

Present Value Table

Present value of 1 i.e. $(1 + r)^{-n}$

Where r = discount rate
n = number of periods until payment

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	0·980	0·961	0·943	0·925	0·907	0·890	0·873	0·857	0·842	0·826	2
3	0·971	0·942	0·915	0·889	0·864	0·840	0·816	0·794	0·772	0·751	3
4	0·961	0·924	0·888	0·855	0·823	0·792	0·763	0·735	0·708	0·683	4
5	0·951	0·906	0·863	0·822	0·784	0·747	0·713	0·681	0·650	0·621	5
6	0·942	0·888	0·837	0·790	0·746	0·705	0·666	0·630	0·596	0·564	6
7	0·933	0·871	0·813	0·760	0·711	0·665	0·623	0·583	0·547	0·513	7
8	0·923	0·853	0·789	0·731	0·677	0·627	0·582	0·540	0·502	0·467	8
9	0·941	0·837	0·766	0·703	0·645	0·592	0·544	0·500	0·460	0·424	9
10	0·905	0·820	0·744	0·676	0·614	0·558	0·508	0·463	0·422	0·386	10
11	0·896	0·804	0·722	0·650	0·585	0·527	0·475	0·429	0·388	0·305	11
12	0·887	0·788	0·701	0·625	0·557	0·497	0·444	0·397	0·356	0·319	12
13	0·879	0·773	0·681	0·601	0·530	0·469	0·415	0·368	0·326	0·290	13
14	0·870	0·758	0·661	0·577	0·505	0·442	0·388	0·340	0·299	0·263	14
15	0·861	0·743	0·642	0·555	0·481	0·417	0·362	0·315	0·275	0·239	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	0·812	0·797	0·783	0·769	0·756	0·743	0·731	0·718	0·706	0·694	2
3	0·731	0·712	0·693	0·675	0·658	0·641	0·624	0·609	0·593	0·579	3
4	0·659	0·636	0·613	0·592	0·572	0·552	0·534	0·516	0·499	0·482	4
5	0·593	0·567	0·543	0·519	0·497	0·476	0·456	0·437	0·419	0·402	5
6	0·535	0·507	0·480	0·456	0·432	0·410	0·390	0·370	0·352	0·335	6
7	0·482	0·452	0·425	0·400	0·376	0·354	0·333	0·314	0·296	0·279	7
8	0·434	0·404	0·376	0·351	0·327	0·305	0·285	0·266	0·249	0·233	8
9	0·391	0·361	0·333	0·308	0·284	0·263	0·243	0·225	0·209	0·194	9
10	0·352	0·322	0·295	0·270	0·247	0·227	0·208	0·191	0·176	0·162	10
11	0·317	0·287	0·261	0·237	0·215	0·195	0·178	0·162	0·148	0·135	11
12	0·286	0·257	0·231	0·208	0·187	0·168	0·152	0·137	0·124	0·112	12
13	0·258	0·229	0·204	0·182	0·163	0·145	0·130	0·116	0·104	0·093	13
14	0·232	0·205	0·181	0·160	0·141	0·125	0·111	0·099	0·088	0·078	14
15	0·209	0·183	0·160	0·140	0·123	0·108	0·095	0·084	0·074	0·065	15

Annuity Table

Present value of an annuity of 1 i.e. $\frac{1 - (1 + r)^{-n}}{r}$

Where r = discount rate
n = number of periods

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	1·970	1·942	1·913	1·886	1·859	1·833	1·808	1·783	1·759	1·736	2
3	2·941	2·884	2·829	2·775	2·723	2·673	2·624	2·577	2·531	2·487	3
4	3·902	3·808	3·717	3·630	3·546	3·465	3·387	3·312	3·240	3·170	4
5	4·853	4·713	4·580	4·452	4·329	4·212	4·100	3·993	3·890	3·791	5
6	5·795	5·601	5·417	5·242	5·076	4·917	4·767	4·623	4·486	4·355	6
7	6·728	6·472	6·230	6·002	5·786	5·582	5·389	5·206	5·033	4·868	7
8	7·652	7·325	7·020	6·733	6·463	6·210	5·971	5·747	5·535	5·335	8
9	8·566	8·162	7·786	7·435	7·108	6·802	6·515	6·247	5·995	5·759	9
10	9·471	8·983	8·530	8·111	7·722	7·360	7·024	6·710	6·418	6·145	10
11	10·37	9·787	9·253	8·760	8·306	7·887	7·499	7·139	6·805	6·495	11
12	11·26	10·58	9·954	9·385	8·863	8·384	7·943	7·536	7·161	6·814	12
13	12·13	11·35	10·63	9·986	9·394	8·853	8·358	7·904	7·487	7·103	13
14	13·00	12·11	11·30	10·56	9·899	9·295	8·745	8·244	7·786	7·367	14
15	13·87	12·85	11·94	11·12	10·38	9·712	9·108	8·559	8·061	7·606	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	1·713	1·690	1·668	1·647	1·626	1·605	1·585	1·566	1·547	1·528	2
3	2·444	2·402	2·361	2·322	2·283	2·246	2·210	2·174	2·140	2·106	3
4	3·102	3·037	2·974	2·914	2·855	2·798	2·743	2·690	2·639	2·589	4
5	3·696	3·605	3·517	3·433	3·352	3·274	3·199	3·127	3·058	2·991	5
6	4·231	4·111	3·998	3·889	3·784	3·685	3·589	3·498	3·410	3·326	6
7	4·712	4·564	4·423	4·288	4·160	4·039	3·922	3·812	3·706	3·605	7
8	5·146	4·968	4·799	4·639	4·487	4·344	4·207	4·078	3·954	3·837	8
9	5·537	5·328	5·132	4·946	4·772	4·607	4·451	4·303	4·163	4·031	9
10	5·889	5·650	5·426	5·216	5·019	4·833	4·659	4·494	4·339	4·192	10
11	6·207	5·938	5·687	5·453	5·234	5·029	4·836	4·656	4·486	4·327	11
12	6·492	6·194	5·918	5·660	5·421	5·197	4·988	4·793	4·611	4·439	12
13	6·750	6·424	6·122	5·842	5·583	5·342	5·118	4·910	4·715	4·533	13
14	6·982	6·628	6·302	6·002	5·724	5·468	5·229	5·008	4·802	4·611	14
15	7·191	6·811	6·462	6·142	5·847	5·575	5·324	5·092	4·876	4·675	15

Standard normal distribution table

	0·00	0·01	0·02	0·03	0·04	0·05	0·06	0·07	0·08	0·09
0·0	0·0000	0·0040	0·0080	0·0120	0·0160	0·0199	0·0239	0·0279	0·0319	0·0359
0·1	0·0398	0·0438	0·0478	0·0517	0·0557	0·0596	0·0636	0·0675	0·0714	0·0753
0·2	0·0793	0·0832	0·0871	0·0910	0·0948	0·0987	0·1026	0·1064	0·1103	0·1141
0·3	0·1179	0·1217	0·1255	0·1293	0·1331	0·1368	0·1406	0·1443	0·1480	0·1517
0·4	0·1554	0·1591	0·1628	0·1664	0·1700	0·1736	0·1772	0·1808	0·1844	0·1879
0·5	0·1915	0·1950	0·1985	0·2019	0·2054	0·2088	0·2123	0·2157	0·2190	0·2224
0·6	0·2257	0·2291	0·2324	0·2357	0·2389	0·2422	0·2454	0·2486	0·2517	0·2549
0·7	0·2580	0·2611	0·2642	0·2673	0·2704	0·2734	0·2764	0·2794	0·2823	0·2852
0·8	0·2881	0·2910	0·2939	0·2967	0·2995	0·3023	0·3051	0·3078	0·3106	0·3133
0·9	0·3159	0·3186	0·3212	0·3238	0·3264	0·3289	0·3315	0·3340	0·3365	0·3389
1·0	0·3413	0·3438	0·3461	0·3485	0·3508	0·3531	0·3554	0·3577	0·3599	0·3621
1·1	0·3643	0·3665	0·3686	0·3708	0·3729	0·3749	0·3770	0·3790	0·3810	0·3830
1·2	0·3849	0·3869	0·3888	0·3907	0·3925	0·3944	0·3962	0·3980	0·3997	0·4015
1·3	0·4032	0·4049	0·4066	0·4082	0·4099	0·4115	0·4131	0·4147	0·4162	0·4177
1·4	0·4192	0·4207	0·4222	0·4236	0·4251	0·4265	0·4279	0·4292	0·4306	0·4319
1·5	0·4332	0·4345	0·4357	0·4370	0·4382	0·4394	0·4406	0·4418	0·4429	0·4441
1·6	0·4452	0·4463	0·4474	0·4484	0·4495	0·4505	0·4515	0·4525	0·4535	0·4545
1·7	0·4554	0·4564	0·4573	0·4582	0·4591	0·4599	0·4608	0·4616	0·4625	0·4633
1·8	0·4641	0·4649	0·4656	0·4664	0·4671	0·4678	0·4686	0·4693	0·4699	0·4706
1·9	0·4713	0·4719	0·4726	0·4732	0·4738	0·4744	0·4750	0·4756	0·4761	0·4767
2·0	0·4772	0·4778	0·4783	0·4788	0·4793	0·4798	0·4803	0·4808	0·4812	0·4817
2·1	0·4821	0·4826	0·4830	0·4834	0·4838	0·4842	0·4846	0·4850	0·4854	0·4857
2·2	0·4861	0·4864	0·4868	0·4871	0·4875	0·4878	0·4881	0·4884	0·4887	0·4890
2·3	0·4893	0·4896	0·4898	0·4901	0·4904	0·4906	0·4909	0·4911	0·4913	0·4916
2·4	0·4918	0·4920	0·4922	0·4925	0·4927	0·4929	0·4931	0·4932	0·4934	0·4936
2·5	0·4938	0·4940	0·4941	0·4943	0·4945	0·4946	0·4948	0·4949	0·4951	0·4952
2·6	0·4953	0·4955	0·4956	0·4957	0·4959	0·4960	0·4961	0·4962	0·4963	0·4964
2·7	0·4965	0·4966	0·4967	0·4968	0·4969	0·4970	0·4971	0·4972	0·4973	0·4974
2·8	0·4974	0·4975	0·4976	0·4977	0·4977	0·4978	0·4979	0·4979	0·4980	0·4981
2·9	0·4981	0·4982	0·4982	0·4983	0·4984	0·4984	0·4985	0·4985	0·4986	0·4986
3·0	0·4987	0·4987	0·4987	0·4988	0·4988	0·4989	0·4989	0·4989	0·4990	0·4990

This table can be used to calculate $N(d)$, the cumulative normal distribution functions needed for the Black-Scholes model of option pricing. If $d_i > 0$, add 0·5 to the relevant number above. If $d_i < 0$, subtract the relevant number above from 0·5.

SUGGESTED SOLUTION

SOLUTION ONE

Part (a)(i)

$B_u = B_g[V_e/(V_e + V_d(1 - t))] = 1.2(0.6/(0.6+0.4(1\text{-}0.30)) = 0.82$

$K_{eu} = R_f + (R_m - R_f) \times B_u = 5\% + (9.2\% - 5\%) \times 0.82 = 8.44\%$ say 9%

The above calculation is based on the M&M assumptions. Students must understand the M&M theories of capital structure.

Part (a)(ii)

The appropriate investment appraisal technique is the Adjusted Present Value (APV). Since the investment is financed purely by debt and will significantly alter the capital structure of BioPharma, the WACC would not be appropriate. In addition, the business risk of the company and project are different, therefore a project specific technique such as the APV would be suitable to evaluate the investment. Finally, seeing that the consequences of financing is a significant part of the investment, there is need to separate the investment and financing aspects of the project appraisal, the APV is such a technique that separates the two.

	0	**1**	**2**	**3**	**4**	**5**
Revenue (K'000)		2,250	2,570	6,890	4,530	
Costs (K'000)		(500)	(1,000)	(3,500)	(2,750)	
Taxable profit		**1,750**	**1,570**	**3,390**	**1,780**	
Tax@30%		-	(525)	(471)	(1,017)	534
Tax Relief on CA		-	375	281.25	210.94	632.5
Working capital (K'000)		(225)	(32)	(432)	689	-
Investment (K'000)	(6,300)					
Net cash flow	**(6,300)**	**1,525**	**1,388**	**2,768.25**	**1,662.94**	**98.5**
df@9%	1	0.917	0.842	0.772	0.708	0.650
Present Values	**(6,300)**	**1,398**	**1,168.7**	**2,137.09**	**1,177.36**	**64.03**

Base Case NPV = (354.82)

Financing side effects

	0	**1**	**2**	**3**	**4**	**5**
Issue costs (w1)	(700)					
Interest (w2)		(560)	(560)	(560)	(560)	
Total financing costs	(700)	(560)	(560)	(560)	(560)	
Tax saved		210	168	168	168	168
DF@10% (w3)		0.909	0.826	0.751	0.683	0.621
PV of tax saved		190.9	138.8	126.2	114.7	104.3

Total Present value of financing side effects = 674.9

APV = (354.82) + 674.9 = 1,029.72

W1 – Issue costs

Net amount invested = K6,300 (90%)

Loan obtained (100%) = K6,300/0.9 = K7,000

Issue costs = 10% x K7,000 or (K7,000 – K6,300) = K700

W1 – Interest

Loan obtained = K7,000

Coupon interest is 8% x K7,000 = K560

W3 – Discount factor

The cost of debt of 7% is post tax (after adjustment for tax). The appropriate rate to use is the pretax (before tax) to avoid double counting the tax.

Therefore, 7%/(1-0.30) = 10%

W4. Tax Relief on Capital Allowances

Year	WDV	CA@25%	Tax Relief@30%	Year Available
1	5,000	1,250	375	2
	(1,250)			
2	3,750	937.5	281.25	3
	(937.5)			
3	2,812.5	703.13	210.94	4
	(703.13)			
4	2,109.5	2,109.5	632.85	5

b) (i)

Measures to be taken to minimize foreign exchange losses

- The usage of a forward exchange contract**.** This is a contract, usually between a bank and its customer, for the purchase/sale of a specified amount of a stated foreign currency at an exchange rate fixed at the time the contract is made for performance at a future date agreed upon at the time of the contract.

- To borrow foreign currency. A Zambian company that has recognized the need to pay a certain amount in US dollars in two months' time, could borrow that amount of US dollars now, thereby avoiding and reducing translation/conversion risks.

- To insert protection clauses. The exporter can incorporate a clause in the contract of sale, to adjust the selling price, if the exchange rate moves outside an agreed range. Also additional charges may be made as a result of conversion or translation changes which may be agreed to be borne by the importer.

- Export factoring. Where the exporter raises foreign finance through the usage of an international factor.

- To operate a domiciliary account. The company in this case maintains an account in a Zambian bank, but denominated in the desired foreign currency. Proceeds of export sales can then be used through this account to settle future commitments.

- Matching and Netting currencies. The idea here is to match receipts and payments in the foreign currency. In this case related amounts are offset in foreign currency if they fall due within the same time period.

- Incorporating a clause in the export contract which will specifically allow or disallow fluctuations in exchange rates. This is slightly different from protection clauses, since the adjustment is done on the exchange rate for payment especially in local currency.

- Foreign Currency Options.
- Foreign Currency Swaps
- Foreign Currency Futures
- Discounting export bills or invoices with foreign finance houses.
- Negotiation of bills of exchange payable or discountable abroad.

b)(ii) **<u>Considerations used by multinational companies for deciding transfer pricing policy:</u>**

Internal Factors

- Overall Goal Congruence:

Transfer prices should help achieve overall goal congruence with regard to profit/income and customer satisfaction. When Divisional Managers have the authority to decide whether to buy or sell internally or on the external market, the transfer price can determine whether Managers' incentives align with the incentives of the overall company and its owners. The objective is to achieve goal congruence, in which Divisional Managers will want to transfer product when doing so maximizes consolidated corporate profits, and at least one Manager will refuse the transfer when transferring product is not the profit-maximizing strategy for the company.

- Better Performance Evaluation

Transfer prices may be set between two subsidiaries of a holding company and/or two units of a corporate body in such a way to evaluate performance of each division. Transfer pricing can evaluate performance by coordinating production, sales and pricing decisions of the different divisions (via an appropriate choice of transfer prices). The transfer price will affect not only the reported profit of each center, but will also affect the allocation of an organization's resources. Transfer prices make Managers aware of the value that goods and services have for other segments of the firm. Transfer pricing allows the company to generate profit (or cost) figures for each Division separately.

- Avoidance of Divisional Conflicts:

Transfer prices are set among the units in such a way that general co-ordination between Units are promoted, the implementation of appropriate procedures to ensure, as far as possible, uniformity in the classification and application of costs are maintained and Divisional conflicts among different units are reduced.

- Better cash management.

- Competitive advantage

External Factors

- Transfer Prices as a Tool to Minimize Worldwide Taxes, Duties and Tariffs:

Transfer prices may be set between two subsidiaries of a holding company and/or two units of a corporate body in such a way to minimize the taxes, duties and tariffs on their overall profit. For example, suppose, tax rate on profit in country X is lower than in country Y. The subsidiary in Y will then under invoice its export to the subsidiary in X. The profit at the latter subsidiary will be inflated, but that will bear a lower tax burden.

- Avoidance of Financial Restrictions on Profit Repatriation Imposed by Government:

When in a country, financial restrictions on profit repatriation are imposed by Government, transfer prices are set among two subsidiaries by over invoicing its imports. In some countries there may be restriction on repatriation of income and dividend/profits. Goods are sought to be transferred to subsidiaries in these countries at more than the price otherwise settled at arm's length.

- Inflation:

If a country hosting a subsidiary, has a high rate of inflation, early repatriation of fund is done by overcharging goods, exported to it so that money may not be tied up in a currency that depreciates. However, the tax and fiscal authorities of the host countries are vigilant. They impose penalty for manipulated evasion of taxation or import duties. To safeguard the position, the taxpayer may enter into an advanced pricing agreement with the related two tax authorities.

- Lesser foreign exchange risks.

b) (iii)

Variables	**Explanation**
Exercise price (Pe)	For most real options (e.g. option to expand, option to delay), the capital investment required can be substituted for the exercise price. These options are examples of call options.
	For an option to abandon, we use the salvage value on abandonment. This is an example of a put option.
Value of the underlying asset (e.g. share price) (Pa)	• It is usually taken to be the PV of the future cash flows from the project (i.e. excluding any initial investment).

Value of the underlying asset (e.g. share price) (Pa)	· This could be the value of the project being undertaken for a call option (e.g. option to expand, option to delay), or the value of the cash flows being foregone for a put option (e.g. option to abandon).
Time to expiry (t)	This is the time to expiry of the real option.
Volatility (s)	The volatility of the underlying asset (for real options the future operating cash flows) is measured using industry sector risk.
Risk-free rate (r)	We use the risk-free rate for real options. However, some argue that a higher rate should be used to reflect the extra risks when replacing the share price with the PV of future cash flows.

SOLUTION TWO

(a) Calculation of Macaulay duration for Bond X (W1)

Year	Cash flow	DCF at 6.06%	Present Values	Weighted present values
	K		K	K
1	80.00	0.943	75.44	75.44
2	80.00	0.889	71.12	142.24
3	80.00	0.838	67.04	201.12
4	80.00	0.790	63.20	252.80
5	1080.00	0.745	804.60	4,023.00
			1,081.40	4,694.60

Macaulay Duration = sum of weighted present values/ Bond's price
= K4,694.60/ K1,081.40
= 4.34 years

Calculation of Macaulay Duration for Bond Y

Year	Cash flow	DCF at 6.06%	Present Values	Weighted present values
	K		K	K
1	60.00	0.943	56.58	56.58
2	60.00	0.889	53.94	107.68
3	60.00	0.838	50.28	150.84
4	60.00	0.790	47.40	189.60
5	1,060.00	0.745	789.70	3,948.50
			997.30	4,452.20

Macaulay Duration = sum of weighted present values/ Bond's price
= K4,453.40/ K997.30
= 4.46 years

Workings

(1) Calculation of Yield to Maturity for bond Y

Annual coupon payment is 8% of K1,000 = K80.00

Year	Cash flow	DCF at 6%	Present Values	DCF at 7%	Present Values
	K		K		K
1 – 5	80.00	4.212	336.96	4.100	328.00
5	1,000	0.747	747.00	0.713	713.00
Sum of Present Values			1,083.96		1,041.00
			(1,081.25)		(1,081.25)
Net Present Values			2.71		(40.25)

Yield to Maturity

= 6% + [2.71/ (2.17 + 40.25)]

= 6.06%

(b) Impact of an interest rise by 50 basis points

Modified duration = Macaulay duration/ (1 + Yield to maturity)

(1) For Bond X, modified duration = 4.34/ 1.0606
= 4.09 years

Decrease in bond price for bond X when interest rates rise by 50 basis points

= - modified duration x yield change in basis points/ 100
= - 4.09 years x 50/ 100
= - 2.045%

(2) For Bond Y, modified duration = 4.46/ 1.0606
= 4.21 years

Decrease in bond price when interest rates rise by 50 basis points

= - modified duration x yield change in basis points/ 100
= - 4.21 years x 50/ 100
= - 2.105%

(c) Duration measures the average time it takes for a bond to pay its coupons and principal and therefore measures the redemption period of a bond. It recognises that bonds which pay higher coupons effectively mature 'sooner' compared to bonds which pay lower coupons, even if the redemption dates of the bonds are the same. This is because a higher proportion of the higher coupon bonds' income is received earlier. Therefore bonds with higher coupon rates are less sensitive to interest rate changes and will have a lower duration than bonds with lower coupon rates.

The sensitivity of bond prices to changes in interest rates depends on their redemption dates. Bonds which are due to be redeemed at a later date are more price-sensitive to interest rate changes, and therefore are riskier than bonds which are redeemable earlier.

However, duration is only useful in assessing small changes in interest rates because of convexity. As interest rates increase, the price of a bond decreases and vice versa, but this decrease is not proportional for coupon paying bonds. The relationship is non-linear. In fact, the relationship between the changes in bond value to changes in interest rates is in the shape of a convex curve to origin. This convexity relationship shows that bond prices are more sensitive to interest changes when interest rates are lower than they are when interest rates are higher.

Duration, on the other hand, assumes that the relationship between changes in interest rates and the resultant bond is linear.

Therefore duration will predict a lower price than the actual price and for large changes in interest rates this difference can be significant.

Duration can only be applied to measure the approximate change in a bond price due to interest rate changes, only if changes in interest rates do not lead to a change in the shape of the yield curve. This is because it is an average measure based on the yield to maturity. However, if the shape of the yield curve changes, duration can no longer be used to assess the change in bond price due to changes in interest rate.

SOLUTION THREE

Part (a)

Conflict between the objectives of shareholders and directors in a listed company is associated with the agency problem, which has three main causes. First, the objectives of shareholders and directors may be different. Second, there is asymmetry of information, so that shareholders have access to less information about the company than directors, making it hard for shareholders to monitor the actions and decisions of directors. Third, there is a separation between ownership and control, as shareholders and directors are different people.

One reason why small and medium-sized entities (SMEs) might experience less conflict between shareholders and directors than larger listed companies is that in many cases shareholders are not different from directors, for example in a family-owned company. Where that is the case, there is no separation between ownership and control, there is no difference between the objectives of shareholders and directors, and there is no asymmetry of information. Conflict between the objectives of shareholders and directors will therefore not arise.

Another reason why there may be less conflict between the objectives of shareholders and directors in SMEs than in larger listed companies is that the shares of SMEs are often owned by a small number of shareholders, who may be in regular contact with the company and its directors. In these circumstances, the possibility of conflict is very much reduced.

Part (b)

Factors to consider when choosing a source of debt finance

There are a number of factors that should be considered when choosing a suitable source of debt finance. Essentially a company should look to match the characteristics of the debt finance with its corporate needs.

Cost

JAS Co should consider both issue costs and the rate of interest to be charged on the funds borrowed. The company should also consider the repayment terms. With a bank loan, for example, there may be an annual capital payment in addition to the annual interest payment. Additionally, some types of debt have early repayment penalties.

Maturity

The period over which the debt is taken should be matched against the period for which the company needs the finance and the ability of the company to meet the financial commitments associated with the debt finance selected. Another factor to consider is that short-term finance can be more flexible than long-term finance. If a company takes on long-term debt finance it takes on a long-term commitment to which it has a contractual obligation.

Financial risk

Debt will increase gearing and hence the financial risk of JAS Co. The company should consider how gearing will change over the life of the debt finance selected and how the company will be viewed from a risk perspective by future investors.

Availability

The kinds of debt finance available to JAS Co will depend upon the relative size of the company, its relationship with its bank and the capital markets to which it has access. It is likely that a bank loan, rather than any other kind of debt finance, will be selected by JAS Co, since very few SMEs are able to issue traded bonds.

Factors to be considered by providers of finance

There are a number of factors that may be considered by providers of finance in deciding how much to lend to a company.

Risk and the ability to meet financial obligations

When considering the amount and the terms of the funds to be made available to JAS Co, providers of debt finance will assess the ability of the company to meets its future financial obligations and the risk of the company. The previous record of the company can be used as a guide to the ability of its board of directors to manage its finances in a responsible and effective manner. The business plan of JAS Co relating to the proposed business expansion will be carefully scrutinised by potential investors in order to make sure that it rests on reasonable assumptions and that the forecast cash flows can be achieved. This helps to reduce the uncertainty associated with the proposed expansion.

Security

The amount of funds made available to JAS Co will also depend on the availability of assets to offer as security. Debt investors will expect security in order to reduce the risk of the investment from their point of view. If security is not available or is limited, JAS Co will have to pay a higher rate of interest in compensation for the higher level of risk.

Legal restrictions on borrowing

Another factor to consider is whether there are any legal restrictions on the amount of debt that the company can take on, for example in existing debt contracts (restrictive or negative covenants), or in the company's memorandum or articles of association.

Part (c)

Political risk would be key risk for JAS Co to consider as the expansion of the business is largely dependent on the Governments relationships and commitment to the trade agreement. Many developing countries especially in Africa, have had a poor policy continuity especially following a change of Government. JAS Co faces a significant risk of loss of business following a change of Government in Zumba, with new Government taking possibly a different policy of international trade. The middle East, has also been known to be politically unstable with many cases of regional conflict and wars. These events could impact on the economic development of the Middle East country, with resources being diverted to combat conflict at the expense of economic trade.

SOLUTION FOUR

Cost of Equity

Ba = Be x Ve/Ve+Vd (i-t)

0.96 = Be x 0.811/0.811+0.189(1-0.3)

Be = 1.12

Ke = 6.85% + 1.12(15%-6.85%)

Ke = 15.98%

Cost of Debt = I(1-t)/MV = 100(1-0.3)/1000

Cost of debt = 7%

WACC = (15.98% x 0.811) + (7% x 0.189) = 14%

Company valuation				
Year	1	2	3	4
	K'm	K'm	K'm	K'm
Cash flow	65	81	85	90
Discount@14%	0.877	0.769	0.675	0.592
Present Values	57.01	62.29	57.38	53.28
Present Values (1 to 4 years)		229.96		
Present value beyond year 4	57.01	814.42		
Total value		**1,044.38**		

Value of equity = K1,044.38m - K16.5m = K1,027.88m

Therefore, the bid is worthwhile considering the payment of K800m.

b) The SVA method of valuation of a business is based on the PV of estimated future free cash flows earned by the business. There are seven factors or 'drivers' that affect the valuation:

- Sales growth. Sales growth in the valuation model is usually expressed as a percentage annual revenue growth rate.
- Operating profit margin. Expected operating profit is expressed as a percentage of sales revenue.
- The tax rate on profits.
- Changes in working capital. With sales growth, there is likely to be an increase in working capital each year, and the incremental working capital investment (IWCI) reduces free cash flow.
- Fixed capital investment. This may be analysed into replacement fixed capital investment (RFCI) and incremental fixed capital investment (IFCI). RFCI is capital investment that is required to replace existing assets that have worn out and need replacement: it is often assumed that RFCI is equal to the annual depreciation charge. IFCI is incremental capital investment in addition to
- RFCI. Capital investment reduces free cash flow.
- The cost of capital. This is the discount rate for converting free cash flows to a PV.
- The competitive advantage period. This is the period of time in the future during which the business is expected to achieve growth in its current form or condition. After this period of time, which may be for three to five years or so, it is often assumed that annual free cash flows will be a constant amount.

SOLUTION FIVE

(a)

(i) A Eurobond is denominated in a currency other than the home currency of the country or market in which it is issued. It is a bearer bond, which means it is unregistered, and payable to the person who carries it; losing a Eurobond is like losing a wallet filled with currency. These bonds are frequently grouped together by the currency in which they are denominated, such as eurodollar or euroyen bonds. Issuance is usually handled by an international syndicate of financial institutions on behalf of the borrower, one of which may underwrite the bond, thus guaranteeing purchase of the entire issue.

They are issued only by large, credit-worthy companies, development banks and state-owned corporations, and are generally unsecured.

(ii) Merits of Eurobond issues

- Eurobonds gives issuers the opportunity to take advantage of favourable regulatory and lending conditions in other countries. Eurobonds are not usually subject to taxes or regulations of any one government, which can make it cheaper to borrow in the Eurobond market as compared to other debt markets.
- Eurobonds create a liability in a foreign currency to match against a foreign currency asset.
- They are also extremely flexible. Most Eurobonds are fixed rate but they can be floating rate or linked to the financial success of the company or the government.
- Obtaining financing by issuing Eurobonds is often cheaper than obtaining a foreign currency bank loan.
- It is a way for companies to obtain financing in an economy where financing is hard to obtain. Issuing Eurobond gives companies wider access to the international market which they may normally not be able to access.
- Since Eurobonds are normally aimed at institutional investors and not the public, there are no advertisement costs involved and this means lower cost for the issuing firm.

ii) Demerits of Eurobond issues

- Currency risk may arise if the investment the bonds are funding generates net revenues in a currency different from that the bond is denominated in.
- The Eurobond market has been criticized as being a haven for tax-shy investors.

- Lower overseas interest rates are not necessarily good news. Many corporate treasurers who try to take advantage of relatively low overseas interest rates often overlook the reasons why interest rates are lower overseas.

- Because Eurobonds are unsecured, companies that issue them must be internationally known and have an excellent credit rating.

- There could be huge costs, elements of credit risk with all bond issue and also the element of country risk including political risk.

b)(i) A leveraged buy-out is a transaction in which a group of private investors uses debt financing to purchase a company or part of a company. In a leveraged buy-out, like a leveraged recapitalization, the company increases its level of leverage, but unlike the case of leveraged capitalisations, the company does not have access to equity markets any more.

Leveraged recapitalization is a corporate strategy in which a company takes on significant additional debt with the intention of paying a large cash dividend to shareholders and/or repurchasing its own stock shares. A leveraged recapitalization strategy typically involves the sale of equity and the borrowing or refinancing of debt.

A leveraged buyout (LBO) is the acquisition of another company using a significant amount of borrowed money to meet the cost of acquisition. The assets of the company being acquired are often used as collateral for the loans, along with the assets of the acquiring company. The purpose of leveraged buyouts is to allow companies to make large acquisitions without having to commit a lot of capital.

b)(ii)

- **Financial reconstruction:** involves changing the capital the capital structure of the firm.
- **Portfolio reconstruction:** involves making additions to or disposals from companies' businesses eg. through acquisition or spin-offs.
- **Organisational restructuring**: involves changing the organizational structure of the firm.

b)(iii)

Strategies or solutions that are generally implemented when devising a financial reconstruction scheme would include the following:

- Gaining positive cash flow in the immediate term and deferring cash outflows for a future period
- Sale of non – core assets or businesses
- An equity injection by existing/new shareholders
- Introduction of quasi-equity (convertible notes or preference shares) solutions
- Securitisation of assets by setting up a trust or corporate structure
- Sale and leaseback of property or intangible assets
- Establishing arrangements with lenders, which may include:
  - Debt for equity swaps, interest rate reductions, debt forgiveness, debt buy – outs, sharing of future earnings, loan asset and collateral security swaps between lenders

Steps taken in executing the above re – construction strategies could be as follows:

Step 1	Estimate the position of each party if liquidation is to go ahead. This will represent the minimum acceptable payment for each group.
Step 2	Assess additional sources of finance, for example selling assets, issuing shares, raising loans. The company will most likely need more finance to keep going.
Step 3	Calculate and assess the new position, and also how each group has fared, and compare with step 1 position.
Step 4	Check that the company is financially viable after the reconstruction.

END OF SOLUTION

CA ZAMBIA PROGRAMME EXAMINATIONS

CA ADVISORY PROFESSIONAL IN ACCOUNTANCY

CA 3.7: PUBLIC SECTOR AUDITS AND ASSURANCE

FRIDAY 18 JUNE 2021

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.

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

SECTION A

This question is compulsory and must be attempted.

<u>QUESTION ONE – (COMPULSORY)</u>

Bogata got its independence from the Russian Federation six (6) years ago. In the first three years of getting independence, the Country was funded by the Federation.

During the first three (3) years of independence, the Country saw a run down in public service delivery despite adequate funding from the Federation. All funds received were administered by a Committee of Cabinet chaired by the President. The Committee appropriates funds to the various Government institutions and there is no accountability on how these funds are used. In the fourth year of independence, the Country introduced a functioning taxation system where taxes are collected from industry and employees. Various indirect taxes were introduced in an effort to increase revenue. Despite the increase in locally generated revenue, there was no significant improvement in public service delivery. More money was being spent on, funding the running of Government mainly for paying salaries and perks for Ministers and other Government Officials.

One (1) year ago, Bogata stopped receiving funding from the Federation because this was the last year for receipt of funding as per agreement at the time of independence. There has been increasing awareness by the citizens to hold those responsible for the governance of the Country accountable on how they use the funds.

The Government embarked on a two (2) year project to improve the water supply system across the country. Before commencing the project, there was much publicity promoting the project which resulted in citizens being required to make contributions through the payroll towards meeting the cost of the project. An indirect tax was introduced for the sole purpose of collecting money for the water supply project.

At the commencement of the project enough funds had been raised for the project. In consultation with experts, specifications and a budget were drawn up. It was estimated that at the end of the project, 60% of the citizens would have running water in their residences.

At the end of the first year, the project stalled and the explanation given was that there were no funds and only 40% of the citizens had running water. Information leaked through social media that most of the funds raised for this project were diverted to paying salaries to Government workers due to funding problems.

The Government needed more money to fund the running of Government and infrastructure development. It decided to go to the World Bank to secure a long term loan. World Bank Officials visited the country on a fact finding mission and concluded that it was not feasible to lend money to Bogata unless it met the following conditions:

1. The country elects a democratic Government through free and fair elections monitored by the International Community.
2. Institutions of governance should be strengthened and the separation of powers between the legislature, executive and judiciary be enhanced.
3. The Government sets up an independent Supreme Audit Institution (SAI) that will be responsible for carrying out audits of all recipients of Government funds.

The World Bank agreed to fund the establishment of the Supreme Audit Institution (SAI).

You work for the International Organization of Supreme Audit Institutions (INTOSAI). You are a member of a three (3) man team that has been appointed to go and assist the Government of Bogata set up a Supreme Audit Institution (SAI) in line with the guidelines of the International Organization of Supreme Audit Institutions (INTOSAI) contained in the Lima and Maxico Declarations.

Required:

(a) (i) Discuss good governance in a democracy in relation to the management of Public funds in Bogata. (6 marks)

(ii) Discuss four (4) benefits to the citizens of establishing a Supreme Audit Institution (SAI) in Bogata. (4 marks)

(b) Discuss six (6) possible problems of the lack of oversight in the management of public funds in Bogata. (9 marks)

(c) Suggest five (5) concepts or principles that should be considered in establishing a Supreme Audit Institution (SAI) in Bogata in line with the Lima and Mexico declarations. (10 marks)

(d) (i) Explain compliance auditing and describe two (2) audit procedures in the compliance audit of the water project. (5 marks)

(ii) Describe three (3) matters that should be considered in the performance audit of the water project in Bogata. (6 marks)

[Total: 40 Marks]

SECTION B

There are four (4) questions in this section. Attempt any THREE (3) questions.

QUESTION TWO

(a) Public Sector Auditors are required to obtain sufficient appropriate audit evidence which forms the basis of the conclusions reached.

It is common for the Public Sector Auditors to obtain written representations from management which forms part of the evidence that the auditors get.

Required:

(i) Explain the types of representations that the public sector auditor may get from management during Public Sector Audits giving supporting authority where necessary. (3 marks)

(ii) State and explain two (2) written representations required by specific standards on auditing other than ISSAI 1580 *Written representations*. (2 marks)

(b) You work for the Office of the Auditor General (OAG) under the Directorate responsible for fraud and forensic audits.

You have been assigned to carry out a forensic audit of the procurement of goods and services at the Ministry of Supplies. The audit was requested by the Ministry's Permanent Secretary on the basis of serious allegations of fraud given to him by suppliers who felt discriminated against in supplying goods to the Ministry.

In planning the audit and gaining an understanding of the happenings at the Ministry the following were established from interviews with Staff, Management at the Ministry and selected suppliers.

The staff turnover in the Procurement Division is very high with staff on average staying less than two (2) years before they are reallocated to other Ministries. A case in point is where two procurement officers were involved in fraudulent activities resulting in the Ministry paying for supplies not received. After investigations and being found guilty the two (2) were sent back to Cabinet Office and have since been redeployed.

You were informed by the Ministry's Internal Audit Staff that they have in the past investigated cases of fraud and made recommendations on improvement of controls but these have been ignored and no action is taken by the Controlling Officers. Currently the procurement procedures are out of date and have not been revised in the last five (5) years resulting in Controlling Officers and Directors deciding on matters that should be spelt out in procurement procedure manuals.

The list of approved suppliers is outdated with a sizeable number of purchases being made from suppliers not on the list which has resulted in the complaint by suppliers. An interview with one of the Ministry's suppliers revealed that the Head of Procurement at the Ministry is a Director in a leading supplier of goods to the Ministry. A verification with the Registrar of Companies proved that this is the case.

When you went to carry out the investigation, it took you longer than necessary. It was very difficult to get information from staff and during the investigation two (2) procurement officers took leave and this made it difficult for the team to get information. There were many cases of missing Goods Received Notes (GRNs) and in several cases the original copies were missing and you were presented with photocopies some of which had alterations which were not clearly explained.

During a meeting with the Controlling Officer in the Ministry, you established that the Ministry is three (3) months in arrears in paying staff salaries due to delays in receipt of funding from the Ministry of Finance. This has put a lot of pressure on the employees who owe money to financial institutions since they are failing to service the loans on time resulting in high interest charges.

Required:

(i) Explain the responsibilities of the Public Sector Auditors for fraud such as the one in the Procurement Division in the Ministry of Supplies. (4 marks)

(ii) Identify and explain five (5) factors that may be indicative of fraud in the Procurement Division of the Ministry of Supplies. (5 marks)

(iii) Identify and explain four (4) fraud risk factors identified during the planning stage of the audit of the Ministry of Supplies. (6 marks)

[Total: 20 Marks]

<u>QUESTION THREE</u>

You are a Director in the Office of the Auditor General (OAG) and you head the Directorate of Specialized Audits and Consultancy. You are finalizing the Audit Strategy and the Audit Plan for the IT audit for the Ministry of Agriculture.

You joined the Office of the Auditor General (OAG) a month ago and this is your first assignment. The Auditor General informed you that this is the last audit for the year and it must be done in a cost effective manner given the limited budget.

The Government of the Department of Zambia has realized that IT systems are an important element of Government and public sector institutions. It is aware that the developments of the 21st century in information and communications technology mean that IT systems are now integral to most organizations and are one of the main enablers of communication both internally and with public and other external stakeholders.

As part of its preparation for the audit of the Ministry of Agriculture's IT systems, the audit team has been carrying out preliminary investigations to gain an understanding of the Ministry of Agriculture. The disaster recovery measures and the payroll IT controls have just been reviewed but concern has arisen about failure to develop and design effective disaster recovery measures.

You are, however, impressed with the existence of the following payroll IT controls:

1. Standardization of procedures.
2. Investigation and regular clearing of all suspense accounts.

3. Batch controls.
4. Exception reporting.

The audit team carried out an audit risk assessment on the payroll IT controls and you are considering appropriate ways of gathering sufficient appropriate audit evidence to assess the effective operation of the payroll IT control.

The Government of the Republic of Zambia has ambitious plans to ensure that public institutions fully implement enterprise resource planning (ERP) system by the year 2024. The aim is to integrate a wide range of areas such as budgeting, procurement, inventory control, revenue collection, finance and human resources.

The Ministry of Agriculture has an effective Internal Audit Department and you are considering using the work of the Internal Audit Department. This has been discussed with Management and Those Charged with Governance. However, one of the Members of the Audit Committee has expressed concern and thinks that such an arrangement will bring into question the distinction between the *Internal audit* and *External audit*.

You are aware that in 1998, the International Organization of Supreme Audit Institutions (INTOSAI) issued the Lima Declaration of Guidance on Auditing Precepts which clearly distinguishes between *internal audit* and *external audit* in the public sector. However, it is unfortunate that most of the stakeholders still do not understand the distinction.

Required:

(a) (i) Describe the Lima Declaration guidelines on *internal* and *external* audits.

(2 marks)

(ii) Explain five (5) potential benefits of using the work of the Internal Audit Department in the Ministry of Agriculture during the IT audit. (5 marks)

(b) Explain the audit procedures that the Public Sector Auditors will consider in planning the use of the work of the Internal Audit Department in the Ministry of Agriculture.

(4 marks)

(c) Explain the importance of disaster recovery measures in Information Technology and recommend three (3) measures which could be implemented. (5 marks)

(d) For each payroll Information Technology control in the scenario, recommend a suitable test of control. (4 marks)

[Total: 20 Marks]

QUESTION FOUR

The Ministry of Transport, in a Country called Kariba, employs more than 30,000 staff, spread throughout the Country. It is responsible for the procurement, operation and maintenance of all Government vehicles. The Office of the Auditor General (OAG) is aware that the payroll cost is a significant component of the Ministry's total expenditure.

The Ministry of Transport's payroll system is computerized and all employees are paid by bank transfer. Some of the input and output documents are manual. The Head of the Payroll Department is a qualified accountant and there is appropriate segregation of duties in the

Department. There is a strong allegation of falsification of data, involving signature forgeries and tampering of the contents of documents, resulting in abnormally high net pays for a number of employees.

The Auditor-General (AG) directed you to start planning a forensic investigation aimed at verifying the allegations. You are an Audit Manager in the Office of the Auditor General (OAG) and are aware that the payroll staff process a large number of payments on a daily basis and the Ministry maintains large data files electronically.

The payment system is also computerized and the Auditor General (AG) indicated that there will be need to use data analytics or data mining. He has, however, warned that:

1. Prior to commencing the forensic investigation there will be need to carefully determine its scope and objectives.
2. Data analytics or data mining can only work effectively with uncompromised data and it will be important to quickly secure data. Document analysis will be important in determining whether particular payroll documents are valid or they have been tampered with.
3. The Office of the Auditor General (OAG) does not have sufficiently qualified staff with the required skills and competence to adequately carry out some of the work involved and there will be need to use experts from the police service in some areas.

Required:

(a) Explain what is involved in the key stage of *defining scope and objectives* in a forensic investigation. (6 marks)

(b) Discuss the potential use of data analytics or data mining in the forensic audit of the payroll for Ministry of Transport. (4 marks)

(c) Describe signature forgery and tampering with the content of a document, and for each, state one (1) procedure which can be used to identify its occurence. (6 marks)

(d) Advise the Office of the Auditor General (OAG) on the factors to consider when evaluating the objectivity of the experts from the police service. (4 marks)

[Total: 20 Marks]

QUESTION FIVE

You are an Auditor in the Office of the Auditor-General (OAG) and are responsible for the performance audit of the Zambia Revenue Authority and the Information Technology (IT) audit of the National Pension Scheme. The following information relates to the two audits:

1. **Compliance audit at the Zambia Revenue Authority (ZRA)**

   The Zambia Revenue Authority (ZRA) collects revenue on behalf of Government under the supervision of the Ministry of Finance. Its goal is to maximize tax compliance and increase domestic revenue yield in Zambia by instituting a fair, efficient and effective tax regime.

   The Ministry of Finance is responsible for mobilizing the financial resources needed by the Government and allocating them to other Ministries, Provinces and other Spending Agencies. It has provided a number of policy guidelines to the ZRA, which include the following:

   (i) All cash offices must be sufficiently staffed with appropriately qualified and experienced staff.
   (ii) Training for all cash office staff regarding the relevant Government policies and procedures shall be held every quarter.
   (iii) Adequate inventory of receipt books and other accountable documents must be maintained to avoid stock-outs.
   (iv) Appropriate security over all accountable documents, monies and other valuable items must exist.
   (v) All money collected must be deposited with approved banks the next day before 12:00 hours.
   (vi) The ZRA must sign a legally enforceable service level agreement with each commercial bank which must include transferring the funds to the Bank of Zambia (BOZ) within 24 hours of receipt.
   (vii) All accountable documents must be sequentially numbered and should only be obtained from the Government Central Stores by the Chief Accountant upon presentation of a duly signed requisition form by the Controlling Officer in each institution.
   (viii) Appropriate segregation of duties must be maintained especially for staff responsible for receipting, banking and reconciliations.
   (ix) Official Government Receipts are issued for any money received.

2. **Information Technology(IT) audit at the National Pension Scheme (NAPSA)**

   The National Pension Scheme (NAPSA) has implemented an internet platform which allows employers to make contributions using mobile phones. However, many employers and employees are sceptical about its use.

   Required:

   (a) (i) Explain the purpose of a compliance auditing. (2 marks)

   (ii) Explain the two (2) levels of assurance which may be given by the Public Sector Auditor, in compliance audits. (4 marks)

(b) Recommend six (6) audit procedures which may be performed in respect of the Zambia Revenue Authority (ZRA) revenue collection compliance audit. (6 marks)

(c) Discuss the performance audit that can be carried out on the NAPSA Information Technology system. (4 marks)

(d) Explain four (4) limitations which the Office of the Auditor-General (OAG) may encounter during the National Pension Scheme IT audit. (4 marks)

[Total: 20 Marks]

END OF PAPER

CA 3.7 PUBLIC SECTOR AUIDT AND ASSURANCE

SUGGESTED SOLUTIONS

SOLUTION ONE

(a) (i) Good governance in administering public funds:

Citizens of a country elect leaders to run the affairs of the country. In Zambia, every five years general elections are held to represent them in parliament for a period of five years.

The President and the ruling party forms Government and the civil service runs the Government machinery. The main source of funds for the Government is through various taxes paid by the citizens.

Parliament who are the people's representatives confers responsibility on the Government to spend money in accordance with the budget approved by parliament. The Government is expected to prepare accountability reports to show how they spent the money. The Government and other agencies that spend public funds are required to adhere to the principles of transparency and accountability on how they have fulfilled their role as stewards of the general citizenry.

The people's representatives through parliament confers a responsibility to the Office of the Auditor General (OAG) to carry out audits on how Government and Government agencies have spent public funds. The OAG is required to report back to parliament who calls the controlling officers to answer to any audit observations made by the Auditor General.

In a democracy it is expected that public funds are spent in the general interest of the citizens of the country.

(ii) Benefits of establishing Supreme Audit Institution (SAI):

- The very existence of a Supreme Audit Institution (SAI) deters those responsible for the Management of the public funds of Bogata to bear in mind that whatever they do will be subject to independent audits.
- The Supreme Audit Institution (SAI) will help those charged with governance and ensuring transparency and accountability to perform their function based on the audit reports issued.
- Being an independent organization the Supreme Audit Institution (SAI) brings about independence and objectivity in carrying out audits.
- The Supreme Audit Institution (SAI) of Bogata will carry out audits of all Government agencies and those spending public funds to ensure that the principles of transparency and accountability are upheld.

Further, the Supreme Audit Institution (SAI) will carry out investigations involving theft of public funds which is common in the public sector.

(b) Problems of lack of oversight on use of public funds:

Lack of oversight in the use of public funds will have the following risks/disadvantages to the citizenry:

- There will be increased lack of adherence with the required rules and regulations regarding pubic finance Management knowing that no independent checks will be made.
- There would be an increase in fraud especially that in the public service the level of fraud risk factors is generally high compared to the private sector.
- There would be increased misapplication of funds to projects or programs that have not been approved for political and other reasons.
- There will be lack of transparency and accountability on the part of those entrusted with the Management of public funds.
- There would be increased levels of abuse of power of those in authority disregarding any rules and regulations that exist. Political power would be used for personal interests of those in power at the expense of benefits to the general citizenry.
- The lack of oversight on the use of public funds is likely to result in failure by those in authority to meet the service delivery expectations of the citizenry.

(c) Setting up of Supreme Audit Institution(SAI) in Bogata:

The guidelines on the setting up of Supreme Audit Institutions (SAIs) are contained in the Lima and Mexico declarations which were issued by the International Organization for Supreme Audit Institutions (INTOSAI).

The following suggestions are made to Bogata in setting up the Supreme Audit Institution (SAI) and these recommendations are based on the Lima and Mexico declarations.

- In setting up the Supreme Audit Institution, the country of Bogata should distinguish the roles of internal audit departments of the Government agencies and the external audit role performed by the Supreme Audit Institution (SAI).
- The setting up of the Supreme Audit Institution and the provisions for its independence should be contained in the Constitution of the country in order to ensure that the institution remains objective in the performance of its duties.
- The appointment and independence of the Head of the Supreme Audit Institution should be contained in the Constitution. Procedures for the removal of the Head of the institution should also be enshrined in the Constitution in order to assure the Head of the SAI, a security of tenure of office without fear of being removed for performing their duty.
- The Supreme Audit Institution (SAI) should have the power to carry out investigations relating to malpractices in the administration of public funds and should have access to all information that they require to function effectively.
- The Supreme Audit Institution (SAI) should have corporate governance independence and financial independence so that it is not funded by any other entity subject to its audits. Funds should be appropriated directly to the institution based on its budget.

- The Supreme Audit Institution (SAI) should ensure that its staff have the skills and competences to carry out their work. Recruitment policies should consider this when engaging staff of the Supreme Audit Institution.
- The Supreme Audit Institution should be given a broad mandate through provisions in the Constitution to audit all recipients of public funds without exception.
- Constitution al provisions should be made requiring the Supreme Audit Institution (SAI) to report on its findings.
- The Supreme Audit institution should be free to decide the timing and contents of the reports that it will publish.
- The Supreme Audit institution should be free to decide on its own programs and the recipients of public funds to be audited.

(d)(i) Meaning and objective of compliance audits in Bogata:

Compliance audits are audits performed by the public sector auditors with the aim of establishing whether or not projects or programs have been carried out in line with a given criteria. In the case of the water project of Bogata, the agreement signed between the Government of Bogata and the European Union forms the criteria against which a compliance audit of the project will be performed.

The matters to consider and the work to be done include an understanding of the provisions contained in the grant agreement and specifically:

- The requirement that expenditure should not exceed the agreed and approved budget.
- The requirement that funds should strictly be spent on the budget lines as approved.
- The requirement that all procurement should be through competitive tender.
- The requirement that audited financial statements should be sent to the donor within three months of the financial period.
- The contribution of the Government of resources to confirm it is 30% of the total project budget as per agreement.

The following audit procedures will be performed:

- Review the analysis of actual expenditure against budget and confirm that no over expenditure has been made. Discuss any over expenditure with Management and obtain explanations.
- For a sample of expenditure incurred on the project, confirm that the expenditure is within budget. Expenditure outside authorized budget lines is an exception. For example the payment of salaries using project funds is an observation that should be made and reported as an exception.
- Review information on selected procurement made for the project and confirm that this has been done in line with the requirement for competitive bidding.

- Request Management to provide a copy of audited financial statements for the first year of the project and ensue there is an audit report by the selected auditors. The fact that there are no audited financial statements for the first year is an anomaly which should be reported in the compliance audit report.
- Enquire from Management details of funds received from the Government and confirm receipt in cash and bank accounts. Confirm that the total contribution from Government amounts to 30% of the budget.

(ii) Performance audit in the audit of the water project in Bogata:

Performance audits also referred to as value for money audits are carried out with a view to establish how programs or projects are carried out considering the principles of economy, efficiency and effectiveness.

In the performance audit of the water project of Bogata, the following patters will be considered:
Economy – Consideration will be made as to whether the project costs incurred were the best price that should have been paid. For example the use of competitive tender is meant to ensure that the project should not pay more than it should without compromising on quality.

Efficiency – This will involve consideration of the level of inputs into the project compared with the outputs. It is meant to answer the question of whether the same output would have been achieved using lesser resources.
In the water project consideration should be made on whether the materials or inputs could have resulted in more residents having running water than the 60% achieved.

Effectiveness – This is the establishment of whether the objectives of the project have been achieved or not. It involves comparing actual performance against the desired outcome.

In the case of the Bogata water project, the objective of the project was that at the end of the project, 60% of the citizens should have running water. The fact that only 40% means that the project objectives have not been met.

SOLUTION TWO

(a) (i) Types of written representations obtained by public sector auditors:

ISSAI 1580 *Written Representations* gives guidance to public sector auditors on written representations. This standard requires that the public sector auditor should obtain (I)

1. Confirmation from Management that it has fulfilled its responsibility for the preparation of financial statements in accordance with the relevant regulatory framework. This is meant to ensure that there is a common understanding on the responsibility for the preparation of the financial statements.
2. Written representations from Management that activities and financial transactions are in compliance with the authorities that govern them.
3. Written representation from Management acknowledging the responsibility for internal controls and whether in management's evaluation that the controls have functioned effectively throughput the period covered by the audit.
4. That Management has communicated to the public sector auditor internal control deficiencies that they are aware of.

(ii) Further, written representations could be obtained in the following situations:

1. From Management to support other evidence given by Management such as when oral evidence is given.
2. When specifically required to obtain written representations by auditing standards such as in the following cases:
   - ISSAI 1240 – on any fraud Management is aware of that would have taken place during the year under review.
   - ISSAI 1550 – on related parties that Management has disclosed all related parties and related party transactions to the public sector auditor.
   - ISSAI 1570 – on management's assessment of the going concern ability of the audited entity.

(b) (i) Responsibility for fraud in public sector auditing:

ISSAI 1240 *The Auditor's Responsibilities Relating to Fraud in an Audit of Financial Statements* gives guidance on the responsibilities for fraud in public sector auditing.

The responsibilities of the public sector auditor with regards fraud are as follows:

- To obtain sufficient appropriate audit evidence that the financial statements are not misstated whether caused by fraud or error. To this effect the auditors should be aware of the possibility of misstatements due to fraud.

- To maintain professional skepticism throughout the audit considering the possibility of Management overriding controls. This will require that the auditor assesses the risk of fraud at the planning stage of the audit.
- To respond appropriately to the risk of fraud by performing appropriate audit procedures.

(ii) Indicators of fraud in Procurement Division of the Ministry of Supplies:

1. The high staff turnover may be indicative of wrong doing by staff and therefore moved to other departments.
2. Non implementation of recommendations of internal controls made by the internal audit department. It is questionable the reasons why Management of the Ministry of Supply is not taking action to ensure controls remain effective.
3. The conflict of interest of the Head of Procurement in that he is a director in a company supplying goods to the Ministry. It is likely that he will want to deal fraudulently with a company to which he is connected for personal benefit.
4. The fact that staff in the Procurement Division took leave at a time when investigations are going on and Management allowed this. The most likely reason is to avoid giving information to the audit team.
5. The extent of missing documents suggests that they may have been destroyed in order to hide evidence.
6. The presentation of photocopies with indications of alterations suggests of giving forged documents with a view to hide information from the auditors.

(iv) Fraud risk factors in the procurement system of the Ministry of Supply:

1. The high staff turnover is a fraud risk factor because staff are not sure of the job security. Knowing that they may not stay long in the job may motivate them to be involved in fraudulent activities especially that inherently the risk of fraud in procurement is high.
2. The lack of punitive action against staff involved in fraud in procurement. The case of two members of staff guilty of fraud but instead of appropriate displinary action being taken they were surrendered back to cabinet office for redeployment. Staff know that no serious action will be taken against staff involved in fraud.
3. Poor internal controls are a recipe for fraud on the part of employees. They will be motivated to commit fraud knowing that the controls are ineffective.
4. Delayed payment of salaries means that staff are struggling to make ends meet and fulfill their financial obligations and manage their families. This will put pressure on staff such as those in procurement to engage in fraudulent activities in order to sustain their livelihood.

SOLUTION THREE

(a) (i) **Lima Declaration guideline on "Internal audit" and "External audit".**

According to the Lima Declaration guideline, each Government department and institution may have its own internal audit service. The Supreme Audit Institution (SAI) is an external auditor and is not part of the organizational structure of entities to be audited.

The SAI should examine the effectiveness of internal audit. If internal audit is judged effective, efforts should be made at cooperation, with tasks divided between the SAI and the internal auditors of the entity.

(ii) Potential benefits of using the work of Internal Audit Department:

- Documentation – the Internal Audit Department could be expected to have documented the existence of controls and may have tested their operation. Hence, unnecessary duplication of work can be avoided.
- Time - using the work of the Internal Audit Department can reduce the time and assist in avoiding delays in the submission of the overall Report of the Auditor-General
- Cost – using the work of the Internal Audit Department can reduce the cost of the IT audit and could greatly in ensuring the audit is done within the limited budget
- Understanding of the Ministry of Agriculture – the Internal Audit Department can assist the OAG (especially as a new Director) in developing an understanding of the entity and its environment, and in identifying and assessing the risks of material misstatement
- Significant matters – using the work of the Internal Audit Department may create an environment in which the OAG can be informed of significant matters that may affect the OAG's work

(b) Audit procedures in planning use of work of internal audit:

- Discuss with the Internal Audit Department the planned use of its work, as a basis for coordinating their respective activities
- Read the reports of the Internal Audit Department relating to the work that the OAG plans to use, in order to obtain an understanding of the nature and extent of audit procedures performed by the internal auditors and the related findings
- Perform sufficient audit procedures on the work of the internal auditors, to determine its adequacy for purposes of the audit, including an evaluation of whether:
  - The work of the internal auditors had been properly planned, performed, supervised, reviewed and documented
  - Sufficient appropriate evidence had been obtained to enable the function to draw reasonable conclusions, and
  - The conclusions reached were appropriate in the circumstances.
- Re-perform the work on some of the items already examined by the internal auditors and compare conclusions reached with the internal auditors' conclusions

(c) Importance of disaster recovery measures and recommended measures:

Disaster recovery measures are important because they limit further losses and rectify current losses.

Recommended disaster recovery measures include:

- Implement back-up procedures for both the Ministry of Agriculture's data and software
- Develop and implement systems for duplicate data and alternative processing facilities, especially for critical functions, at a remote location to ensure that operations are not interrupted, in case of a disaster
- Organize regular training on disaster recovery, especially for key staff

(d) Tests of control:

- Standardization of procedures – Review the Ministry of Agriculture's payroll procedures from the time the employees are engaged up to the time they leave
- Investigation and regular clearing of all suspense accounts – review the suspense accounts to confirm whether discrepancies are followed-up promptly and resolved
- Batch controls – observe and evaluate proper batch controls
- Exception reporting – review the Ministry of Agriculture's procedure for exception reporting

SOLUTION FOUR

(a) Defining scope and objectives in forensic investigations:

Scope – this will involve reaching an understanding on what the investigation will cover and therefore answering a number of questions, such as the following:

- Are recommendations of remedial action required?
- Is the work of forensic investigation likely to support legal action?
- What form and content of report is required?

Objectives – this may involve establishing whether:

- The nature of the fraud that has been occurring (or that the suspicions of fraud are unfounded);
- The identity of the fraudster or fraudsters;
- The period of time over which it has been occurring;
- How the fraudster or fraudsters have succeeded in concealing their fraud during this time;
- If possible, an estimate of the loss to the Ministry of Transport as a consequence of the fraud. (In the public sector, the loss is likely to include a financial loss, but there may also be a significant qualitative loss, such as a loss of public trust in Government);
- Obtaining sufficient evidence to support a prosecution in court, if required.

(b) Potential use of data analytics or data mining

Data analytics or data mining are in-depth queries or searches into large files of data in order to:

- Identify anomalous individual items (unusual items) which can then be scrutinized in more detail, manually.
- Facilitate rapid analysis of huge numbers of transactions that have passed through the payroll system. For example, 100% of the payroll payments could be checked for characteristics such as date, time, amount, approval and payee.
- Identify duplicate payroll transactions to the same employee
- Group ('Stratify) employees by the amount of net pay they have received, so that further manual scrutiny could be performed
- Detect an audit trail which may not be apparent in manual inspection, which will provide grounds to investigate further.

(c) Description of signature forgery & tampering with documents:

- **Identification of signature forgery** – signature forgery involves a document which has supposedly been signed by an authorized person, but the signature is a forgery. The procedures to identify signature forgery could include a comparison of the signature in the suspect document with a genuine signature and this might reveal differences. An investigator should remember that advanced age, poor health, temporary injury and use of drugs or alcohol can result in large variations in signatures, and these might mislead the investigator into thinking that the signature is a forgery.

- **Identification of tampering with the content of a document** – signs of tampering with the content of a document could include some ink differences, alterations, erasures and deletions. The procedure to identify tampering with the contents of a document may involve holding the paper in front of a bright light or holding a light over the writing at different angles and observing differences in the colour and reflectivity of the inks, or disturbances to the paper surface.

(d) Factors to consider when evaluating the objectivity of the experts from the police service

ISSAI 1620 *Reliance on the work of an expert* gives detailed guidance in this area. Factors to consider may include:

- Actual or perceived political neutrality – whether the experts are politically neutral so that their objectivity is not brought into question by any actual or perceived political bias
- Financial interests, business or personal relationships with the Ministry of Transport – whether financial interests, business or personal relationships exist which could make the experts act in a way as to protect their interests or relationships.
- Applicable safeguards – whether adequate safeguards exist to reduce any threat to an acceptable level.

SOLUTION FIVE

(a) Compliance audits:

(i) The purpose of a compliance audit is to assess whether activities, financial transactions and information for an audited public sector entity are, in all material respects, in accordance with the authorities that govern the entity. "Authorities" may be rules, laws and regulations, established policy, agreed codes of conduct, budgetary decisions, and so on.

(ii) The two (2) types of assurance which may be given in compliance audits are:

- **Reasonable assurance** – this is high but not absolute, and the audit conclusion is typically expressed positively, stating that, in the auditor's opinion, the subject matter is or is not complaint in all material respects.
- **Limited assurance** – the audit conclusion states that, based on the procedures performed and evidence obtained, nothing has come to the auditor's attention that causes the auditor to believe that the subject matter is not compliant with the audit criteria.

Reasonable assurance normally requires more audit evidence than limited assurance.

(b) Recommended audit procedures – compliance audit:

- Obtain copies of Government policies and procedures, and review the contents
- Inquire of Human Resource (HR) Director (or if appropriate, the Chief Accountant) whether cash offices are sufficiently staffed
- Obtain selected personal files from Human Resources (HR) department and check whether each employee is appropriately qualified and experienced as per Government directives
- Carry out physical inspection of the inventory of receipt books to verify whether adequate inventories are held
- Inspect security over receipt books and monies collected in order to verify that it appropriate
- Select a sample of receipts and use the deposit slips and bank statements to check the dates when these were deposited. This may also assist in identifying instances of teeming and lading fraud.
- Obtain copies of signed legally enforceable service level agreements with commercial banks and check the details on transfer of funds to the Bank of Zambia (BOZ)
- Observe that receipts are being issued for any money received
- Sample a few receipt books and check whether the receipts are sequentially numbered

(c) NAPSA IT audit within the context of performance audit

The NAPSA IT audit will be required to apply the performance audit criteria of economy, efficiency and effectiveness, and value for money to NAPSA's internet platform which allows employers to make contributions using mobile phones. The following will therefore apply:

- Economy – this will involve checking whether minimum costs have been incurred on the NAPSA system, from design and specification through to operation
- Efficiency – this will involve checking whether the NAPSA system's utilization is being maximized.
- Effectiveness – this will involve checking whether the NAPSA system has been implemented in such a manner that it meets NAPSA's objectives.

(d) Limitations during National Pension Scheme IT Audit:

- Lack of appropriate Computer Assisted Audit Technique (CAATs)
- Lack of appropriately qualified, experienced and competent IT Auditors in the Office of the Auditor-General (AG). Audit staff may not have the basic understanding of data processing and NAPSA's computer application, together with a detailed knowledge of audit software and the computer files to be used.
- Inadequate access to data and information
- Lack of adequate documentation of the computerization process
- NAPSA staff may lack full knowledge of the computer system, and hence may not be able to explain fully all the information it produces

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

ADVISORY PROFESSIONAL IN ACCOUNTANCY

CA 3.8: PUBLIC SECTOR FINANCIAL MANAGEMENT

FRIDAY 18 JUNE 2021

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

INSTRUCTIONS TO CANDIDATES

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

2. This paper is divided into TWO (2) sections:

   Section A: One (1) compulsory scenario question.

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

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

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

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

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

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

8. Present legible and tidy work.

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

10. Present Value and Annuity tables are attached at the end of this paper.

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

SECTION A

This question is compulsory and must be attempted

QUESTION ONE (COMPULSORY)

Chongwe District Council is a district situated in Muchinga Province of Zambia. The district is not connected to the national grid and uses a diesel generator to supply electricity to the homes of the residents. The generator was installed some years ago at a cost of K10,000 and has life expectancy of five (5) years. It functions more efficiently as the hourly demand increases, as follows:

Hourly demand (Kilowatts)	Average running cost Per kilo watt
10	K0.50
20	K0.40
30	K0.30
40	K0.24

The above figures relate to the coming year 1. The running costs are expected to increase during the coming five (5) year period whereby the cost per year will be 10% higher than the preceding year. The running costs are avoidable for each year in which the generator is not operated. The average daily requirement is 1 hour at 40 kilowatts, 2 hours at 30 kilowatts, 4 hours at 20 kilowatts and 2 hours at 10 kilowatts (there are no electricity requirements for the remaining 30 hours) for each 365 days each year. Chongwe District is considering the purchase of an electricity generating system using a windmill which would reduce reliance on the diesel generator. The windmill would cost K20,000 and would be operational at the commencement of year 1 with a five year life span.

Chongwe district council has gathered information which would enable it make high, medium and low estimates of electricity generation capacity of the windmill as follows:

Estimate	Windmill Output (Kilowatt/hr)	Operating Hours/day	Operating days In a Year	Probability
High	4.25	12	250	0.2
Medium	4.00	12	200	0.6
Low	3.50	12	190	0.2

For each estimate, weather conditions during the non-operating days of the year may be assumed to be unsuitable for the generation of electricity by the windmill.

The windmill generated electricity would be stored in batteries and used to eliminate the highest cost of running periods of diesel generator. Each battery would cost K50. Chongwe District would purchase eighty (80) batteries at the commencement of year 1. This number of batteries should provide sufficient storage capacity, whatever the pattern of windmill collection and subsequent usage of electricity. Each battery would have life expectancy of five years. The diesel generator, windmill batteries will all have a nil residual value at the end of five (5) year period. The time value of money should be ignored.

(a) You are a consultant hired by Chongwe District Council, prepare an analysis of the information which calculates financial effects of each of the high, medium and low estimates of the electricity generation capability of the windmill and use an expected value approach to advise Chongwe District Council on the financial viability of installing the windmill. (26 marks)

(b) Discuss the differences between investment appraisal in the public sector and in the private sector. (14 marks)

[Total: 40 Marks]

SECTION B

There are FOUR (4) questions in this section. Attempt any THREE (3) questions.

<u>QUESTION TWO</u>

Northern University a recently established university by the Ministry of Higher Education is a public university. The University offers various courses in medicine, law, Education and Engineering. The management recently introduced two degree programs in finance. Both programs have a component of financial management. However, the programs are only focused on financial management in the private sector.

The university recently carried out a market research about the quality of their programs. The research was focused on former students, current students and those likely to enroll for a program of study at the university in the near future. The result of the research indicated that most respondents are satisfied with the most of the programs offered by the university. However, the majority of the respondents were of the view that as a public university, Northern University should introduce a financial management course focused on the public sector.

The university is now considering introducing public sector financial management as one of the courses in its degree programs. However some stakeholders are of the view that introducing public sector financial management will not add value to the university as it is very similar to financial management in the private sector.

Required:

(a) Discuss how public sector financial management differs from private sector financial management. (10 marks)

(b) Explain the key institutions responsible for public sector financial management in Zambia and provide a brief explanation of their functions. (10 marks)

[Total: 20 Marks]

QUESTION THREE

The government of a SADC country, which obtained its independence on 31 December, 1999 from its colonial masters, presented its first budget to parliament in November, 2019 for the first time after 20 years. The reason is that the country has had no stable Government during this period, largely due to a civil war. The war resulted into devastation of its infrastructure like, roads, water and sanitation, Schools and Hospitals. The Finance Minister allocated 20% of the total budget to finance road construction, 15% for water and sanitation, 35% and 10% for Schools and Hospitals respectively. The source of funds for road construction, water and sanitation infrastructure was to be exclusively from foreign grants, programme and project loans. All of the programme and project loans were to be obtained from the Export - Import Bank of China.

The business model adopted by the government in the capital approval process was the five (5) step business case model, as developed by HM Treasury of the United Kingdom.

Required:

(a) Explain the five (5) step business case model and identify its key components as developed by HM Treasury in the United Kingdom and adopted by the SADC country in its capital expenditure approval process. (10 marks)

(b) Explain the difference between project grants, programme and project loans as sources of foreign financing and the constraints on relying entirely on foreign borrowing as a major source of Government financing. (10 marks)

[Total: 20 Marks]

QUESTION FOUR

A country in the sub Saharan Africa commences its budgetary process with little consultation with the public. The budget process commences with consultation with political leadership who at many times ensure that the programmes included in the budget are in accordance with political ambitions as opposed to programs being aligned to national development plans. Further the country has had no annual reports produced or shared with the public. This has resulted in a number of challenges with implementation of activities. Procurement processes are not transparent. Though government had implemented a number of electronic Government systems, the systems were underutilized.

Regarding, economic performance, the Country, has accumulated debt of 70% of GDP, analyzed as follows:

(i) External Debt - $10.1 bn representing 38% of GDP in 2018
(ii) Stock of Government Securities K58.21 bn representing 21% of GDP as at 31 March 2019
(iii) Guarantees amounting to $1.3bn representing 5% of GDP

(iv) Domestic arrears amounting to K15.6bn.

The domestic arrears were as a result of government's reluctance to implement commitment control.

Required:

As a consultant of the Ministry of Finance, advise the Minister of Finance on the best practice of the financial planning process, managing commitments and how to improve use of the electronic Government system. **[Total: 20 Marks]**

QUESTION FIVE

A government has in the recent past experienced liquidity challenges and has not been able to meet its obligations such as paying salaries and payments of goods and services to suppliers. The reason advanced for not meeting the obligations by that country's authorities is the huge debt disbursements they have to pay every month. The country has borrowed to a tune of 70% of its Gross Domestic Product (GDP). Other commentators have attributed this non availability of funds to mismanagement of public resources.

The Auditor General's report has revealed misappropriation of funds which were being facilitated by accounting officers from line ministries and the Treasury. The Auditors noted that there were no policies and procedures to regulate behavior and assign specific duties to designated staff in the Treasury. Efforts by the country's Anti-Corruption Commission to operationalize the Integrity Committees have been frustrated by top management in respective line ministries and the treasury.

Required:

As a consultant to the Treasury of the Country, advise the authorities on the following:

(a) The purpose of code of ethics in the public sector. (10 marks)

(b) Elements of the code of ethics that should apply to the Treasury. (10 marks)

[Total: 20 Marks]

END OF PAPER

Formulae

Modigliani and Miller Proposition 2 (with tax)

$$k_e = k_e^i + (1 - T)(k_e^i - k_d)\frac{V_d}{V_e}$$

Two asset portfolio

$$s_p = \sqrt{w_a^2 s_a^2 + w_b^2 s_b^2 + 2w_a w_b r_{ab} s_a s_b}$$

The Capital Asset Pricing Model

$$E(r_i) = R_f + \beta_i(E(r_m) - R_f)$$

The asset beta formula

$$\beta_a = \left[\frac{V_e}{(V_e + V_d(1 - T))}\beta_e\right] + \left[\frac{V_d(1 - T)}{(V_e + V_d(1 - T))}\beta_d\right]$$

The Growth Model

$$P_o = \frac{D_o(1 + g)}{(r_e - g)}$$

Gordon's growth approximation

$$g = br_e$$

The weighted average cost of capital

$$WACC = \left[\frac{V_e}{V_e + V_d}\right]k_e + \left[\frac{V_d}{V_e + V_d}\right]k_d(1 - T)$$

The Fisher formula

$$(1 + i) = (1 + r)(1 + h)$$

Purchasing power parity and interest rate parity

$$S_1 = S_0 x \frac{(1 + h_c)}{(1 + h_b)} \qquad F_0 = S_0 x \frac{(1 + i_c)}{(1 + i_b)}$$

Modified Internal Rate of Return

$$MIRR = \left[\frac{PV_R}{PV_I}\right]^{\frac{1}{n}} \left(1 + r_e\right) - 1$$

The Black-Scholes option pricing model

$$c = P_a N(d_1) - P_e N(d_2) e^{-rt}$$

Where:

$$d_1 = \frac{\ln(P_a / P_e) + (r + 0.5s^2)t}{s\sqrt{t}}$$

$$d_2 = d_1 - s\sqrt{t}$$

The Put Call Parity relationship

$$p = c - P_a + P_e e^{-rt}$$

Present Value Table

Present value of 1 i.e. $(1 + r)^{-n}$

Where r = discount rate
n = number of periods until payment

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	0·980	0·961	0·943	0·925	0·907	0·890	0·873	0·857	0·842	0·826	2
3	0·971	0·942	0·915	0·889	0·864	0·840	0·816	0·794	0·772	0·751	3
4	0·961	0·924	0·888	0·855	0·823	0·792	0·763	0·735	0·708	0·683	4
5	0·951	0·906	0·863	0·822	0·784	0·747	0·713	0·681	0·650	0·621	5
6	0·942	0·888	0·837	0·790	0·746	0·705	0·666	0·630	0·596	0·564	6
7	0·933	0·871	0·813	0·760	0·711	0·665	0·623	0·583	0·547	0·513	7
8	0·923	0·853	0·789	0·731	0·677	0·627	0·582	0·540	0·502	0·467	8
9	0·941	0·837	0·766	0·703	0·645	0·592	0·544	0·500	0·460	0·424	9
10	0·905	0·820	0·744	0·676	0·614	0·558	0·508	0·463	0·422	0·386	10
11	0·896	0·804	0·722	0·650	0·585	0·527	0·475	0·429	0·388	0·305	11
12	0·887	0·788	0·701	0·625	0·557	0·497	0·444	0·397	0·356	0·319	12
13	0·879	0·773	0·681	0·601	0·530	0·469	0·415	0·368	0·326	0·290	13
14	0·870	0·758	0·661	0·577	0·505	0·442	0·388	0·340	0·299	0·263	14
15	0·861	0·743	0·642	0·555	0·481	0·417	0·362	0·315	0·275	0·239	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	0·812	0·797	0·783	0·769	0·756	0·743	0·731	0·718	0·706	0·694	2
3	0·731	0·712	0·693	0·675	0·658	0·641	0·624	0·609	0·593	0·579	3
4	0·659	0·636	0·613	0·592	0·572	0·552	0·534	0·516	0·499	0·482	4
5	0·593	0·567	0·543	0·519	0·497	0·476	0·456	0·437	0·419	0·402	5
6	0·535	0·507	0·480	0·456	0·432	0·410	0·390	0·370	0·352	0·335	6
7	0·482	0·452	0·425	0·400	0·376	0·354	0·333	0·314	0·296	0·279	7
8	0·434	0·404	0·376	0·351	0·327	0·305	0·285	0·266	0·249	0·233	8
9	0·391	0·361	0·333	0·308	0·284	0·263	0·243	0·225	0·209	0·194	9
10	0·352	0·322	0·295	0·270	0·247	0·227	0·208	0·191	0·176	0·162	10
11	0·317	0·287	0·261	0·237	0·215	0·195	0·178	0·162	0·148	0·135	11
12	0·286	0·257	0·231	0·208	0·187	0·168	0·152	0·137	0·124	0·112	12
13	0·258	0·229	0·204	0·182	0·163	0·145	0·130	0·116	0·104	0·093	13
14	0·232	0·205	0·181	0·160	0·141	0·125	0·111	0·099	0·088	0·078	14
15	0·209	0·183	0·160	0·140	0·123	0·108	0·095	0·084	0·074	0·065	15

Annuity Table

Present value of an annuity of 1 i.e. $\frac{1 - (1 + r)^{-n}}{r}$

Where r = discount rate
n = number of periods

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	1·970	1·942	1·913	1·886	1·859	1·833	1·808	1·783	1·759	1·736	2
3	2·941	2·884	2·829	2·775	2·723	2·673	2·624	2·577	2·531	2·487	3
4	3·902	3·808	3·717	3·630	3·546	3·465	3·387	3·312	3·240	3·170	4
5	4·853	4·713	4·580	4·452	4·329	4·212	4·100	3·993	3·890	3·791	5
6	5·795	5·601	5·417	5·242	5·076	4·917	4·767	4·623	4·486	4·355	6
7	6·728	6·472	6·230	6·002	5·786	5·582	5·389	5·206	5·033	4·868	7
8	7·652	7·325	7·020	6·733	6·463	6·210	5·971	5·747	5·535	5·335	8
9	8·566	8·162	7·786	7·435	7·108	6·802	6·515	6·247	5·995	5·759	9
10	9·471	8·983	8·530	8·111	7·722	7·360	7·024	6·710	6·418	6·145	10
11	10·37	9·787	9·253	8·760	8·306	7·887	7·499	7·139	6·805	6·495	11
12	11·26	10·58	9·954	9·385	8·863	8·384	7·943	7·536	7·161	6·814	12
13	12·13	11·35	10·63	9·986	9·394	8·853	8·358	7·904	7·487	7·103	13
14	13·00	12·11	11·30	10·56	9·899	9·295	8·745	8·244	7·786	7·367	14
15	13·87	12·85	11·94	11·12	10·38	9·712	9·108	8·559	8·061	7·606	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	1·713	1·690	1·668	1·647	1·626	1·605	1·585	1·566	1·547	1·528	2
3	2·444	2·402	2·361	2·322	2·283	2·246	2·210	2·174	2·140	2·106	3
4	3·102	3·037	2·974	2·914	2·855	2·798	2·743	2·690	2·639	2·589	4
5	3·696	3·605	3·517	3·433	3·352	3·274	3·199	3·127	3·058	2·991	5
6	4·231	4·111	3·998	3·889	3·784	3·685	3·589	3·498	3·410	3·326	6
7	4·712	4·564	4·423	4·288	4·160	4·039	3·922	3·812	3·706	3·605	7
8	5·146	4·968	4·799	4·639	4·487	4·344	4·207	4·078	3·954	3·837	8
9	5·537	5·328	5·132	4·946	4·772	4·607	4·451	4·303	4·163	4·031	9
10	5·889	5·650	5·426	5·216	5·019	4·833	4·659	4·494	4·339	4·192	10
11	6·207	5·938	5·687	5·453	5·234	5·029	4·836	4·656	4·486	4·327	11
12	6·492	6·194	5·918	5·660	5·421	5·197	4·988	4·793	4·611	4·439	12
13	6·750	6·424	6·122	5·842	5·583	5·342	5·118	4·910	4·715	4·533	13
14	6·982	6·628	6·302	6·002	5·724	5·468	5·229	5·008	4·802	4·611	14
15	7·191	6·811	6·462	6·142	5·847	5·575	5·324	5·092	4·876	4·675	15

Standard normal distribution table

	0·00	0·01	0·02	0·03	0·04	0·05	0·06	0·07	0·08	0·09
0·0	0·0000	0·0040	0·0080	0·0120	0·0160	0·0199	0·0239	0·0279	0·0319	0·0359
0·1	0·0398	0·0438	0·0478	0·0517	0·0557	0·0596	0·0636	0·0675	0·0714	0·0753
0·2	0·0793	0·0832	0·0871	0·0910	0·0948	0·0987	0·1026	0·1064	0·1103	0·1141
0·3	0·1179	0·1217	0·1255	0·1293	0·1331	0·1368	0·1406	0·1443	0·1480	0·1517
0·4	0·1554	0·1591	0·1628	0·1664	0·1700	0·1736	0·1772	0·1808	0·1844	0·1879
0·5	0·1915	0·1950	0·1985	0·2019	0·2054	0·2088	0·2123	0·2157	0·2190	0·2224
0·6	0·2257	0·2291	0·2324	0·2357	0·2389	0·2422	0·2454	0·2486	0·2517	0·2549
0·7	0·2580	0·2611	0·2642	0·2673	0·2704	0·2734	0·2764	0·2794	0·2823	0·2852
0·8	0·2881	0·2910	0·2939	0·2967	0·2995	0·3023	0·3051	0·3078	0·3106	0·3133
0·9	0·3159	0·3186	0·3212	0·3238	0·3264	0·3289	0·3315	0·3340	0·3365	0·3389
1·0	0·3413	0·3438	0·3461	0·3485	0·3508	0·3531	0·3554	0·3577	0·3599	0·3621
1·1	0·3643	0·3665	0·3686	0·3708	0·3729	0·3749	0·3770	0·3790	0·3810	0·3830
1·2	0·3849	0·3869	0·3888	0·3907	0·3925	0·3944	0·3962	0·3980	0·3997	0·4015
1·3	0·4032	0·4049	0·4066	0·4082	0·4099	0·4115	0·4131	0·4147	0·4162	0·4177
1·4	0·4192	0·4207	0·4222	0·4236	0·4251	0·4265	0·4279	0·4292	0·4306	0·4319
1·5	0·4332	0·4345	0·4357	0·4370	0·4382	0·4394	0·4406	0·4418	0·4429	0·4441
1·6	0·4452	0·4463	0·4474	0·4484	0·4495	0·4505	0·4515	0·4525	0·4535	0·4545
1·7	0·4554	0·4564	0·4573	0·4582	0·4591	0·4599	0·4608	0·4616	0·4625	0·4633
1·8	0·4641	0·4649	0·4656	0·4664	0·4671	0·4678	0·4686	0·4693	0·4699	0·4706
1·9	0·4713	0·4719	0·4726	0·4732	0·4738	0·4744	0·4750	0·4756	0·4761	0·4767
2·0	0·4772	0·4778	0·4783	0·4788	0·4793	0·4798	0·4803	0·4808	0·4812	0·4817
2·1	0·4821	0·4826	0·4830	0·4834	0·4838	0·4842	0·4846	0·4850	0·4854	0·4857
2·2	0·4861	0·4864	0·4868	0·4871	0·4875	0·4878	0·4881	0·4884	0·4887	0·4890
2·3	0·4893	0·4896	0·4898	0·4901	0·4904	0·4906	0·4909	0·4911	0·4913	0·4916
2·4	0·4918	0·4920	0·4922	0·4925	0·4927	0·4929	0·4931	0·4932	0·4934	0·4936
2·5	0·4938	0·4940	0·4941	0·4943	0·4945	0·4946	0·4948	0·4949	0·4951	0·4952
2·6	0·4953	0·4955	0·4956	0·4957	0·4959	0·4960	0·4961	0·4962	0·4963	0·4964
2·7	0·4965	0·4966	0·4967	0·4968	0·4969	0·4970	0·4971	0·4972	0·4973	0·4974
2·8	0·4974	0·4975	0·4976	0·4977	0·4977	0·4978	0·4979	0·4979	0·4980	0·4981
2·9	0·4981	0·4982	0·4982	0·4983	0·4984	0·4984	0·4985	0·4985	0·4986	0·4986
3·0	0·4987	0·4987	0·4987	0·4988	0·4988	0·4989	0·4989	0·4989	0·4990	0·4990

This table can be used to calculate $N(d)$, the cumulative normal distribution functions needed for the Black-Scholes model of option pricing. If $d_i > 0$, add 0·5 to the relevant number above. If $d_i < 0$, subtract the relevant number above from 0·5.

CA 3.8: PUBLIC SECTOR FINANCIAL MANAGEMENT SUGGESTED SOLUTION

SOLUTION ONE

Daily Requirements

No. of Hours	No of Kilowatts
1	40
2	30
4	20
2	10

Output of windmill per annum		Kilowatt Hours
High	250 X 12 X 4.25	12,750
Medium	200 X 12 X 4	9,600
Low	190 X 12 X 3.5	7,980

Savings in Kilowatts Hours

	High	Medium	Low
Hourly demand – 10 Kilowatts	7,300	7,300	7,300
365 X 10 X 2			
Hourly demand – 20 Kilowatts			
365 X 20 X 4 = 29,200			
12,750 – 7,300	5,450		
9,600 – 7,300		2,300	
7,980 – 7,300			680

10 Kilo watts	**High**	**Medium**	**Low**
Year 1 = 7,300 X 0.50	3,650		
Year 2 = 7,300 X 0.50 X 1.10	4,015		
Year 3 = 7,300 X 0.50 X 1.10X1.10	4,417		
Year 4 = 7,300 X 0.50 X 1.10 X 1.10X1.10	4,858		
Year 5 = 7,300 X 0.50 X 1.10X1.10X1.10 X 1.10	5,343		
	22,283	22,283	22,283
20 Kilo watts			
Year 1 = 5,450 X 0.40	2,180		
Year 2 = 5,450 X 0.40 X 1.10	2,398		
Year 3 = 5,450 X 0.40 X 1.10X1.10	2,638		
Year 4 = 5,450 X 0.40 X 1.10 X 1.10X1.10	2,902		
Year 5 = 5,450 X 0.40 X 1.10X1.10X1.10 X 1.10	3,192		
Year 1 = 2,300 X 0.40		920	

Year 2 = 2,300 X 0.40 X 1.10		1,012	
Year 3 = 2,300 X 0.40 X 1.10X1.10		1,113	
Year 4 = 2,300 X 0.40 X 1.10 X 1.10X1.10		1,224	
Year 5 = 2,300 X 0.40 X 1.10X1.10X1.10 X 1.10		1,374	
Year 1 = 680 X 0.40			272
Year 2 = 680 X 0.40 X 1.10			299
Year 3 = 680 X 0.40 X 1.10X1.10			329
Year 4 = 680 X 0.40 X 1.10 X 1.10X1.10			362
Year 5 = 680 X 0.40 X 1.10X1.10X1.10 X 1.10			398
	35,592	27,900	23,944

Summary

Savings in running costs	35,592	27,900	23,944
Cost of Windmill	(20,000)	(20,000)	(20,000)
Cost of Batteries	(4,000)	(4,000)	(4,000)
Net Benefit (cost)/Benefit	11,592	3,900	(56)
Probability	0.2	0.6	0.2

Expected Value:

11,592 X 0.2	=	2,318.40
3,900 X 0.6	=	2,340.00
(56) X 0.2	=	(11.2)
Expected Benefit	=	4,647.20

On the basis of the expected value, the windmill should be installed.

b)Discuss the difference between investment appraisal in the public sector and in the private sector.
Briefly explain the difference between investment appraisal in the public sector and in the private sector. • Investment appraisal analysis in the private sector is primarily focused on cash flow analysis. This stems from the profit maximizing objective of private sector entities. • The most significant difference between public and private sector investment appraisal is the wider focus of the decision making for the public sector entity, which reflects more complex objectives in the public sector. For the public sector the outcomes of a project will be a range of benefits to society. Investment appraisal in the public sector is therefore focused not on how the cash flows of the individual entity will be impacted by a capital investment decision, but rather on the net value of the project to society as whole. Some outcomes may be quantifiable but others may not. Where outcomes are non-quantifiable, use can be made of outputs which can be measured and which relate to the desired outcome. • As part of the cost benefit analysis, all relevant costs and benefits to government and society should be valued in order to determine net benefits or costs. Where available, costs and benefits should use market values. Measuring the economic and wider societal benefits of a proposal may be difficult when compared to costs. • Where impacts cannot be measured and quantified, and prices cannot be readily determined from market data, then a range of techniques is available to determine values. Once values have been assigned to costs and benefits, it may be necessary for further adjustments to be made to these to take into account other considerations such as distributional impacts and the impact of inflation on relative prices • In the private sector, net present value techniques can be used to determine whether to undertake an investment, and the discount rate used to undertake this analysis will be the firm's cost of capital. • Use of a cost of capital for discounting in the public sector is generally restricted to those activities where a government entity is selling goods and services commercially and a 'market' price needs to be determined. In these cases an appropriate rate is often taken to be the rate at which the government is able to borrow to finance its activities.

- Generally, however, cost of capital should not be used as a discount rate when evaluating projects in the public sector. Instead it is common to use either a social time preference rate or a social opportunity cost rate to determine an appropriate social discount rate.

SOLUTION TWO

1) The key differences which lead to distinct characteristics of PFM are as follows:

   a) The relationship between citizens and those who use services and the state is based on rights, the public interest, and funding through taxation. Individuals usually have a choice over whether to purchase goods and services and who to purchase them from in the private sector. Ultimately they can, at least theoretically, withhold resources and exit markets. This is not the case in the public sector, where public goods and services are provided by the state and must be funded through taxes or compulsory fees and charges.
   b) As individuals and other entities are required to pay taxes in order for services to be made available, these taxes must be spent by government in the public interest, to high standards of ethics and governance, and in a manner that promotes value for money. There must therefore be transparency as to how public resources have been used, and government officials must act with fairness, integrity and be accountable to citizens and service users. In the private sector the source of funds is usually the owners of the company or shareholders.
   c) Government is often a monopoly provider of public goods and services and in the absence of competition and a profit motive to determine a fair way in which to allocate scarce resources, achieving value for money can be challenging. While input measures may be readily available, measuring outputs and outcomes is also often far more difficult, which further complicates financial decision making. In the private sector the motive is profit and shareholder wealth maximisation
   d) There are many complex and competing objectives faced by governments, and operating in a political environment adds additional pressures. Delivery of certain services may be deemed necessary for wider social or political reasons, even if from a strict financial management perspective such decisions do not lead to an optimal use of resources.
   e) Finally there is a challenge that can arise from other parts of government or external providers of funding, who may also have both legitimate expectations as to how resources will be utilized and their own stakeholders to satisfy. Service delivery at a local level for example may be subject to different decision making and accountability mechanisms and external donors may require resources to be used in a certain manner that does not coincide with government priorities.

2)
   a) The Ministry of finance.(MoF)
      The MoF is responsible for economic and financial management. Its missions are to efficiently and effectively coordinate national planning and economic management, mobilize and manage public resources in a

transparent and accountable manner for sustainable national development. Its two main functions include:

i) Economic management and finance

This involves among other things the development of fiscal and monetary policies to guide domestic resource mobilization and government medium and long term expenditure. It's also responsible for managing the financial resources of the country and monitoring accounting processes.

ii) Budgets and economic affairs

It is responsible for budget implementation, managing cash flows of the republic and setting revenue targets for the ZRA.

Economic and debt management role include includes monitoring and evaluating the governments investments and management of domestic and external debt stock.

b) Ministries, Provinces and Spending Agencies (MPSAs)

The government of Zambia is centralized with central government comprising Ministries, Provincial administrations and Spending Agencies.

Services at district level are coordinated at a provincial level and effectively managed by units of the relevant central government ministry. E.g. Health service delivery is managed by District Health Offices. Markets and bus stations are managed by local authorities in the district.

c) Auditor general and the National Audit Office

The auditor general's duties and responsibilities provided for in article 250 of the constitution include audit of the accounts of state organs, provincial administration, local authorities and institutions financed from public funds. The other responsibilities includes ascertaining that money appropriated by parliament or raised by government and disbursed has been applied for the purpose for which it was appropriated.

d) The Legislature

Parliament of Zambia consists of the president and the national assembly. Parliament enacts legislation through bills passed by the national assembly and assented to by the president. Article 63(2) of the constitution states that the national assembly is responsible for overseeing the performance of executive functions by among other things:

i) Ensuring equity in the distribution of national resources amongst the people of Zambia
ii) Approving public debt before it is contracted
iii) Scrutinizing public expenditure.

SOLUTION THREE

a) It is important to ensure that Agolia Republic adopts the best possible value for money capital expenditure is undertaken. The approval processes for capital spending must be robust. The five step business case model has the following core key components:

i. The "Strategic case"-that the intervention is supported by a case for change which provides a rationale for why the project is required, what the outcomes will be , and how this fits with wider national, regional and/or local priorities.
ii. The "economic case"-that the intervention represents best public value. This demonstration requires the identification and appraisal of a range of alternatives with a view to producing a short list of options that are subjected to detailed cost-benefit analysis.
iii. The "commercial case"-required to demonstrate that the preferred option put forward in the economic case will result in a viable procurement process. This includes the need to specify service requirements and outputs, delivery models and risk allocation, and any anticipated charging regime.
iv. The "financial case"-demonstrates that the preferred option is affordable and can be funded. This requires the demonstration of capital and revenue expenditure for the proposal over the life of the project, including an assessment of the impact on the public sector entity's budgets.
v. The" management case" –this demonstrates that there is the capacity to deliver the preferred option successfully, in accordance with sound project management methodologies and with robust monitoring and evaluation, change management, risk identification and mitigation and other processes in place.

b).Foreign Grants:

Foreign project grants are provided to a particular nation on either a bilateral or multilateral basis to fund specific projects. As they are grants, they do not need to be repaid provided that the conditions attached to the grants are fulfilled and met.

Programme and Project Loans:

The funds obtained as programme and project loan have to be repaid and in most instances attract interest. These include financing from multinational organisations like the World Bank,. European Investment Banks and African Development Banks. They also include bilateral financing from banks such as the Export-Import Bank of China.

While it is useful to borrow from these institutions, particularly when domestic capital markets are constrained, the requirement to pay interest and repay capital restricts future spending flexibility. Additional issues arise if borrowing is made and repayments are required in form of a foreign currency such as the US$, as depreciation of the local currency can lead to significantly higher repayments.

SOLUTION FOUR

1a	You are a consultant of the Ministry of Finance , Advise the Minister of Finance on the best practice of financial planning process, managing commitments and how to improve use of the electronic Government system.
	Best Practice Financial Planning. • Government sets its target for economic performance using fiscal rules. These rules set targets for the level of government deficit (the difference between income and expenditure in a year) and debt (the stock of accumulated deficits) at the end of the five-year term. • Spending Reviews conducted by the Treasury then set spending limits for future years for departments and other parts of the public sector following a process of negotiation. The Spending Reviews aim to achieve the fiscal rules and also wider public sector strategic objectives. • Annual budgets for departments and other public bodies are based on the spending limits set in the Spending Review. These annual budgets are subject to scrutiny, debate and vote by the legislature.
	Good practice in commitment control systems requires that: • A commitment is incurred only when it is within budget appropriations and any expenditure ceilings and cash releases approved by the MoF; • No payments are made unless based on approved commitments; • Outstanding commitments and unpaid invoices and other bills are monitored on a regular basis; and • Payments arrears should not accumulate and if they do should be cleared as a matter of priority.
	How to improve use of the electronic Government system. • Government should develop strategic approaches for organizing and assembling resources such as computers and networks and intangible resources such as employee skills and knowledge and organizational processes • Government needs to have a significant population of citizens willing and able to adopt and use online services. • Developing the managerial and technical capability to implement electronic government applications to meet the citizens needs.

SOLUTION FIVE

	a) You have been appointed as consultant to the Treasury of Country X, Advise the authorities of Country X on the following: i. The purpose of code of ethics in the public sector. ii. Elements of the code of ethics that should apply to the Treasury.
	The purpose of code of ethics in the public sector • Ethics provide accountability between the public and the administration. Adhering to code of ethics means the public receives what it needs in a fair manner. • Code of ethics also gives guidelines for integrity to the administration in their operations. That integrity in turn helps foster the trust in the community. • Code of ethics creates a standard of professionalism that co-workers in the public sector can expect from each other- the public can also expect the same from their leaders. • Clarifies organization's mission, values and principles , linking them with standards of professional conduct. • Code of ethics in public administration also brings about timely and informative communication with the community. This kind of transparency builds trust and prevents or minimizes the potential issues that can arise when information is divulged from outside sources.
	Elements of the code of ethics that should apply to the Treasury • Integrity – Official in the Treasury should be straight forward in professional relationships. • Objectivity – Treasury officials should not allow bias, conflict of interest or undue influence of others to override professional or business judgements. • Professional competence and due care- Treasury officials have a duty to maintain professional knowledge and skill at the level required to ensure that advise is provided in accordance with current developments. A treasury official should act diligently and in accordance with applicable technical and professional standards. • Confidentiality – Treasury official should respect confidentiality of information. Confidential information acquired as a result of professional relationship should not be used for personal advantage. • Professional behaviour – Treasury officials should comply with relevant laws and regulations and avoid any action that discredits the profession.

END OF SOLUTIONS