Zambia Institute of Chartered Accountants

CA ZAMBIA PROGRAMME EXAMINATIONS

CA CERTIFICATE IN ACCOUNTANCY LEVEL

CA 1.1: FINANCIAL ACCOUNTING

MONDAY 13 JUNE 2022

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

<u>QUESTION ONE</u>

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

1.1 Which of the following lists the four (4) enhancing qualitative characteristics of Financial Statements as defined in the IASB's Conceptual Framework for Financial Reporting?

A. Relevance, faithful representation, materiality and going concern
B. Comparability, verifiability, timeliness and understandability
C. Relevance, comparability, verifiability and going concern
D. Timeliness, understandability, materiality and faithful representation

(2 marks)

1.2 A sole trader had opening capital of K10,000 and closing capital of K4,500. During the period, the owner introduced capital of K4,000 and withdrew K8,000 for her own use.

Her profit or loss during the period was:

A. K9,500 loss
B. K17,500 profit
C. K7,500 profit
D. K1,500 loss

(2 marks)

1.3 Ntumbachushi's cash book at 31 December 2021 shows an overdrawn bank balance of K565. On comparing this with your bank statement at the same date, you discover the following.

(i) A cheque for K57 drawn by you on 29 December 2021 has not yet been presented for payment.

(ii) A cheque for K92 from a customer, which was paid into the bank on 24 December 2021, has been dishonored on 31 December 2021.

The correct bank balance to be shown in Ntumbachushi's statement of financial position at 31 December 2021 is:

A. K714 overdrawn
B. K657 overdrawn
C. K473 overdrawn
D. K53 overdrawn

(2 marks)

1.4 You are given the following information:

Receivables at 1 January 2021	K10,000
Receivables at 31 December 2021	K9,000
Total receipts during 2021 (including cash sales of K5,000)	K85,000

Sales on credit during 2021 amount to:

A. K81,000
B. K86,000
C. K79,000
D. K84,000

(2 marks)

1.5 Where a transaction is credited to the correct ledger account, but debited incorrectly to the repairs and renewals account instead of to the plant and machinery account, the error is known as an error of:

A. Omission
B. Commission
C. Principle
D. Original entry

(2 marks)

1.6 Calculate the subscription income for the year ended 31 December, 2021 in respect of Monze Social Club using the following data: Arrears at 1 January, 2021 were K700; amounts prepaid in advance at 1 January, 2021 were K1,500; arrears at 31 December, 2021 were K1,200; amounts paid in advance 31 December, 2021 were K3,200 and cash received from members during 2021 was K14,200.

A. K13,000
B. K14,200
C. K11,400
D. K17,000

(2 marks)

1.7 The difference between a receipts and payments account and an income and expenditure account is:

A. A receipts and payments account is prepared on an accruals basis and an income and expenditure account on a cash basis.
B. A receipts and payments account is prepared on a cash basis and an income and expenditure account on an accruals basis.
C. A receipts and payments account is prepared for a not for profit organizations and an income and expenditure account for a business.
D. A receipts and payments account is prepared for a manufacturing business and an income and expenditure account for a non-manufacturing business.

(2 marks)

1.8 Kariba Breams Limited distributes fish to major retailers around the country. They are concerned about their cash flow situation and have asked the accountant to calculate the quick ratio to determine the company's ability to pay their fish suppliers.

The following figures were extracted from the Statement of Financial Position as at 30 November 2021:

Inventory	K25,000
Trade Receivables	K22,000
Cash in hand	K23,000
Cash at bank	K5,000 Credit
Trade creditors	K60,000

The quick ratio for Kariba Breams Limited is:

A. 1.08
B. 0.69
C. 1.25
D. 0.75

(2 marks)

1.9 Which of the following correctly defines a Liability, according to the IASB conceptual framework for financial reporting?

A. A liability is the residual interest in the assets of the entity after deducting all liabilities.
B. A liability is a present obligation of the entity arising from past events, the settlement of which is expected to result in an outflow from the entity of resources embodying economic benefits.
C. A liability is a resource controlled by an entity as a result of past events and from which future economic benefit are expected to flow to the entity.
D. A liability is a decrease in economic benefits during the accounting period in form of outflow or depletions of assets or in incurrences of liabilities that result in decrease in equity other than those relating to distributions to equity participants.

(2 marks)

1.10 After checking a business' cash book against the bank statement, which of the following items could require an entry in the cash book?

1. Standing order entered in bank statement only.
2. Credit transfer entered in bank statement only.
3. Deposits not credited.
4. Cheques not presented.
5. Error by bank.
6. Bank charges.
7. A cheque from a customer dishonored.

A. 1, 2, 6 and 7
B. 3, 4 and 7
C. 2, 3, 4 and 5
D. 3 and 4

(2 marks)

[Total: 20 Marks]

SECTION B

Question TWO (2) in this section is compulsory and must be attempted. Then attempt any other THREE (3) questions from the remaining four (4) questions.

<u>QUESTION TWO</u> – (COMPULSORY)

The following is the trial balance of Poland Ltd as at 31 December 2021.

		K	K
500,000 equity shares of K1 each			500,000
60,000; 7% redeemable preference shares of 50 Ngwee each			30,000
Equipment:	cost	350,000	
Equipment:	accumulated depreciation		75,000
Motor vehicle:	cost	160,000	
Motor vehicle:	accumulated depreciation		25,650
Premises		220,000	
Inventory as at 1 January 2021		51,980	
Bank		10,050	
Sales			508,420
Purchases		225,000	
Trade receivables		130,010	
Trade payables			10,200
Distribution costs		80,400	
Administrative expenses		45,240	
Irrecoverable debts		1,250	
Income Tax liability			14,360
Rent received			8,500
Income from investments			17,040
Interim dividend on equity shares		7,420	
Retained earnings			51,760
General reserve			40,420
		1,281,350	**1,281,350**

Additional information:

(i) Inventories as at 31 December 2021 are valued at K85,420.

(ii) Insurance include K840 for one and half-year. Insurance is included in administrative expenses.

(iii) Rent received includes an amount of K2,400 paid in advance as at 31 December 2021.

(iv) Distribution costs of K750 were prepaid and administrative expenses of K800 were owing as at 31 December 2021.

(v) The total trade receivables balance of K130,010 includes a balance of K1,010 which has been outstanding for ten months. Poland Ltd has decided to write off this balance.

(vi) The charge for income tax liability is included in the figure for administration expenses.

(vii) On 15 January 2021 Poland Ltd purchased premises at a cost of K105,000. This cost included K3,500 relating to legal costs. The legal costs of K3,500 had been included in administrative expenses and not in the cost of premises. Premises are not depreciated.

(viii) On 1 April 2021 Poland Ltd purchased equipment which cost K50,000. This transaction was entered in the accounts on 1 April 2021.

(ix) Provide depreciation on Equipment at 20% per annum on cost and Motor vehicles 20% per annum reducing balance basis

(x) Depreciation on equipment is apportioned 20% to administrative expenses and 80% to distribution costs. Depreciation is charged for each month of use. Depreciation of motor vehicles is treated as a distribution cost.

Required:

Prepare, for Poland Ltd, the following statements in accordance with International Financial Reporting Standards (IFRSs).

(a) Statement of Profit and Loss for the year ended 31 December 2021 (10marks)

(b) Statement of Financial Position as at 31 December 2021. (10marks)

[Total: 20 Marks]

QUESTION THREE

Mubita is a sole trader whose business is to supply gumboots on credit to mining companies in Zambia. Mubita has an accounting year that ends on 31 March each year. At each year end, Mubita has large receivable balances and so he has a policy of making an adjustment to its percentage of allowance on each year's closing trade receivables in accordance with the current 'economic climate'.

The following details are available for Mubita for three years ending 31 March 2020, 2021 and 2022.

	2020	**2021**	**2022**
	'K'	**'K'**	**'K'**
Receivables balance at 31 March after Writing off irrecoverable debts	252,000	462,000	516,000
Irrecoverable debts written off	7,440	15,648	31,860
% allowance for receivables	5%	4%	3%

Required:

(a) Briefly explain why irrecoverable debts arise in a business. (4marks)

(b) Prepare irrecoverable debts accounts for Mubita for each of the three years ended 31 March 2020, 2021 and 2022. (6marks)

(c) Prepare allowance for receivables accounts for each of the three years ended 31 March 2020, 2021 and 2022 and show the statement of financial position extracts as at 31 March 2020, 2021 and 2022. (6 marks)

(d) State reasons why an allowance for receivables account is created, in addition to writing off irrecoverable debts. (4marks)

[Total: 20Marks]

QUESTION FOUR

(a) You are the Accountant of Mukaka Co (Mukaka) limited. Mukaka Financial year end is 31 December each year. Mukaka purchased an equipment on 1 January 2021 and the costs schedule below has been given to you for you review. All costs were paid on 1 January 2021.

Costs schedule

(1) Equipment purchase price	K95,000
(2) Trade discount	K15,000
(3) Site preparation costs	K10,000
(4) Delivery costs	K7,000
(5) Insurance costs for the year ended 31 December 2021	K40,000
(6) Compulsory dismantling costs at end of 10 years asset's life	K3,000

The equipment is depreciated on a straight-line basis and revaluation model is used by Mukaka. Management revalued the equipment to K102,000 on 31 December 2021 so that its carrying amount is not materially different from market value.

Required:

(i) Calculate revenue expenditure and capital expenditure at 1 January 2021. (2marks)

(ii) Prepare journal entries for the acquisition of equipment as at 1 January 2021. (2 marks)

(iii) Calculate revaluation surplus/ (loss) at 31 December 2021. (4 marks)

(iv) Prepare journal entries for the revaluation of equipment as at 31 December 2021. (3 marks)

(b) Mayo and Tata have been trading as a partnership for many years, sharing profits and loss equally. You prepared their income statement for the year ended 31 December 2021 which reported a profit of K255,784 before taking into account the items below:

(1) Partners are charged interest on drawings at a rate of 8% per year. Drawings made at the beginning of the year were; Mayo K56,000 and Tata K48,000.
(2) Partners were paid annual salaries: Mayo K44, 000 and Tata K16,000.
(3) Each partner contributed K250,000 as capital at the beginning of the partnership.
(4) At 1 January 2021 partners current accounts balances were Mayo K34,840 (Debit) and Tata K19,094 (Credit)

Required:

(i) Prepare partnership appropriation account. (3marks)
(ii) Prepare partners (Mayo and Tata) current accounts. (6marks)

[Total20Marks]

QUESTION FIVE

(a) The Conceptual Framework's purpose is to assist the IASB in developing and revising IFRSs that are based on consistent concepts, to help preparers to develop consistent accounting policies for areas that are not covered by a standard or where there is choice of accounting policy, and to assist all parties to understand and interpret IFRS.

Qualitative characteristics are attributes that make financial information useful to users. Chapter 2 of the framework, distinguishes between fundamental qualitative characteristics (FQCs) and enhancing qualitative characteristics (EQCs). FQCs distinguish useful financial reporting information from information that is not useful or misleading and EQCs distinguish more useful financial reporting information from less useful information. Financial information is useful when it is relevant and represents faithfully what it purports to represent.

Required:
State and explain enhancing qualitative characteristics. (8marks)

(b) The trial balance of Bubu Ltd has an excess of debit balances over credit balances of K24,995. A suspense account has been opened to balance the trial balance. The following transactions were later discovered:

(i) Interest paid of K5,000 and Interest received of K8,000 have both been entered on the wrong side of the trial balance.
(ii) The receivable control account balance of K224,387 had been included in the trial balance as K242,387
(iii) Sales of K2,000 had been omitted from the sales records (i.e from the sales day book).
(iv) Purchase of raw material of K4,005 was entered in the purchase account as K4,500.
(iv) The balance on the current account of K12,500 for the Proprietor's wife had been omitted from the trial balance. This item when corrected will clear the suspense account.

Required:

State and explain three (3) errors that will not affect the balancing of a trial balance and open a suspense account and correct the above transactions in it. (6marks)

(c) EFG Ltd has prepared its October 2021 bank reconciliation for auditors to review. As at 31 October 2021 the ledger balance was K2,450 (Credit) but the bank statement showed that the company has funds amounting to K3,743.

The following are useful information:

(1) The company arranged for the bank to transfer the dollar equivalent of K500,000 to a supplier in the United States. Charges on the transfer of 0.5% have not been recorded in the books of EFG Ltd.

(2) The CEO of EFG Ltd arranged for an amount of K3,000 to be transferred from his personal bank account into the company's account. The bank made the transfer on 31 October 2021, but EFG Ltd has not made any entry in its books.

(3) A Cheque for Electricity Company amounting to K5,600 issued and recorded correctly in the bank statements appeared in EFG ledger as K6,500.

(4) The following cheques issued by EFG Ltd in October 2021 did not appear on the bank statement:

Cheque # 20450 - K2,000

Cheque # 20456 - K4,800

Cheque # 20500 - K5,250

(5) Income earned on investment with an advice by the bank of K2,457 was not recorded by the bank until 3 November 2021.

(6) Three cheques received and booked by EFG Ltd amounting to K4,800 were not credited by the bank.

Required:

(i) Prepare the bank account in EFG Ltd nominal ledger including any adjusting entries based on the information above.

(3marks)

(ii) Prepare a reconciliation of the bank statement balance to the corrected balance on the bank account in EFG Ltd nominal ledger.

(3marks)

[Total:20 Marks]

QUESTION SIX

The following summary information relates to two (2) businesses Bwana and Mkubwa. Both businesses traded in the same market sector for the year ended 31 December 2020.

Statement of Profit or Loss Accounts for the year ended 31 December 2020

	Bwana	**Mkubwa**
	K	**K**
Sales	800,000	800,000
Cost of sales	(400,000)	(360,000)
Gross Profit	400,000	440,000
Expenses	(250,000)	(220,000)
Net Profit	150,000	220,000

Statement of Financial Position as at 31 December 2020

	Bwana		**Mkubwa**	
	K	K	K	K
Fixed Assets		490,000		700,000
Current Assets				
Inventory	50,000		100,000	
Receivable	80,000		160,000	
Cash at bank	170,000		Nil	
	300,000		260,000	
Current Liabilities				
Payables	90,000		140,000	
Bank overdraft	Nil		120,000	
		210,000		Nil
		700,000		**700,000**
Financed by:				
Opening capital		575,000		555,000
Net profit		150,000		220,000
		725,000		775,000
Drawings		(25,000)		(75,000)
Closing capital		**700,000**		**700,000**

Additional information:

Inventory as at 1 January 2020: Bwana K30,000
Mkubwa K80,000

Required:

(a) Calculate the following ratios for Bwana and Mkubwa:

(i) Gross profit margin (1 mark)

(ii) Net profit margin (1 mark)

(iii) Return on capital employed (based on closing capital) (1 mark)

(iv) Current ratio (1 mark)

(v) Liquid (acid test) ratio (1 mark)

(vi) Inventory turnover (1 mark)

(b) Use the ratios calculated in (a) to assess:

(i) The liquidity of both businesses; (4 marks)
(ii) The profitability of both businesses. (4marks)

(c) Advise management of both Bwana and Mkubwa on the actions they should now take to improve liquidity and profitability.

(6marks)

[Total: 20 Marks]

END OF PAPER

CA1.1 SUGGESTED SOLUTIONS

SOLUTION ONE

1.1 B

1.2 D

1.3 B

1.4 C

1.5 C

1.6 A

1.7 B

1.8 B

1.9 B

SOLUTION TWO

a) Poland Ltd.

Statement of Profit and Loss for the year ended 31 December 2021

	K	K
Sales		508,420
Opening inventories	51,980	
Purchases	225,000	
	276,980	
Closing inventories	(85,420)	
Cost of sales		(191,560)
Gross profit		316,860
Other income (17,040 + 8,500 – 2,400)		23,140
Distribution costs (80,400 – 750 + 48,000 + 6,000 + 26,870)	160,520	
Administrative expenses (45,240 – (1/3x840) + 800 + 1,250 + 1,010+ 12,000 + 1,500 – 3,500-14,360)	43,660	
Preference dividends (7% x 30,000)	2,100	(206,280)
Profit before tax		133,720
Taxation		(14.360)
Profit after tax		119,360

b) Poland Ltd.

Statement of Financial Position at 31 December 2021

	K	K
Assets		
Non-current assets		
Premises (220,000 + 3,500)		223,500
Equipment (350,000 – 75,000 – 60,000 – 7,500)		207,500
Motor vehicles (160,000 – 25,650 – 26,870)		107,480
		538,480
Current assets		
Inventories	85,420	
Trade receivables (130,010 – 1,010)	129,000	
Prepayments ((1/3x840) + 750)	10,30	
Bank	10,050	
		225,500
Total assets		**763,980**
Equity and liabilities		
Equity		
Equity share capital	500,000	
General reserve	40,420	
Retained earnings (51,760 + 119,360 – 7,420)	163,700	
		704,120

Non-current liabilities		
Preference shares		30,000
Current liabilities		
Trade payables	10,200	
Accruals (800 + 2,100+14,360)	17,260	
Prepaid rent income	2,400	
		29,860
Total equity and liabilities		**763,980**

SOLUTION THREE

(a) Irrecoverable debts arise to a business that sells goods or services on credit for the following reasons:

- Bankruptcy or financial difficulties
- Trade disputes
- Fraud
- When the customer has a poor financial management

(b) 2020 irrecoverable debts account

Irrecoverable debt account(2020)

Receivables	7440	profit and loss	7,440
	7440		7,440

IRRECOVERABLE DEBT ACCOUNT(2021)			
Receivables	15648	profit and loss	15,648
	15648		15,648

IRRECOVERABLE DEBT ACCOUNT(2022)			
Receivables	31860	profit and loss	31,860
	31860		31,860

(c) Allowance for receivables

Statement of financial position extract

CURRENT ASSETS	2020	2021	2022
	K	K	K
Trade receivables	252,000	462,000	516,000
Less allowance for receivables	(12,600)	(18,480)	(15,480)
Net receivables	239,400	443,520	500,520

(d) Why allowance for receivables account is maintained in addition to writing off irrecoverable debts.

Irrecoverable debts are debts that are the entity is sure will not be recovered. The corresponding expense must be recognized in the profit and loss in which such a fact arises. This is application of the matching concept that seeks to match revenue of a period with the corresponding expenses of the same period.

On the other hand the entity applies the prudence concept (conservatism) which requires that when losses are foreseen, they must be recognized now as expenses even before they occur. Revenues predicted are foreseen or predicted, they are ignored until they actually occur. This concept makes management to do an age analysis of receivables and identify customer debts that may not be received. Then a provision for doubtful debts or allowance for receivables is created and maintained.

SOLUTION FOUR

(a)

(i) Revenue and Capital expenditures

Revenue expenditure = K40, 000 Insurance costs

Capital expenditure

Equipment purchase price	95, 000
Trade discount	(15, 000)
Site preparation costs	10, 000
Delivery costs	7, 000
Compulsory dismantling costs	3, 000
Total	K100, 000

(ii)

	DR	CR
Equipment	100,000	
Insurance	40,000	
Bank		140,000

(iii)

Dep: 100,000/10yrs = 10,000 N.B.V: 100,000 – 10,000 = 90,000

Revaluation surplus: 102,000 – 90,000 = 12, 000

(iV)

	DR	CR
Equipment	12,000	
Revaluation		12,000

(b) (i) Partner appropriation account as at 31 December 2021

Net profit	255, 784
Interest on drawings: Mayo 56,000 x 8%	4, 480
Interest on drawings: Taka 48,000 x 8%	3,840
Salary: Mayo	(44, 000)
Salary: Tata	(16, 000)
Profit to share	204, 104
Share of profit:	
Mayo	102, 052
Tata	102, 052
Profit to share	204, 104

(ii) Dr. Mayo Current Account Cr

Opening Balance	34, 840	Profit	102, 052
Drawings	56, 000	Salary	44, 000
Interest on drawings	4, 480		
Balance c/d	50, 735		
	146, 052		146, 052

(ii) Dr. Tata Current Account Cr

Drawings	48, 000	Opening balance	19, 094
Interest on drawings	3, 840	Profit	102, 052
Balance c/d	85, 306	Salary	16, 000
	137, 146		137, 146

SOLUTION FIVE

(a)

Comparability, verifiability, timeliness and understandability are qualitative characteristics that enhance/improve the usefulness of information that is relevant and faithfully represented.

Comparability; Information about a reporting entity is more useful if it can be compared with a similar information about other entities and with similar information about the same entity for another period or another date. Comparability enables users to identify and understand similarities in, and differences among, items. The consistency of treatment is therefore important across like items over time, within the entity and across all entities. Consistency is a means by which the objective of comparability may be met.

Comparability is not the same as uniformity. For information to be comparable, like things must look alike and different things must look different. The disclosure of accounting policies is particularly important here. Users must distinguish between different accounting policies to be able to make a valid comparison of similar items in the accounts of different entities.

Corresponding information for preceding periods should be shown to enable comparison over time. Where an accounting policy is changed in the current period, the comparative figures will normally need to be amended to show the figures as they would have been presented using the new accounting policy (requirement of IAS 8).

Verifiability; Verifiability helps to assure users that information represents faithfully the economic phenomena it purports to represent. Verifiability means that different knowledgeable and independent observers could reach consensus, although not necessarily complete agreement, that a particular depiction is a faithful representation. Verification can be direct or indirect. Direct verification means verifying an amount or other representation through direct observation, for example, by observing a physical inventory count or by counting cash. Indirect verification means checking the inputs to a model, formula or other technique and recalculating the outputs using the same methodology. An example is verifying the carrying amount of inventory by checking the inputs (quantities and costs) and recalculating the closing inventory using the same cost flow assumption (for example, using the first-in, first-out method).

Timeliness; Timeliness means that information is available to decision-makers in time to be capable of influencing their decisions. Generally, the older the information is the less useful it is. However, some information may continue to be timely long after the end of a reporting period because, for example, some users may need to identify and assess trends.

Understandability; Classifying, characterizing and presenting information clearly and concisely makes it understandable. While some phenomena are inherently complex and cannot be made easy to understand, to exclude such information would make financial reports incomplete and potentially misleading. Financial reports are prepared for users who have a reasonable knowledge of business and economic activities and who review and analyze the information with diligence. Users must be able to understand financial statements. They are assumed to have some business, economic and accounting knowledge and to be able to apply themselves to study the information properly.

Enhancing qualitative characteristics should be maximized to the extent necessary. However, enhancing qualitative characteristics (either individually or collectively) cannot render information useful if that information is irrelevant or not represented faithfully. A trade-off between qualitative characteristics is often necessary, the aim being to achieve an appropriate balance to meet the objective of financial statements.

(b)

- **Error of Omission**- Failing to record a transaction- Once a transaction is omitted it will not affect balancing of the trial balance
- **Compensating errors:** Errors which are equal and opposite to one another which in effect will not affect balancing of the trial balance
- **Error of Commission:** Entry recorded in the wrong accounts. E.g. Electricity expenses recorded as Telephone expenses. This will not affect the trial balance.
- **Error of Principle:** Entry in the wrong class of accounts. E.g. Revenue expenditure treated as capital expenditure.

Suspense Account

		DR K	CR K
Unidentified balance Per TB	12,500		
Interest paid		10,000	
Interest received			16,000
Receivables overstated		18,000	
Purchase over casted	495		
Current Account (Balancing figure)		<u>24,995</u>	
	<u>40, 99540,995</u>		

(c)

I) Bank Account in EFG Ltd nominal ledger **K**

	K
Balance b/f	(2,450)
Transfer charges (0.5%*500000)	(2,500)
Transfer from CEO	3,000
Electricity Overstated	<u>900</u>
Balance c/f	**<u>(1,050)</u>**

ii)Bank Reconciliation Statements **K**

Balance per ledger			(1,050)
Add unpresented cheques			
#450	2,000		
#456	4,800		
#500	<u>5,250</u>	<u>12,050</u>	
			11,000
Less:			
Uncredited cheques	4,800		
Interest not booked	<u>2,457</u>	<u>(7,257)</u>	
Balance per bank statement		**<u>3,743</u>**	

SOLUTION SIX

		Bwana	Mkubwa
(a)	(i) Gross profit margin:		
	Gross profit ÷ sales x 100	400,000 ÷ 800,000 x 100 **= 50%**	440,000 ÷ 800,000 x 100 **= 55%**
	(ii) Net profit margin:		
	Net profit ÷ sales x 100	150,000 ÷ 800,000 x 100 **= 18.75%**	220,000 ÷ 800,000 x 100 **= 27.50%**
	(iii) ROCE:		
	Profit ÷ Capital employed x 100	150,000 ÷ 700,000 x 100 **= 21.43%**	220,000 ÷ 700,000 x 100 **= 31.43%**
	(iv)Current ratio:		
	Current assets ÷ current liabilities	300,000 ÷ 90,000	260,000 ÷ 260,000
	(v) Liquidity:		
	Current assets – Inventory ÷ CL	250,000 ÷ 90,000 **= 2.8:1**	160,000 ÷ 260,000 **= 0.62:1**
	(vi)Inventory turnover:		
	Cost of sales ÷ Avge inventory	400,000 ÷ 40,000 **= 10 times**	360,000 ÷ 90,000 **= 4 times**

(b) i) Liquidity:

- The stock turnover of Bwana is low, and stock levels are twice those of Mkubwa.
- The current ratio of Mkubwa is high with probable idle funds; Bwana's ratio is low with poor credit control.
- The liquid ratio of Mkubwa is high with substantial cash available; Bwana's ratio is again low with an overdraft and substantial debts uncollected.

ii) Profitability:

- The gross profit margin of Bwana is greater than Mkubwa, possibly due to a higher markup.
- The net profit margin of Bwana is greater than Mkubwa as expenses have been maintained at a lower level for the same turnover for both businesses.
- Return on capital employed is acceptable for both businesses but particularly high for Bwana.

(c) Advice to management of Mkubwa:

- Mkubwa should seek to reduce its expenses.
- Mkubwa should consider investing some of its cash which is at present 'idle'.
- Mkubwa's stock level has increased from K30, 000 to K50, 000 in one year and should therefore be reviewed.

Advice to management of Bwana:

- Bwana should seek to reduce its inventory level and improve its stock turnover.
- Bwana should institute better credit control to reduce its debtors to fund the
- Limination of bank overdraft.
- Bwana should seek to improve its current ratio and liquid ratio.

CA ZAMBIA PROGRAMME EXAMINATIONS

CA CERTIFICATE IN ACCOUNTANCY

CA 1.2 BUSINESS STATISTICS

WEDNESDAY 15 JUNE 2022

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

<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 The mean of height of students in a class is 160 cm with a standard deviation of 12.5. If a student of height 160 cm joins the class, what would be the immediate effects on the mean and the standard deviation of the height of the class of students?

	Standard deviation	**Mean**
A.	Decreased	Decreased
B.	Unchanged	Increased
C.	Increased	Unchanged
D.	Decreased	unchanged

(2 marks)

1.2 Observational studies are especially useful for:

A. population inference
B. neither type of inference
C. both types of inference
D. causal inference

(2 marks)

1.3 Statistics descriptive data summaries, the number that represents the difference between the largest and smallest measurement is called;

A. range
B. variance
C. median
D. Inter-quartile deviation

(2 marks)

1.4 Let X be the number of contacts the shop owner visits on a particular day. The following table gives the probability distribution of X:

X	1	2	3	4
P(X=x)	0.20	0.35	0.30	0.15

The average number of times the shop owner visits on a particular day is?

A. 10
B. 2.50
C. 10.6
D. 2.40

(2 marks)

1.5 If the mean of five numbers 3, 6, 7, x 14 is 8. Calculate the standard deviation.

A. 4.18
B. 4.74
C. 10.0
D. 5.24

(2 marks)

1.6 A survey was conducted to find out the relationship between changes in price of fuel (x) And cost of the staple food mealie-meal (Y) in the country. The results for 8 observations were summarized as shown below:

$$\sum x = 900 \quad \sum xy = 35200 \quad \sum y^2 = 1487800 \quad \sum x^2 = 99500 \quad \sum y = 3900$$

What is the Pearson correlation between x and y?

A. -0.7515
B. -0.2485
C. 0.2485
D. 0.7515

(2 marks)

1.7 The method of moving average is used to find the:

A. Season variations
B. Secular trend
C. Cyclic variation
D. Irregular variation

(2 marks)

1.8 The following are the times (in hours) of ten students studying for an exam in a particular week:

49 53 37 56 35 32 59 27 31 44.

Find the interquartile range for the data.

A. 21
B. 22
C. 23
D. 2

(2 marks)

1.9 The addition theorem states that if two (2) events A and B are mutually exclusive the probability of A and B this is written as:

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

(2 marks)

1.10 Given that the Pearson's coefficient of skewness is 0.42, with a mean and standard deviation of 30.89 and 2.219 respectively, find the median.

A. 29.58
B. 30.54
C. 30.58
D. 30.45

(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 (4) questions.

<u>QUESTION TWO</u> – (COMPULSORY)

(a) Define the following stating two examples of each;

(i) Quantitative data (3 marks)

(ii) Qualitative Data (3 marks)

(b) Each of the investment sale of farm produce maize, egg plants, fresh vegetables and beans have a probability of 0.6 of yielding a profit. If the business person decides to sale all the four products,

(i) What is the probability that all four yield a profit? (3 marks)

(ii) What is the probability that the business person's four (4) investments are not profitable? (2 marks)

(c) The results are from an experiment conducted from a certain industry on the relationship mass in kilograms of product (x) and its subsequent product profitability (y) in kwacha. A linear regression equation $\hat{y} = -44.61 + 4.07x$ was generated with the summary data shown below.

$\sum x = 155$	$\sum y = 274$	$\sum x^2 = 3265$	$\sum xy = 6375$	$\sum y^2 = 14070$

(i) Estimate the estimated profit of the product if its weight is 100. (3 marks)
(ii) Calculate the correlation coefficient of this data (4 marks)
(iii) Interpret the correlation coefficient (2 marks)

[Total: 20 Marks]

QUESTION THREE

(a) A department store manager is interested in the number of complaints about the quality of electrical products sold by the store. Records over ten months' period yield the following data:

Month	1	2	3	4	5	6	7	8	9	10
Complaints	19	13	11	17	9	4	14	12	4	11

Required:

(i) Find the mean number of monthly complaints for the population. (4 marks)

(ii) Find the median number of monthly complaints in this population. (3 marks)

(b) Below are given the figures of production of a sugar factory.

Year	Production (thousand tons)
2001	93
2002	84
2003	95
2004	93
2005	93
2006	111

Required:

(i) Apply the method of least squares to determine the trend values. (9 marks)

(ii) Find out the short term fluctuations. (4 marks)

[Total 20 Marks]

QUESTION FOUR

(a) A problem in business statistics is given to three students X, Y and Z. Their chances of **not** solving the problem are $\frac{1}{3}$, $\frac{1}{4}$ and $\frac{1}{5}$ respectively.

What is the probability that the problem will be solved? (5 marks)

(b) Suppose that the student's file contains information on the individual's **sex**, **major**, **age**, **religion**, **grade point average**, and **monthly income** of parents.

(i) State whether each variable is qualitative or quantitative. (6 marks)

(ii) Describe how to code qualitative variable numerically. (3 marks)

(iii) State which variables are discrete and which are continuous. (6 marks)

[Total: 20 Marks]

QUESTION FIVE

(a) If the standard deviation of the spot speed of vehicles in a highway is 9.9 km/h and the mean speed of the vehicles is 34 km/h. it has been observed the data is normally distributed.

Required:

(i) Calculate the coefficient of variation in speed. (3 marks)

(ii) Find the probability that the spot speed exceed 30 km/h. (4 marks)

(iii) Calculate the probability that the spot speed is between 25 km/h and 33 km/h. (4 marks)

(b) The probability distribution for days taken in a construction project is shown in the table below:

Days (X)	1	2	3	4
P(X)	0.23	0.14	0.50	0.13

Required:

(i) What is the probability that the construction takes less than three (3) days? (2 marks)

(ii) Find the expected value of the time taken for completion of the construction project. (3 marks)

(iii) Calculate the standard deviation of days taken for the completion of the construction project. (4 marks)

[Total 20 marks]

QUESTION SIX

(a) State and define the four (4) components of time series data. (6 marks)

(b) Thirty (30) adults were asked which of the following conveniences they would find most difficult to do without: television (T), refrigerator (R), air conditioning (A), public transportation (P), or microwave (M). Their responses are listed below.

R	A	R	P	P	T	R	M	P	A
A	R	R	T	P	P	T	R	A	A
R	P	A	T	R	P	R	A	P	R

Required:

(i) Prepare a frequency distribution table. (3 marks)

(ii) Calculate the relative frequencies and percentages for all categories. (5 marks)

(iii) What percentage of these adults named refrigerator or air conditioning as the convenience that they would find most difficult to do without? (2 marks)

(iv) Draw a bar chart for the relative frequency distribution. (4 marks)

[Total: 20 Marks]

END OF PAPER

CA 1.2 SUGGESTED SOLUTIONS

1.1 D

1.2 B

1.3 A

1.4 D

1.5 A

1.6 B

1.7 B

1.8 C

1.9 D

1.10 C

SOLUTION TWO

(a) (i) qualitative data is the descriptive and conceptual findings collected through questionnaires, interview or observation.

Examples are: Letter of grades in an exam, color of cars in a parking lot
(any example so long a particular number is not assigned to the description)

(ii) quantitative data is defined as the value of data in the form of counts or numbers where each data set has a unique numerical value.
Examples are: revenue in kwacha, weight, height, grades in percentage for a class etc.

(b) (i) probability of profit in maize(M), eggplant E, vegetable (V) and beans (B) is

$$= P(M)P(E)P(V)P(B)$$
$$= 0.6 \times 0.6 \times 0.6 \times 0.6$$
$$= 0.1296$$

(ii) probability of loss in all products is

$$= (1-0.6)(1-0.6)(1-0.6)(1-0.6)$$
$$= 0.4 \times 0.4 \times 0.4 \times 0.4$$
$$= 0.0256$$

(c) (i) $\hat{y} = -44.61 + 4.07x$

$y = -44.61 + 4.07(100)$

$y = -44.61 + 407$

$y = 362.39$

(ii)

$$r = \frac{\sum xy - \frac{\sum x \sum y}{n}}{\sqrt{\left(\sum x^2 - \frac{(\sum x)^2}{n}\right)\left(\sum y^2 - \frac{(\sum y)^2}{n}\right)}}$$

$$\frac{6375 - \frac{155 \times 274}{8}}{\sqrt{\left(3265 - \frac{155^2}{8}\right)\left(14070 - \frac{(274)^2}{8}\right)}}$$

$$= \frac{1066.25}{\sqrt{(261.875)(4685.5)}} = \frac{1066.25}{\sqrt{1227015.3125}} \qquad = 0.963$$

(iii) there is a very strong positive correlation between the weight of the product and its profitability

SOLUTION THREE

(a)

Month (x)	Complaints (f)	xf	F
1	19	19	19
2	13	26	32
3	11	33	43
4	17	68	40
5	9	45	69
6	4	24	73
7	14	98	67
8	12	96	99
9	4	36	83
10	14	140	117
	$\sum f = 117$	$\sum xf = 585$	

i) $\mu = \frac{\sum xf}{\sum f} = \frac{585}{117} = 5$

ii) Position of median $= 0.5(117) = 58.5th\, position$

The median number of monthly complaints is 17

(b) Let time be x and y production then

Year (x)	Production ('000')(y)	x^2	y^2	xy
1	93	1	8649	93
2	84	4	7056	168
3	95	9	9025	285
4	93	16	8649	372
5	93	25	8549	465
6	111	36	12321	666
$\sum x = 21$	$\sum y = 569$	$\sum x^2 = 91$	$\sum y^2 = 45\ 700$	$\sum xy = 2049$

$$b = \frac{n\sum xy - \sum x \sum y}{n\sum x^2 - (\sum x)^2} = \frac{6(2049) - (21)(569)}{6(91) - (21)^2} = 3.29$$

$$a = \bar{y} - b\bar{x} = 94.83 - 11.5 = 83.33$$

$$\hat{y} = 83.33 + 3.29x$$

Short term fluctuations

Year	y	Trend	Fluctuations $y - \hat{y}$
2001	93	86.6	+6.4
2002	84	89.9	-5.9
2003	95	93.2	+1.8
2004	93	96.5	-3.5
2005	93	99.8	-6.5
2006	111	103.0	+8

SOLUTION FOUR

(a) Let $(X) = \frac{1}{3}$, $P(Y) = \frac{1}{4}$ and $P(Z) = \frac{1}{5}$ i.e., the probability that the problem being solved by the individual student respectively.

The $P(\bar{X}) = 1 - P(X) = \frac{2}{3}$ the probability that the problem cannot be solve by student X.

$P(\bar{Y}) = 1 - \frac{1}{4} = \frac{3}{4}$ and $P(\bar{Z}) = 1 - \frac{1}{5} = \frac{4}{5}$. Therefore, the required probability that the problem is solved is equal to

$1 - P(\bar{X})P(\bar{Y})P(\bar{Z}) = 1 - \left(\frac{2}{3}\right)\left(\frac{3}{4}\right)\left(\frac{4}{5}\right) = \frac{3}{5}$

(b)

(i)

Quantitative variables	
1	Age
2	Grade point average
3	Monthly income of parents

Qualitative variables	
1	Sex
2	Major
3	Religion

(ii) Coding

Qualitative variables	
Sex	0 or 1
major	0, 1, 2, 3, . . .
Religion	0, 1, 2, …

(iii)

Continuous variables	
1	Age
2	Grade point average
3	Monthly income of parents

Discrete variables	
1	Sex
2	Major
3	Religion

SOLUTION FIVE

(a) i) The coefficient of variation is $CV = \frac{\sigma}{\mu} \times 100 = \frac{9.9}{34} \times 100 = 29.12\%$

ii) $\boldsymbol{P(X > 30) = P(z > \frac{X-34}{9.9})}$

$$\boldsymbol{= P(Z > \frac{30-34}{9.9})}$$

$$\boldsymbol{= P(Z > \frac{4}{9.9})}$$

$$\boldsymbol{P(Z > 0.44) = 0.3300}$$

iii) $\boldsymbol{P(25 < X < 33) = P(\frac{X-34}{9.9} < Z < \frac{X-34}{9.9})}$

$$\boldsymbol{= P(\frac{25-34}{9.9} < Z < \frac{33-34}{9.9})}$$

$$\boldsymbol{= P(-0.91 < Z < 0.10)}$$

$$\boldsymbol{1 - P(Z < -0.91) - P(Z > 0.1) = 1 - 0.1814 - 0.4602}$$

$$\boldsymbol{= 0.3584}$$

(b)

i) $\boldsymbol{P(X < 3) = P(1) + P(2) = 0.23 + 0.14}$

$$\boldsymbol{= 0.37}$$

ii) $\boldsymbol{expected\ value = \sum xp(x) = 1(0.23) + 2(0.14) + 3(0.5) + 4(0.13)}$

$$\boldsymbol{= 0.23 + 0.28 + 1.5 + 0.52 = 2.53\ days}$$

iii) **the standard deviation**

$$\boldsymbol{sd = \sqrt{E(X^2) - \left(E(X)\right)^2}}$$

$$\boldsymbol{= \left[1^2(0.23) + 2^2(0.14) + 3^2(0.5) + 4^2(0.13)\right] - [\,2.53^2]}$$

$$\boldsymbol{= [0.23 + 0.56 + 4.5 + 2.08] - [6.4009]}$$

$$\boldsymbol{= [7.37 - 6.4009 = 0.9691}$$

SOLUTION SIX

(a)

(i) Trend component-usually characterized by long-run increase or decrease in time

(ii) seasonal component-this is characterized by regular and predictable changes the time series data experiences which recur every year

(iii) Cyclic: These are long term oscillations occurring in a time series.

(iv) Irregular or random noise component-might contain irregular cyclical components of unknown frequency fluctuating around zero

(b)

(i)

Conveniences	**Frequency**	**R. Frequencies**	**Percentages**
Television (T)	4	$\frac{4}{30}$	13.33
Refrigerator (R)	10	$\frac{10}{30}$	33.33
Air conditioning (A)	7	$\frac{7}{30}$	23.33
Public transportation (P)	8	$\frac{8}{30}$	26.67
Microwave (M)	1	$\frac{1}{30}$	3.33
Totals	30	1	100

(ii)

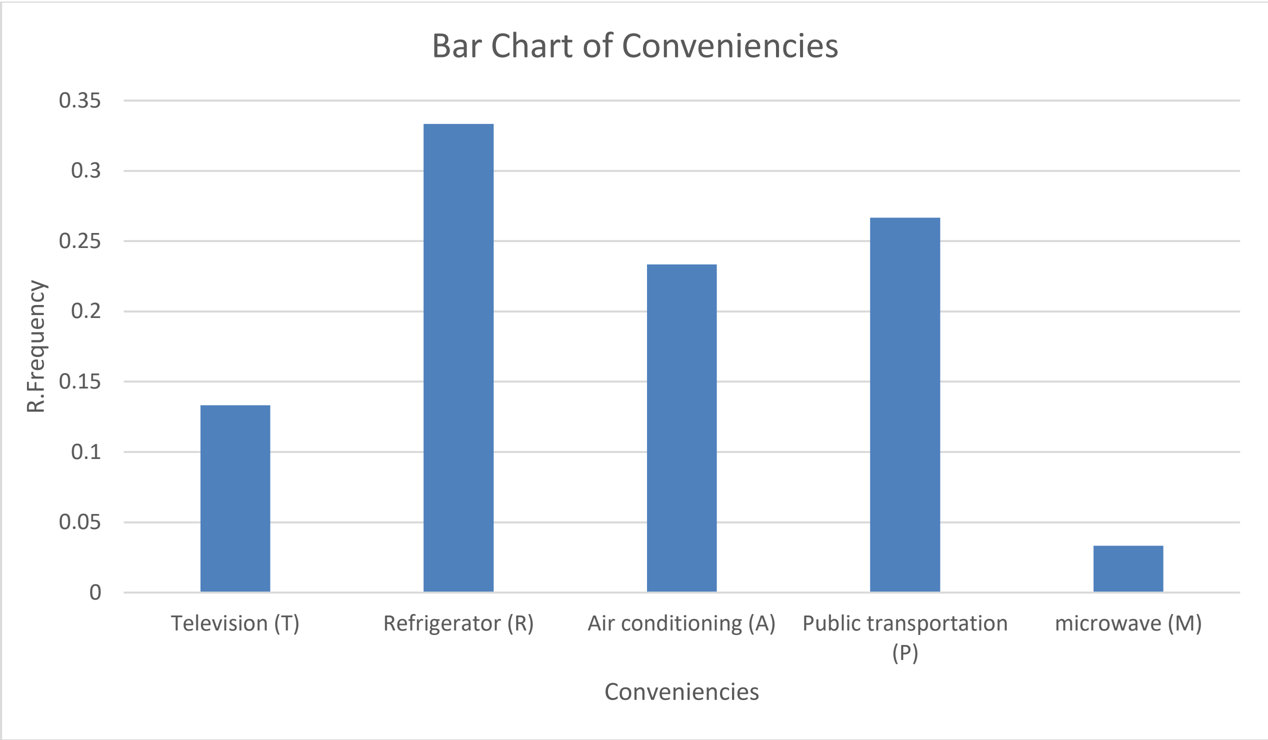
Conveniencies	**R. Frequencies**	**Percentages**
Television (T):	$Relative\ Frequency = \frac{4}{30}$	$\frac{4}{30} \times 100 = 13.33$
Refrigerator (R):	$Relative\ Frequency = \frac{10}{30}$	$\frac{4}{30} \times 100 = 13.33$
Air conditioning (A):	$Relative\ Frequency = \frac{7}{30}$	$\frac{4}{30} \times 100 = 13.33$
Public transportation (P):	$Relative\ Frequency = \frac{8}{30}$	$\frac{4}{30} \times 100 = 13.33$
Microwave (M):	$Relative\ Frequency = \frac{1}{30}$	$\frac{4}{30} \times 100 = 13.33$

(iii) $P(R\ or\ A) = P(R) + P(A) = \frac{10}{30} + \frac{7}{30} = \frac{17}{30}$

Therefore the percentage is;

$$\frac{17}{30} \times 100 = 56.7\%$$

(iv)



END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

CA CERTIFICATE IN ACCOUNTANCY

CA1.3: BUSINESS ECONOMICS

TUESDAY 14 JUNE 2022

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 How do perfectly competitive firms compete?
A. They engage in none price competition
B. They engage is price competition
C. There is no competition between firms
D. Through heavy advertising

(2 marks)

1.2 If the price of a movie ticket is increased by 3% and the quantity demanded decreased by 1%, then the demand for movie tickets can best be described as…………….
A. Elastic
B. Inelastic
C. Unitary
D. Perfect

(2 marks)

1.3 Which of the following statements is correct for a planned economy?
A. The price mechanism determines the allocation of resources
B. Individual firms make decisions for themselves about what to produce and how to produce it
C. All the prices are determined by the interaction of demand and supply
D. There is likely to be a large public sector

(2 marks)

1.4 What is the main difference between variable costs and fixed costs?
A. Fixed costs are constant with output while variable cost are not
B. Variable costs are constant with output while fixed costs are not
C. Variable costs rise with output and so do fixed costs
D. Fixed costs are more expensive than variable costs

(2 marks)

1.5 The credit multiplier is ……………………………….
A. An injection of government spending which increases national income
B. The process where banks borrow from other banks
C. Cash leaks out of the banking system into less formal accumulations
D. Government control the creation of credit

(2 marks)

1.6 Implicit costs are the opportunity costs of using the resources of …………..

A. Outsiders
B. Owners
C. Banks
D. Retained earnings

(2 marks)

1.7 In the circular Flow of income model, which one of the following statements is correct about the role of firms?

A. The buy goods and factors of production
B. They sell goods and factors of production
C. They sell goods and buy factors of production
D. They sell factors of production and buy goods

(2 marks)

1.8 Which of the following is considered open market activities?

A. Raising taxes
B. Increased spending
C. Increasing reserve requirement
D. Selling bonds

(2 marks)

1.9 The infant industry argument for protectionism is based on which of the following views?

A. Foreign buyers will absorb all the output of domestic producers in the new industry
B. The growth of the industry that is new to a nation will be too rapid unless trade restrictions are imposed
C. Firms in a newly developed domestic industry will have difficulty growing if they face strong competition from established foreign firms
D. It is based on none of the above

(2 marks)

1.10 An increase in consumers' incomes increases the demand for oranges. As a result of the adjustment to a new equilibrium, there is a (an)……………………………….

A. Leftward shift of the supply curve
B. Upward movement along the supply curve
C. Rightward shift of the supply curve
D. Downward movement along a supply curve

(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) questions.

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

Meat production industry in Country X has experienced significant changes since the 1990s when Pork was the most frequently purchased meat. The consumption of all types of meat has increased since the 1990s; however, Fish has now replaced Pork as the most frequently purchased meat.

The Fish-meat production industry in Country X is now dominated by just two large producers who supply 70% of the fish. A few medium-sized companies supply another 22%, and the remainder is supplied by small producers. Producers claim that the market structure of the Fish-meat production industry meets the needs of both consumers and producers.

Required:

(a) Identify the likely market structure of the fish-pork production industry in Country X. Justify your answer. (4 marks)

(b) Use the knowledge of elasticity to determine the nature of the goods that pork and fish are? (2 marks)

(c) Outline any two (2) assumptions under which the Production Possibility Frontier is constructed? (2 marks)

(d) Suppose that a Fish feed manufacturing company, which sells its feed at K120 per bag, has the following cost structure.

Output	Total Cost
0	80
1	100
2	140
3	210
4	280
5	400
6	600
7	840

(i) Compute Average cost, Marginal cost, Total revenue and Marginal revenue. (8 marks)

(ii) Explain the implications of freedom of entry and exit of firms under perfect competition. (4 marks)

[Total: 20 Marks]

QUESTION THREE

A perfectly competitive market is characterized by many firms producing an identical product and so each firm is a price-taker, firms have freedom of entry and exit, and buyers are perfectly informed about the product sold in the market. All those assumptions rarely hold together in a given market, and therefore we rarely see a perfectly competitive market in reality.

Required:

Suppose that in a large city there are many taxi firms which can provide identical services.

(a) Explain and show on a diagram the possible changes in a taxi firm's economic profit, price and output given the following events. Use diagrams which are initially in long run equilibrium and take each event separately for both the industry and the firm.

(i) The city council decides to ease traffic congestion by banning cars from inner city areas but not taxis. (7 marks)

(ii) The price of petrol and diesel fuel increases. (7 marks)

(b) Outline two (2) factors which explain the shape of a firm's average cost curve in the short and the long run. (6 marks)

[Total: 20 Marks]

QUESTION FOUR

The Chinese Government is becoming increasingly concerned about higher rates of inflation. Rising oil and petrol prices have increased costs to industry and firms are being forced to raise their prices to cover these higher costs. In addition, rising demand for food from a wealthier population, together with supply problems resulting in excess demand, have led to the price of pork rising by 63% and fresh vegetable prices by 46%. The People's Bank of China has just increased interest rates by a further 0.27%. This is the third increase in less than a year. A spokesman from Goldman Sachs, the investment bank, reported that the increase shows that the central bank is now much more prepared to use interest rates to manage the economy and tighten monetary policy at the first signs of the booming economy overheating. China's GDP increased by 10.7% in 2007, and the Prime Minister has said that this rate of growth is becoming 'unsustainable'. Chinese leaders face conflicting pressures in balancing the top priority of maintaining high-speed economic growth to create millions of new jobs each year. **(David Berg et al., 2011)**

Required:

(a) State any four (4) reasons why high inflation is not good. (4 marks)

(b) Are these causes of inflation described in the scenario above cost-push or demand-pull pressures? Give reasons to explain your answer. (3 marks)

(c) If the Chinese government increased interest rates again, explain what impact this could have on:

- (i) a consumer spending on luxury goods (3 marks)
- (ii) spending on new expansion projects by Chinese businesses (3 marks)
- (iii) the exchange rate of China's currency. (3 marks)

(d) Explain how a tight monetary policy would control inflation. (4 marks)

[Total: 20 Marks]

QUESTION FIVE

Suppose that a country can produce two (2) goods: X and Y. To produce one (1) unit of X it requires one (1) worker. To produce one unit of Y it requires two workers. The allocation of resources towards the production of the two goods can be depicted on a production possibility frontier (PPF). The PPF shows the different combinations of goods and services that can be produced with a given amount of resources in their most efficient way. Since resources are scarce, allocating and re-allocating resources to produce one good to another, involves an opportunity cost.

Required:

(a) Define what 'opportunity cost' is? (2 marks)

(b) Construct a hypothetical production possibility frontier using the information in the scenario. (4 marks)

(c) Explain any three (3) reasons why the production possibility frontier will shift outwards. (6 marks)

(d) Outline any four (4) advantages of the market economy. (8 marks)

[Total: 20 Marks]

QUESTION SIX

The Keynesian theory of instability lends directly to a model for government policy. From a Keynesian perspective, an insufficient aggregate demand causes unemployment and an excess aggregate demand causes inflation. Since the market itself will not correct these imbalances between aggregate demand and the productive capacity of the economy the government must. Specifically, government must increase aggregate demand when it is low and decrease aggregate demand when it is excessive. By balancing aggregate demand and full-employment GNP in this way, government can achieve macroeconomic goals of full employment, price stability and sustained economic growth. The use of fiscal policy to alter the level of expenditure is called stabilisation of the budget. From the Keynesian perspective, the pursuit of stable economic growth implies that expenditures and receipts will not always be equal.

Required:

(a) In detail distinguish between fiscal discipline and monetary policies. (4 marks)

(b) The new Minister of Finance on his appointment emphasized that for Zambia to revert to higher growth figures of above 7.5 percent with adherence to fiscal consolidation and stimulation of productivity out of recession. Discuss any two (2) macroeconomic policy mixes that can be pursued to realise the 7.5 per cent economic growth? (8 marks)

(c) Zambia has been facing a budget deficits in the past decade despite numerous budget planning made.

(i) What is a budget deficit? (2 marks)

(ii) Explain intuitively how government finances the budget deficit through the help of Bank of Zambia by auctioning government securities (6 marks)

[Total: 20 Marks]

END OF PAPER

CA 1.3 SUGGESTED SOLUTIONS

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

SOLUTION TWO

(a)

- The market structure is **oligopoly.** An oligopoly is an industry where there is a **high level of market concentration**.
- A rule of thumb is that an oligopoly exists when the **top five firms** in the market account for more than **60%** of total market sales.

(b) Cross-price elasticity

1. If the cross price elasticity is positive the pork and fish would be classified as substitutes
2. If the cross price elasticity is negative the pork and would be classified as complements

(c)

1. Two –goods model
2. Fixed technology
3. Fixed amount of resources

(d)

i) Compute AC, MC, TR and MR

Output	Total Cost	Average cost	Marginal cost	Total revenue	Marginal revenue
0	80	**-**	**-**	**0**	**-**
1	100	**100**	**20**	**120**	**120**
2	140	**70**	**40**	**240**	**120**
3	210	**70**	**70**	**360**	**120**
4	280	**70**	**70**	**480**	**120**
5	400	**80**	**120**	**600**	**120**
6	600	**100**	**200**	**720**	**120**
7	840	**120**	**240**	**840**	**120**

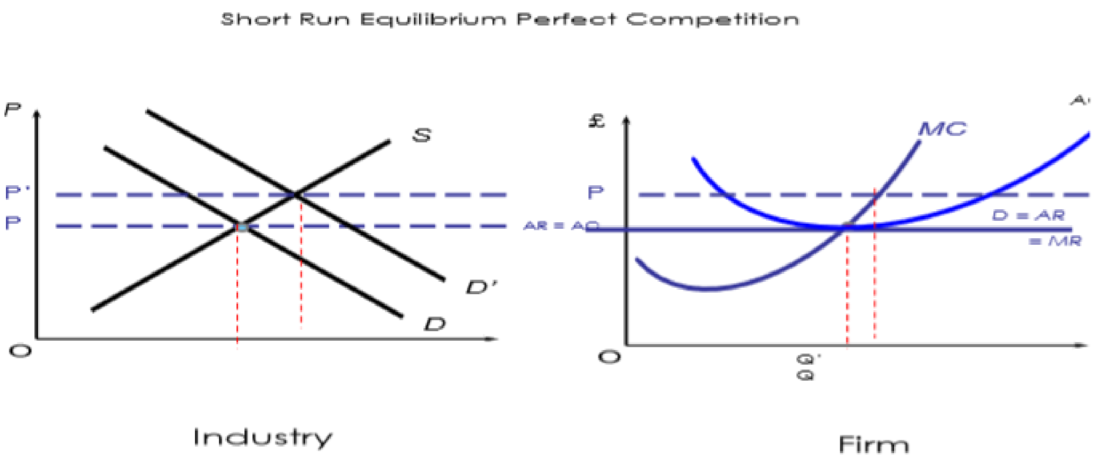
ii) Implications are:

- Freedom of entry and exit of firms under perfect competition means that there are no costs or barriers a firm faces to enter or exit the market as the cost of exit and entry is considered zero. The implication of this is that in the long run each firm earns only normal profit.
- Suppose in the short run, existing firms are earning super normal profits, new firms enter the industry as they are attracted by profits. This raises the market supply and reduces the market price. As firms accept the lower market price, profits reduce. This process continues till profits reduce to normal levels in the long run.
- The opposite occurs if firms are earning losses as firms leave the industry. This reduces market supply and raises market price till losses get wiped out and firms earn only normal profit in the long run

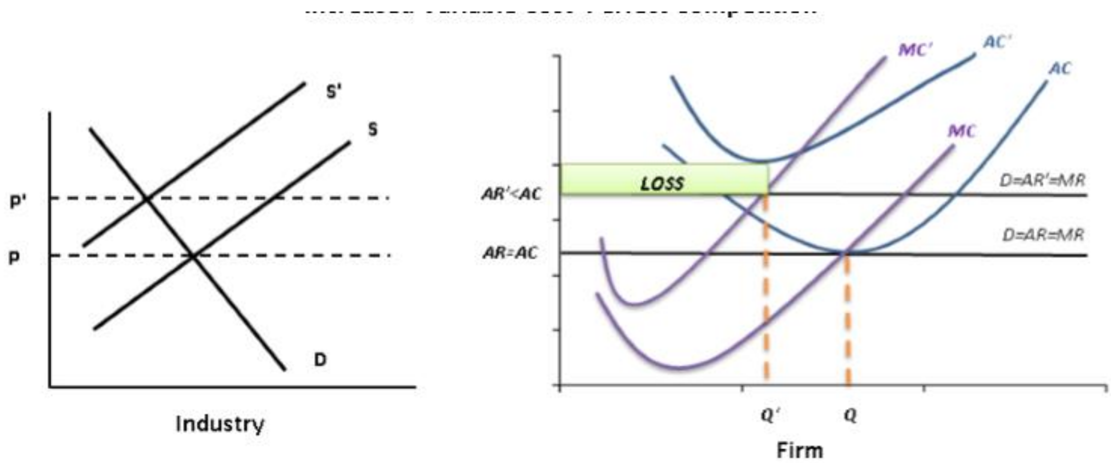
SOLUTION THREE

(a)

(i) In the short run there would be a greater demand for taxis, demand shifts right for the industry and prices and quantity traded increase. For the firm, a new SR equilibrium experiencing abnormal profit would result. In the long run due to the characteristics of the market, new firms enter and normal profits are restored.



(ii) Starting from an initial equilibrium – The higher AVC would shift the supply curve upwards and to the left. Therefore ATC and MC would all shift up resulting in higher prices and lower quantity traded. Losses would lead to firms exiting the market in the short run.



(b)

In the short run the law of diminishing returns is the relevant factor in determining short run average costs. As increasing amounts of a variable factor of production are added to a given amount of a fixed factor, marginal and average product initially tend to rise implying a fall in short run average costs. However, after a certain point marginal and eventually average product begin to decline. As average product declines then short run average costs rise.

Long run average costs are affected by economies and diseconomies of scale. In the long run all factors of production are variable. If increasing all inputs increases output more than proportionately then long run average costs decline. Examples of economies of scale include: discounts for bulk purchasing, lower borrowing costs etc. Eventually diseconomies of scale may set in e.g. bureaucracy, inflexibility etc. When diseconomies of scale outweigh economies of scale then long run average cost will begin to rise.

SOLUTION FOUR

(a) **The negative effects of inflation are as follows:**

- Inflation redistributes income: Retired people who are on fixed incomes suffer a lot from inflation. Some people earn K20, 000 per month as pension. At the time of retirement, they were able to purchase a lot of goods and services from that amount, but due to inflation their purchasing power and standards of living falls.
- Inflation distorts consumer behaviour. Consumers purchase a lot of goods because of expected future price increases. They hoard goods hoping to 'beat' inflation and in the process create shortages.
- Inflation undermines business confidence. Businesses are unable to make concrete future plans because of uncertainty in price fluctuation in addition, they have to change the price tags on products on a regular basis and this can be so costly and time consuming.
- Inflation and interest rate and savings. The real rate of interest, which is the money rate of interest after making an allowance for inflation, is reduced. Lenders demand for high money rates to compensate for lower real values.
- Lower real interest rates discourage savings and encourage spending. This may have a long-term effect on long-term finance for investment.
- Inflation reduces a country's international competitiveness: High prices make products (exports) unattractive on the international market; consumers are likely to prefer cheaper imports to locally produced products. This affects the balance of payments. A country has an adverse balance of payments when exports are lower than imports.
- Inflation causes the currency to depreciate when there is a low demand for exports, therefore, the demand for the currency is low compared to its supply, and the currency depreciates in value.
- Inflation redistributes wealth; it causes borrowers to gain at the expense of lenders as it reduces the value of the debt. The lenders receive less relative to what they had lent. This is related to the time value of money.
- Inflation leads to uncertainty in price forecasting, both at central government level and at corporate business level.

(b) The causes of inflation are both demand pull and cost-push

Demand-pull: rising demand for food from a wealthier population

Cost-push: Rising oil and petrol prices have increased costs to industry

(c) If the Chinese government increases interest rates;

i) Consumer spending will reduce because consumers will not be able to borrow enough money from the banks due to high rates. Luxury goods are by nature very expensive. Without enough money, consumers will not be able to afford luxury goods.

ii) High interest rates will discourage business from borrowing as a result of increased government expenditure which has a crowding out eff3ect on investment

iii) An increase in interest rates will lead to an increase in the flow of foreign funds. The foreign flow of funds will put pressure on the exchange rate thereby the Chinese currency will appreciate.

(d)

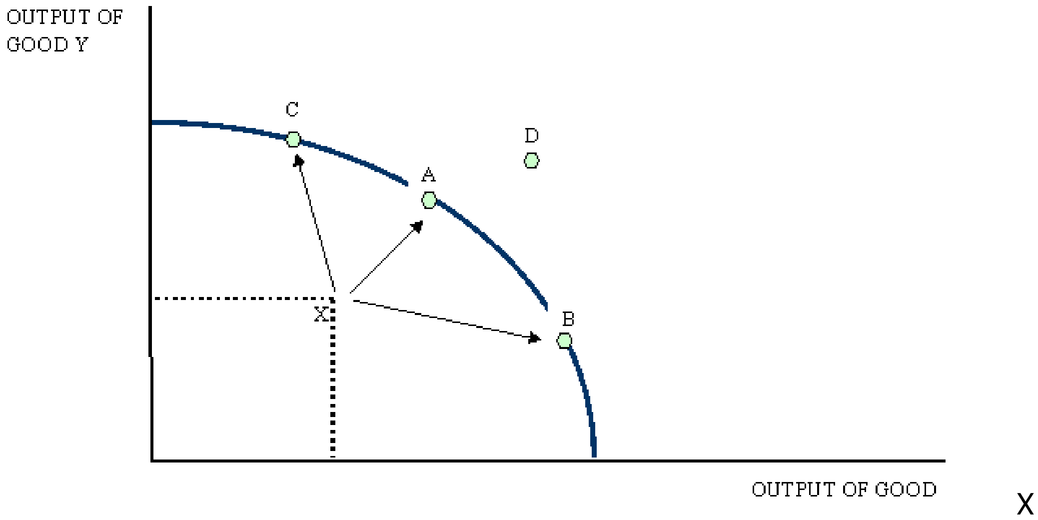
- **Monetary policy** can be used to reduce the money supply, the central bank has to curtail the borrowing and spending by limiting the commercial bank's capacity to create credit, create deposits and therefore 'create money'. One of instruments that the central bank uses to control the money supply is the interest rate.
- The importance of central bank rate is that other rates of interest used, depend on it, the rate charged to discount houses, the rates charged on advances to customers and the rate offered on deposit accounts.
- These rates move up or down with central bank rate. To check inflation, i.e. to reduce the money supply, the interest rate is raised to make credit expensive and as such discourage people from borrowing.

SOLUTION FIVE

(a) Opportunity cost is defined as the next best alternative foregone.

(b) The production possibility frontier

A PPF shows the different combinations of goods and services that can be produced with a given amount of resources in their most efficient way
Any point inside the curve – suggests resources are not being utilised efficiently
Any point outside the curve – not attainable with the current level of resources



(c) The production possibility frontier will shift when:

- There are improvements in productivity and efficiency perhaps because of the introduction of new technology or advances in the techniques of production)
- More factor resources are exploited perhaps due to an increase a rise in the amount of capital equipment available for businesses
- An increase in the size of the workforce perhaps due to increase in population or more people being educated.
- Discovery of a natural resource that supports the production of the two goods.

(d) **Advantages of market economy**

- Any individual or firm has the right to act on his/her/its own account to satisfy the needs of others
- Competition between different firms leads to increased efficiency
- There is more innovation as firms look for new products to sell and cheaper ways to produce goods and services
- The size, power and cost of the State bureaucracy is reduced, as various activities that are usually associated with the public sector are taken over by private enterprise
- Choice –no compulsion for any individual to buy a product
- Provides information about the preferences and beliefs of consumers.

SOLUTION SIX

(a) Fiscal discipline is the central government mandate to avoid budget deficit by spending within the limits of the mobilized revenue while monetary policy is the actions of the central bank in managing the growth of money supply.

(b) In a recession, aggregate demand is generally low hence through expansionary fiscal policy; the government can increase government expenditure through public works hence stimulating industrial output. On the monetary policy side, the central bank can pursue reasonable policy rate that will caution inflationary pressure from a possible over-stimulated economy.

In an effort to manage and stimulate aggregate demand, the government can reduce taxes hence increasing the purchasing power through increased disposable income. At the same point the central bank can pursue reasonable intervention such as paucity increase in RRR or market interest rates to curb possible upswings in commercial bank credits and stabilizes the prices.

(c) (i) Budget deficit is when government expenditure exceeds government revenue

ii) Government can finance the deficit by auctioning government securities by selling bonds and treasury bills on the Open market at attractive market rates. Through the sale, the Bank of Zambia raises money that can be used to finance the budget deficit. Further, the bank of Zambia can finance by contracting external debt through the issuance of Eurobonds

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

CA CERTIFICATE IN ACCOUNTANCY

CA 1.4: COMMERCIAL AND CORPORATE LAW

FRIDAY 17 JUNE 2022

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

INSTRUCTIONS TO CANDIDATES

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

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

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

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

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

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

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

8. Present legible and tidy work.

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

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 to the correct answer you have chosen in your answer booklet. Marks allocated are indicated against each question.

1.1 Winding up of the company by the court for its failure to pay debts is an example of.

A. Compulsory winding up

B. Creditors' winding up

C. Members' winding up

D. PACRA Registrar's winding up

(2 marks)

1.2. In Zambia, customary law is part of ……………………..

A. The Constitution of Zambia

B. Written law

C. Unwritten law

D. International law

(2 marks)

1.3 At an auction sale, the call for bids by the auctioneer is …………………….

A. An offer

B. An acceptance

C. An invitation to treat

D. An advertisement

(2 marks)

1.4. Which of the following is **not** a right of an unpaid seller in respect of the goods which have become a property of the buyer?

A. A lien on the goods

B. A right to damages for breach of warranty by the seller

C. A right to stoppage in transit

D. A right to resale (2 marks)

1.5. A contract of employment for a garden boy who reports for work three times a week, uses his own tools and at times sends his young brother to do the work when he is not feeling well, is an example of ………

A. Contract for services

B. Contract of service

C. Contract of employment

D. Master and servant

(2 marks)

1.6. ……………is an agent who acts without authority to preserve the property or interest of the principal?

A. Agent of necessity

B. Agent with apparent authority

C. Agent by Will

D. Agent by estoppel

(2 marks)

1.7 Debenture stock in a company is an example of ……………………. Capital?

A. Share capital

B. Loan capital

C. Share subscription

D. Equity capital

(2 marks)

1.8 The amount of a company's capital registered with the Registrar of Companies is known as…………..

A. Authorized capital

B. Issued capital

C. Subscribed capital

D. Reserve capital

(2 marks)

1.9 Which one is **not** a distinction between partnerships and limited liability companies?

A. A limited liability company can own assets in its name whereas a partnership cannot.

B. A limited liability company can be dissolved upon the death of a shareholder where as a partnership cannot.

C. A limited liability company can sue and be sued in its own name where as a partnership cannot.

D. A limited liability company (if publicly listed) can have its accounts published in public media where as a partnership is not.

(2 marks)

1.10 Which of the following is not an equitable remedy in contract law?

A. Specific performance

B. Injunction

C. Damages

D. Restitution.

(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)

(a) Statutory interpretation is the process by which judges bring out the meanings of the words used in statutes. The main rules of interpretation being the Literal Rule, Golden Rule, and Mischief Rule. There are instances where a precedent may be termed to be a bad precedent. Several reasons can be advanced for such an occurrence.

State some of the reason that may lead to a precedent being a bad precedent. (6 marks)

(b) Discuss the main types of companies recognized in Zambia. (12 marks)

(c) Describe an agency relationship. (2 marks)

[Total: 20 Marks]

<u>QUESTION THREE</u>

Chisepo works as a truck driver for Mukanda Transport and Logistics limited. He transports various goods across the country for different clients. He is on a fixed monthly salary and, when he is not transporting goods, he is required to report for work at 9:00 AM. The company engaged him to transport goods to Kitwe from Lusaka. It is company policy not to carry unauthorized passengers in the trucks whenever on duty. On his way to Kitwe, he decided to stop by in Kapiri Mposhi to meet up a friend. The friend lived about 5 kilometers from the main road. After about an hours' visitation, he set off on his journey. Before reaching the main road however, he hit into a vehicle carrying vegetables to the market. The vegetables are destroyed and the vehicle carrying them has suffered extensive damage at the rear. Mboshi the owner of the vehicle carrying the vegetables on inquiry from Chisepo discovers that Chisepo was just employed as a driver and did not own the truck. Mboshi does not believe Chisepo can meet the compensation for the damage caused to his vehicle and the vegetables. He wants to be guided on how to proceed.

Required:

(a) With reference to the above scenario, explain the elements of negligence. (6 marks)

(b) Define vicarious liability (2 marks)

(c) Explain what elements should be established for Mukanda transport to be vicariously liable. (7 marks)

(d) Discuss the elements to be established for the existence of a master servant relationship. (5 marks)

[Total: 20 Marks]

QUESTION FOUR

(a) Making reference to the Constitution of Zambia, give the jurisdiction of the Zambian Courts. (10 marks)

(b) Explain what the position of the law is on transfer of title by a seller without title. (2 marks)

(c) Explain how a warranty can be distinguished from a guarantee. (4 marks)

(d) Discuss how a hire purchase differs from a credit sale. (4 marks)

[Total: 20 Marks]

QUESTION FIVE

Chongo bought a car from Lubono Mpande for K34,000 and used it for four (4) months. It later transpired that Lubono Mpande had bought the car from someone who had stolen it, and it had to be returned to the true owner. Chongo is now in your office and seeks legal advice on the same.

Required:

(a) Explain to Chongo on the legal implication of the above case. (10 marks)

(b) Explain to Chongo the distinction between a contract of sale and an agreement to sell. (10 marks)

[Total: 20 Marks]

QUESTION SIX

Jombo is a teacher who has worked over ten years in government schools. Jombo is certain in his mind that the time is now for him to take a leap of faith and join the world of entrepreneurship. He therefore wants to start his own school. He has never started any business before and therefore everything about business is foreign to him. He has no idea on the types of business entities there are, how they are established, how and why they may be wound up and how they can actually raise capital to expand their operations etc. He has heard that you are a consultant in matters of corporate affairs and has come to you for assist.

Required:

(a) Explain the effect of incorporating a company in Zambia. (4 marks)

(b) Discuss the term "Partnership". (4 marks)

(c) Explain the process of declaration of bankrupt. (4 marks)

(d) Discuss the powers of a Receiver. (4 marks)

(e) In the event of winding up, state what a statement of affairs is. (4 marks)

[Total: 20 Marks]

END OF PAPER

CA1.4 - SUGGESTED SOLUTIONS

SOLUTION ONE

1.1. A

1.2. C

1.3. C

1.4. B

1.5. A

1.6. A

1.7. B

1.8. A

1.9. B

1.10. C

SOLUTION TWO

(a) There are several reasons that can be responsible for a precedent being bad. One of the reasons is when a judge arrives at a decision '*per incuriam*' meaning he did not take into account an essential point of law; in certain cases a judge may misdirect himself in law; or the judge's decision can be declared too wide and the *ratio decidendi* may be declared too obscure.

(b) The following are the main types of companies in Zambia:

(i) Public Company which by nature is limited by shares meaning it raise its capital by listing its shares on the stock exchange

(ii) Private company limited by shares which raises its capital through selling its shares to private individuals or companies and the liability of its members is limited to the extent of the balance owing on their shares.

(iii) Private limited by guarantee where the company does not necessarily sell shares and the liability of its members is determined by the amount they guarantee at inception indication how much they will contribute in the event that the company goes into liquidation.

(iv) Private unlimited company which has no amount specifies as to how much each member will contribute in the event of winding up.

(c) An agency relationship is a relationship where a principal, appoints a middleman known as an agent who concludes commercial business transactions on behalf of the principal. The acts of the agent are deemed as if they are the acts of the principal.

SOLUTION THREE

(a) Negligence involves a wrongful act or omission by the defendant which is in breach of a duty of care and tends to cause damage to the plaintiff. Negligence arises accidentally without intention on the part of the tortfeasor to do the act or bring about the out of the act. There are mainly three elements that ought to be established for a claim of negligence to be made up that is, duty, breach and damage.

-duty is the obligation imposed on persons by law to ensure one's actions or omissions do not in fact cause any harm to others. This duty is primarily fixed by law hence; there is no need for there to be any prior relationship between the plaintiff and the defendant for the defendant to be held liable for his/her wrongful action or omission. The neighbor principle established in *Donoghue v Stevenson* [1932] 1 AC brings everyone within the scope of liability to our neighbors, which all those we may have in contemplation as being so affected by our actions or omissions so that we take care not to cause injury to the.

- Breach is the act of doing something contrary to the obligation imposed on us by law. Where therefore a person does an act or omission which a reasonable person would not do, they are then said to be I breach of their duty of care. For instance, as in the case of *Michael Chilufya Sata v Zambia Bottlers* (2004), where it was alleged that a dead cockroach was found in a bottle of sprite purchased by the plaintiff, the presence of the dead cockroach is indicative of the breach of duty of care. Where an act is so manifest in its revelation of a thing said to be in breach, it is said that a *res ipsa loquitor* case exists and in such cases, there would be no need for evidence to show that indeed there was a breach of duty of care.

- Damage is the injury suffered by the plaintiff arising from the breach of duty of care. Damage is very important as without it, a claim for negligence cannot be made. As negligence is concerned with restitution, there is need for the claimant to show evidence of the damage suffered for which they wish to be compensated. Damage therefore triggers the award of damages.

(b) Vicarious liability is simply liability of one for the torts of another. Where a person therefore does a wrongful act or omission and another suffered damage, once evidence has been established, the liability for that negligence rather than being borne by the person committing the tort, shall be borne by another vicariously.

(c) For vicarious liability to successfully be pleaded, the plaintiff ought to establish three elements being:

- existence of a master servant relationship between the wrongdoer and the one vicariously liable,
- the wrongful act being done in the course of employment and
- the wrongdoer not having been on a frolic of his own.

In the case at hand therefore, for Mboshi to successfully get compensation from Mukanda vicariously for the negligence of Chisepo, he has to prove that there was a relationship of master and servant existing between Mukanda and Chisepo. Mboshi will further have to prove that at the time Chisepo caused the accident, he did that while in the course of doing the job engaged to do by Mukanda transport. Lastly, Mboshi would have to prove that Chisepo was not on a frolic of his own but was doing just what he was expected to do by his master.

(d) The test for establishing the existence of a master servant relationship was set in Ready Mix Concrete (South East) Ltd v Minister of Pensions [1968] as being:

- The servant agrees that in consideration of a service for his master, a wage/salary shall be paid.
- The servant agrees either expressly or impliedly that in the performance of his/her work, he shall be subject to a significant degree to the control of the master.
- The provisions of the contract are consistent with its being a contract of service rather than for services.

SOLUTION FOUR

(a) In descending order the hierarchy of the courts in Zambian according to part VIII of the constitution is as follows:

(i) Constitutional Court and Supreme Court - The Supreme Court is the highest appellate court in the country. It has appellate jurisdiction meaning it hears matters on appeal from the court of appeal. This court does not have original jurisdiction meaning no matter may be originated in this court. Before the 2016 constitution came into effect, the Supreme Court was the highest court in the country. The constitutional court stands at the level with the Supreme Court. This court is both an appellate court and a court of first instance. Article 128 of the constitution confers exclusive jurisdiction on the constitutional court to hear all matters pertaining to the interpretation of the constitution. It further confers jurisdiction on the constitutional court to hear presidential election petitions and parliamentary election petitions appeals. The constitutional court and Supreme Court stand *pari pasu* in the Zambian court hierarchy.

(ii) Court of Appeal – This court is the second highest appellate court in Zambia. Like the Supreme Court, the court does not have original jurisdiction but appellate jurisdiction in both criminal and civil matters.

(iii) High Court – this court is the court of first instance in all matters of a criminal and civil nature. The court once exercised jurisdiction on matters relating to the bill of rights before the constitutional court was established. The high court hears several matters under its different divisions.

(iv) Subordinate Court (magistrate court) – this is the second lowest in ranking of the courts in the hierarchy. The subordinate court hears most criminal cases as a court of first instance. It is presided by magistrates of different classes.

(v) Local Courts - these are courts that hear customary related matters. They are the lowest in the ranking and they are not courts of record.

(b) The rule is that a person who does not any right to property cannot transfer title to that property. Hence, a person who does not own property that they sale may not transfer title of the property to the buyer. Section 21 of the Sale of Goods Act 1893 makes this provision.

(c) Warranties and guarantees are terms found commonly found in commercial transactions. Though sounding the same, they are in fact different. A warranty is an assurance or indeed a guarantee that when a product sold by the seller fails to work as expected within a certain expected timeframe, or where it is damaged due to no fault of the buyer, the buyer will be entitled to a repair at the cost of the seller or manufacturer. Conversely, a guarantee is an assurance that a product sold shall not be damaged for a timeframe that would be given by the manufacturer. In essence therefore it would be said that a warranty is a guarantee that if a product breaks within a specific period, it will be repaired at the cost of the manufacturer whereas a guarantee is an assurance that for a specific period, the goods bought would not break.

(d) A hire purchase agreement is an agreement where the purchaser of goods makes a payment towards the purchase price of the goods purchased and they take possession of the purchased goods. They do not however have ownership of the purchased goods and may not sale or transfer ownership in the goods sold. In the event of a default in the payments on the balance, the seller is entitled to repossession of the sold goods not the demand payment of the balance money. A credit sale on the other hand is a sale where the buyer acquires the rights to the sold goods and can do with them as they desire including selling them. Where there is a breach in a credit sale, the seller demands for the balance of the purchase price and not the goods sold.

SOLUTION FIVE

(a) The question borders on implied conditions of contract of sale and are covered under section 12-15 of the Sale of Goods Act 1893. Section 12 provides for an implied undertaking as to tittle……. *In a contract of sale, unless the circumstances of the contract are such as to show a different intention, there is—*

(1) An implied condition on the part of the seller that in the case of a sale he has a right to sell the goods, and that in the case of an agreement to sell he will have a right to sell the goods at the time when the property is to pass:
(2) An implied warranty that the buyer shall have and enjoy quiet possession of the goods:
(3) An implied warranty that the goods shall be free from any charge or encumbrance in favor of any third party, not declared or known to the buyer before or at the time when the contract is made.
In the case at hand, the seller was in breach of section 12. The buyer paid for the car to become the owner. Since he did not receive what he had paid for, there was a total failure of consideration, entitling him to a refund.
This position of the Law was buttressed in **Rowland v Divall (1923).**

(b) Sale takes place immediately, while an agreement to sell takes place in the future depending upon the fulfilment of certain terms and conditions. Thus at the time of the sale, an actual transfer takes place whereas at the time of the agreement to sell future transfer takes place. Risks are transferred immediately in sale whereas in the agreement of sale risks are attached to the seller till the goods are being transferred in the future. The sale is an executed contract whereas agreement to sell is an executory contract.

SOLUTION SIX

(a) Incorporation of a company is where two or more people apply through the prescribed forms under the Zambian Company's Act 2017 to have their company registered by the Registrar of Companies at PACRA. The Act prescribes forms to be completed by applicant and stipulates the documents to be lodged together with the application. Upon approval by the registrar, the company then stands registered and is born as an artificial person. Effects of incorporation are that the company stands alone from its sponsors and has legal capacity to sue or be sued in its own name. Upon incorporation, the company is liable for its debts and sponsors cannot be answerable for the company's debts. ***Salomon v Salomon*** is instructive on this. In the case the court held that once incorporated, a company becomes a separate legal personality and can be held liable for its actions and not the sponsors. Even where the company is a sole trader as long as it is incorporated the sole owner cannot be held liable for the acts of the company.

(b) A partnership is established under the Partnership Act 1890. It requires two or more persons coming together with a common purpose to form a business with intention to profit. Partnerships are unlimited liability companies meaning, the partners in the ship are all liable jointly and severally for the debts and wrongs of the company. A partnership will usually dissolve in event of death of anyone of the partners.
Conversely, an incorporated company is registered under the Company's Act. It has limited liability characteristics meaning, sponsors cannot be held liable for the debts and wrongs of the company but the company itself. A company evolves into an artificial person able to sue and be sued in its own capacity.

(c) Bankruptcy is defined as; the state of a person who has been adjudged by a court to be insolvent. Meaning, having more debts than assets.
Pursuant to section 20 of the Bankruptcy Act, the court may adjudge someone bankrupt in the following events:
- (i) Where the debtor applies to the court that they be declared bankrupt
- (ii) On the application of the official receiver, and;
- (iii) On the application of creditors pursuant to section 6(1)(a)(b) of the Bankruptcy Act.

(d) A receiver is a person appointed by the court to protect property during the course of liquidation. A receiver is appointed to take into account interests of creditors in liquidation. The powers of the receiver include:
- (i) Power over all the assets of the company in liquidation
- (ii) Power to appoint or terminate the appointment of a special manager of the debtor's estate or business in the interest of the creditors according to section 12(1) of the Act
- (iii) Power to appoint a duty official receiver
- (iv) Power to administer oaths.

(e) A statement of affairs is a document required to be made by the debtor pursuant to section 16 of the Act. The statement of affairs shows the assets and liabilities and the details of the debtor's creditors. In the case of a company, a company in liquidation is required to prepare a statement of affairs by the date of winding up which should indicate the assets, debts and liabilities. Names and addresses of creditors, securities held by each of the creditors, dates on which securities were given and any other information as requested by the liquidator. Per section 287 of the Company's Act.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATION

CA CERTIFICATE IN ACCOUNTANCY

CA 1.5: MANAGEMENT THEORY AND PRACTICE

MONDAY 13 JUNE 2022

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 in this section.

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 What is the planning horizon?

A. The distance ahead for the forecasts on which plans are made.

B. The time period within which uncertainty is very low.

C. The time ahead for which there is no information.

D. The maximum time for which managers can make plans.

(2 marks)

1.2 Which management concept suggests that low-importance decisions be handled by subordinates, so that managers can focus on high-importance decisions?

A. management by objective

B. management by exception

C. participatory management

D. inclusionary management

(2 marks)

1.3 Scalar chain refers to _______________

A. The line of authority from top management to the lowest rank

B. Degree to which subordinates are involved in decision making

C. Every employees should receive orders from only one superior

D. People and materials should be in the right place at the right time

(2 marks)

1.4 The communication process must have a medium to convey information between two (2) or more parties. The three (3) common media are _______________.

A. Written, spoken, and signalized

B. Visual, audio, and tactile

C. Seeing, talking, and listening

D. Seeing, listening, and touching (2 marks)

1.5. In general, if a policy is not thought out and established _______________

A. situation requiring action will arise

B. Social issues will cause change in the organization

C. Managers will be hired from the outside

D. There will be significant staff turnover

(2 marks)

1.6. Maslow and Herzberg are two examples of _______________ theories of motivation.

A. Expectancy

B. Content

C. Process

D. Equity

(2 marks)

1.7. Which management theorist is responsible for the motivation-hygiene theory?

A. Abraham Maslow

B. Dale Hawthorne

C. Peter Drucker

D. Frederick Herzberg

(2 marks)

1.8 . Strategic planning as a broad concept consists of _______________

A. Corporate strategy and business strategy

B. Strategy formulation and strategy implementation

C. Inputs and outputs

D. Environmental analysis and internal analysis

(2 marks)

1.9 The exact triggers for change will depend on the context of an organisation and its industry. Identify from the following that could act as change triggers:

A. Arrival of new entrants into the market, or mergers/acquisitions between existing competitors in the industry.

B. Changes in level or intensity of competition (prompting a need to gain or protect market share).

C. New laws or regulations affecting an industry; or changes in government legislation more generally.

D. All of the above (2marks)

1.10 The Great Man theory is associated with which of the following approaches to studying leadership?

A. Skills
B. Intelligences
C. Styles
D. Traits

(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 (4) Questions.

<u>QUESTION TWO</u> – (COMPULSORY)

With the excitement of the new job at the Bank, Ms Katanekwa was ready to put her dream of working hard. However, the matter before seems to be challenging. The bank has experienced a high employee turnover and the CEO has tasked the new manager to make a turnaround to this problem. As a graduate in economics from Copperbelt University, she has no in-depth understanding in employee related matters and she has approached you for help.

Required:

(a) List down three (3) key roles of a Manager. (3 marks)

(b) Explain the three (3) major methods that can be used to make the job attractive to the incumbent. (12 marks)

(c) State five (5) uses of performance evaluation or appraisal that management may consider for general human resource management decisions. (5 marks)

[Total: 20 Marks]

<u>QUESTION THREE</u>

Virtually every organization will, at some point, undergo a transition or change in order to remain viable and scale. Whether onboarding new employees, growing a department, or merging with another company, these changes can have a significant impact on the trajectory of your business. Organizational change is the movement of an organization from one state of affairs to another. Organizational change can take many forms. It may involve a change in a company's structure, strategy, policies, procedures, technology, or culture. Although there is no one right or wrong way to mitigate change, there are a few tried-and-true change management models that organizations return to again and again.

Required:

(a) Outline some of the reasons as to why employees resist change in an organization. [10 marks]

(b) Pick any five (5) models of change and write concise notes on each. (10 marks)

[Total: 20 Marks

QUESTION FOUR

(a) Mwale says it is very difficult for him to work with other people because they may not be as hard working and honest as he is. He is also worried about the sharing of the profits because he wants to make a lot of money in a short period possible to help him solve the financial problems which are too much for him and his family.

Required

Suggest to Mwale the type of organization ownership and any (5) of its features that will suit his desires. (10 marks)

(b) Define the features specified by the Companies Act that make private limited companies different from public limited companies. (10 marks)

[Total: 20 Marks]

QUESTION FIVE

(a) Suggest any five (5) impacts of globalization on firms? (10 marks)

(b) Using any five (5) features of globalization, describe its impact in the world today.

(10 marks)

[Total: 20 Marks]

QUESTION SIX

"A system of effective internal controls is a critical component of company management and a foundation for the safe and sound operation of organizations. However, ineffective internal controls result in ineffective programs and losses. Internal control means different things to different people. This causes confusion among business people, legislators and others." Natasha attended a workshop were the facilitator Ms Fridah Mwaba emphasized the importance of corporate governance in organization. These in-fact were described as a high-profile collapse by the Association of Certified Chartered Accountants – ACCA, (Student Accountant, 2008).

Required:

(a) List down four (4) functions of managements according to Henri Fayol. (4 marks)

(b) Briefly identify six (6) principles of good governance. (12 marks)

(c) Identify the four (4) points to consider in managing ethics at workplaces.

(4 marks)

[TOTAL: 20 Marks]

END OF PAPER

CA 1.5 SUGGESTED SOLUTIONS

SOLUTION ONE

1.1	A
1.2	B
1.3	A
1.4	4
1.5	A
1.6	B
1.7	D
1.8	B
1.9	D
1.10	D

SOLUTION TWO

(a) List down three key roles of a manager

Solution:

- Work planning
- Resource allocation
- Project management.

(b) Explain the three major methods that can be used to make the job attractive to the incumbent.

Solution:

The process of restructuring the job when found to be dissatisfying was carried out in at least the following three methods, namely job rotation, job enlargement and job enrichment.

i. **Job rotation** is the most common form of individual job redesign. It involves the moving of a person from one job or task to another aimed at adding some variety and help remove boredom at least in the short term. This is more pronounced where the jobs are similar and routine. Employees within the medium term would find the new job boring again.

ii. **Job enlargement** involves increasing the scope of the job and the range of tasks that a person carries out. It may be achieved by combining a number of related operations at the same level. Job enlargement is horizontal job redesign; it makes a job structurally bigger. It lengthens the time cycle of operations and may offer greater variety. Not always popular with workers as it may not improve a person's intrinsic satisfaction or sense of achievement. Workers would see this as increasing the number of routine and boring tasks.

iii. **Job Enrichment** is an extension of the more basic job rotation and job enlargement methods of job design. This method attempts to enrich the job by incorporating motivating or growth factors such as increased responsibility and involvement, opportunities for advancement and the sense of achievement. Job enrichment involves vertical job enlargement. It aims to give the person greater autonomy and authority over the planning, execution and control of their own work. This is sometimes referred to as empowerment.

(c) State five (5) uses of performance evaluation or appraisal that management may consider for general human resource management decisions.

Solution:

Management uses performance evaluation or appraisal for general human resource management decisions.

i. Performance evaluations are important inputs in decisions of promotion, transfer and termination.
ii. Evaluations identify training and evaluation needs. They help pinpoint employee skills and competences, which are currently deficient for staff development, can be used to remedy the situation.
iii. Performance evaluation is used as criteria against which selection and development programs are validated. Newly hired employees who perform poorly can be identified through performance evaluation.
iv. Performance evaluation also provides a feedback to employees on how the organization views their performance.
v. Performance evaluations are also used as a basis for reward allocations. Thus who gets a merit increase or who gets a bonus for work output.

SOLUTION THREE

(a) Outline some of the reasons as to why employees resist change in an organization

- Misunderstanding about the need for change/when the reason for the change is unclear
- Fear of the unknown
- Lack of Competence:
- Lack of competence
- Loss of power and control:
- Connected to the old ways of doing things
- Low trust
- Temporary fad
- Not being consulted
- Poor communication
- Changes to routines
- Exhaustion/Saturation
- Change in the status
- Fear to lose Benefits and reward

(b) **Change Management Models**

- **Lewin's Change Management Model**: A 3-step approach to change behaviour that reflects the process of melting and reshaping an ice cube.
- **ADKAR Model**: A people-centered approach to facilitate change at the individual level.
- **Kotter's 8-Step Change Model**: A process that uses employee's experience to reduce resistance and accept change.
- **Kubler-Ross Change Curve**: A strategy that breaks down how people process change using the 5 stages of grief.
- **McKinsey 7s Model:** A process centered around the alignment seven fundamental elements of any organization
- **PDCA:** A cyclical and iterative change management process focused on continuous improvement.
- **Bridges Transition Model:** A people-centered model focused on managing people's experience transitioning to change.

SOLUTION FOUR

(a) The type of organization that will suit Mwale 's desires is sole proprietorship and the following are its features:

i. Owned by one person who also provides capital
ii. They run the business and reward themselves from the profits
iii. The owner works in the business and can be assisted by some workers and family
iv. They are personally liable for all the debts of their business
v. It is very simple to set up
vi. They are common and usually small

(b) The following are the features of the private limited company specified by the Company Act.

i. Formed by two (2) people and no more than fifty (50)
ii. They are often small family business the main shareholders are also directors of the company.
iii. Shares cannot be offered to the general public
iv. Shares are not transferable without the agreement of other shareholders
v. They are much smaller than public limited companies

SOLUTION FIVE

(a) The following are the impacts of globalization on the firm:

i. Relocation in order to reduce on costs, avoidance of tariffs and quotas or to take advantage of areas of industrial excellence.

ii. Markets new markets may emerge as closed markets as nations develop and tastes and preferences change.

iii. Competition-reduce trade barriers and advances in communications greatly increases the number of competitors that a firm faces in the industry.

iv. Alliances-opportunities for forming alliances, merging, acquiring may increase

v. Economic divisions- wealthy nations with advanced technology will become more wealthy at the expense of poorer nations

(b) The following are the features of globalization and how they impact the world today.

i. Ability to enter into transactions with individuals and organizations based in other countries

ii. Rise of globally linked and dependent financial markets

iii. Reduction in importance of local manufacturing

iv. Reduced transaction costs through developments in communication and transport

v. Rise of emerging, newly industrialized nations

SOLUTION SIX

(a) List down FOUR (4) functions of managements according to Henri Fayol

(i) Planning

(ii) Organizing

(iii) Leading (directing)

(i) Controlling

(b) Identify SIX (6) principles of good governance

(i) Probity/Honest: relates to telling the truth and not misleading shareholders and other stakeholders.

(ii) Integrity: Being straightforward dealing and completeness. The means to to be of high moral character.

(iii) Fairness: Being of a balanced leader in all litigations and administrative matters

(iv) Responsibility: Management accepting the credit or blame for governance decisions

(v) Accountability: The organization and its directors are answerable in some way for their consequences of their action

(vi) Transparency: Being open and with clear disclosure of relevant information to shareholders and other stakeholders.

(c) Identify the FOUR (4) points to consider in managing ethics at workplaces.

(i) Understand the benefits of ethical conducts

(ii) Focus on ethical conduct through building strong organization culture around ethics

(iii) Develop a code of ethical conduct that is documented and available to every employee of the organization.

(iv) Promote process should incorporate ethics as part of the evaluation

(v) Link ethics to other management practices

(vi) Demonstrate ethical practices by leading by examples.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

CA CERTIFICATE IN ACCOUNTANCY

CA 1.6: BUSINESS COMMUNICATION

WEDNESDAY 15 JUNE 2022

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

<u>QUESTION ONE</u>

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

1.1 What type of error will be generated by the following Spreadsheet formula =45/0?

A. #REF
B. Do not divide by zero
C. #####
D. #DIV/0

(2 marks)

1.2 Which of the following is **NOT** a system level?

A. Strategic
B. Executive
C. Knowledge
D. Management

(2 marks)

1.3 A file object that is placed on a webpage that are designed to monitor user behavior is called …

A. Viruses
B. Cookies
C. Web bugs
D. Ad networks

(2 marks)

1.4 Which of the following enables information to be useful to a user?

A. Formal
B. Timely
C. Complex
D. Fast

(2 marks)

1.5 Which one is **NOT** a type of data processing?

A. Batch processing
B. Online processing
C. Cloud processing
D. Real time processing

(2 marks)

1.6 What type of question starts by asking a general question and then goes to ask a specific point?

A. Open question
B. Closed question
C. Leading question
D. Funneling question

(2 marks)

1.7 A memo, a notice and a press release are example of ______________.

A. Business documents
B. Business circulars
C. Meeting documents
D. Official documents

(2 marks)

1.8 The difference between a formal and an informal meeting is that a formal meeting requires ………….

A. Special committees
B. A quorum
C. Choosing Members
D. Choosing a Chairperson

(2 marks)

1.9 In a business letter if the **salutation** begins with '**Dear Mr. Banda'**, what would be the **complimentary close?**

A. Yours truly
B. Yours faithfully
C. Yours sincerely
D. Cordially yours

(2 marks)

1.10 What are Bar charts used for?

A. Establishing relationships between variable or groups
B. Comparing different variables or groups
C. Showing percentages of variables or groups
D. Tracking changes of things over a period of time (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 – COMPULSORY</u>

(a) Enterprise Resource Planning Systems (ERP systems) offer integrated software solutions to different functions of an organisation. They primarily support business operations that ensure that data is shared among the departments.

Required:

State four (4) functional areas within an organisation that can benefit from an ERP giving a brief example of how each department can benefit from such a system.

(8 marks)

(b) Explain the two (2) layers of Information Technology (IT) infrastructure listed below:

(i) IT platform (4 marks)

(ii) IT Services (4 marks)

(c) Give two (2) reasons organisations need an IT Service Desk? (4 marks)

[Total: 20 Marks]

QUESTION THREE

(a) Organizational information systems are always vulnerable to security risks and as such the data they house must be protected at all costs from unauthorized modification, disclosure or destruction and ultimately viruses.

Required:

Identify five (5) types of Malware and explain how they infect the system.

(10 marks)

(b) Briefly explain what an Office Automation System (OAS) is. (2 marks)

(c) Give any four (4) examples of Office Automation Systems that you could use in your organization and briefly describe the nature of work that each is used for. (8 marks)

[Total: 20 Marks]

QUESTION FOUR

(a) TMS is a national company specialising in mineral exploration. You are one of the accountants at the company and you are responsible for keeping and interpreting financial records.

In performing your duties, you are required to visit many of the company's branches each month. You are also involved in collecting data, ensuring that it is analysed and compiled before it is sent to the head office.

Required:

Explain three (3) advantages of using Teleconferencing facilitates when communicating with the Head Office. (6 marks)

(b) A Zambian owned audit firm desires to acquire tailor made software. Briefly discuss two (2) ways in which this organization can acquire the desired software. (6 marks)

(c) There are different types of operating systems that are used in organizations other than Microsoft Windows. Briefly discuss any two (2) operating systems that are competitors to windows. (4 marks)

(d) One of the application software used in the day-to-day tasks of an accountant is Microsoft Word. Name two (2) tabs found in the Microsoft word menu and state the kind of commands that each contains. (4 marks)

[Total: 20 Marks]

QUESTION FIVE

SCENARIO

As a young graduate, you believe that you are confident and a result-oriented person who easily gets along with other people. You also worked as an intern for 8 months at one of the accounting firms. This background provides an added advantage as you seek for a job opportunity that was recently advertised at GC Accounting Consultancy Limited. GC Accounting Consultancy Limited is looking for a suitably qualified accounts assistant to fill in that vacant position. The Job advertisement provided information that all the aspiring candidates must apply through the office of the Human Resources Manager at GC Accounting Consultancy, P.O Box 30041, Kitwe.

Required:

(a) Define the type of letter expected to be written from the scenario described above. (2 marks)

(b) State any three (3) documents that may be attached to such type of letters. (3 marks)

(c) Write a suitable letter which should include a statement on the attached documents for the scenario described above. (15 marks)

[Total 20 Marks]

QUESTION SIX

You work with colleagues who do not understand the communication cycle. You feel that understanding some simple aspects of communication is important for the smooth flow of information in an organization. Therefore, you decided to explain in detail to them what is involved in the communication process.

Required:

(a) Draw a diagram to help illustrate the communication cycle. (6 marks)

(b) Briefly explain any four (4) roles of a receiver in the communication process. (8 marks)

(c) Give four (4) reasons feedback is important in the communication process. (4 marks)

(d) State any two (2) purposes of communication. (2 marks)

[Total: 20 Marks]

END OF PAPER

CA1.6 SUGGETED SOLUTIONS

SOLUTION ONE

1.1 D

1.2 B

1.3 B

1.4 B

1.5 C

1.6 D

1.7 A

1.8 B

1.9 C

1.10 B

SOLUTION TWO

(a) State the departments within an organization that can benefit from an ERP. Give a brief example of how each department can benefit from such a system.

- Finance: The ERP reports the current selling prices of item on sale. It can report a customer's credit rating.
- Operations: Controls inventory throughout the supply chain, from procurement to distribution.
- Accounting: Records sales and payments and tracks business performance.
- Human Resources: Recruits, trains, evaluates and compensates employees.
- Marketing: Coordinates sales activities and handles customer relationship management.

(b) Explain the two (2) layers of Information Technology (IT) infrastructure listed below:

i) IT platform
Refers to the hardware architecture and software framework that allows software to run. Typical platforms include a computer architecture, operating system, programming languages and program development system.

ii) IT Services
Organization require people to run and manage their IT infrastructure, including training employees to use the technologies. Most organizations will have an information systems department to perform at least part of this role; others may use external agencies or consultants to help in this role.

(c) Why do organizations need an IT Service Desk?

This is where people, process and technology blend to deliver a service. This point provides the essential central place for daily contact between customers, users, IT service and any relevant third party organization.
The service desk does not only handle incidences, problems and requests, but also provides an interface for other activities such as change requests, maintenance contracts, software licenses, configuration management, availability management and financial management.

SOLUTION THREE

(a) Identify five (5) types of viruses and explain how they infect the system. (10 marks)

- Viruses: spread using email messages and replicate by mailing themselves to addresses held in the user's contact book.
- Worms: copy themselves from machine to machine on the network
- Trojans/trojan horses: are hidden inside a valid program but perform an unexpected act.
- Trap doors: are undocumented access points to a system allowing controls to be bypassed.
- Logic bombs: triggered by occurrence of a certain event.
- Ransomware: is malware that employee encryption to hold a victim's information at ransom
- Livewire – simulating electronic circuits using CPU or memory
- Hoax – message warning receipts of a non-existent computer virus threat

(b) An office automation system is a computerised package designed to increase the productivity of data workers by providing access to basic systems such as email and word processing. An OAS can help to coordinate activities within a single office or multi-national businesses by providing access to shared resources and databases.

- It increases productivity of clerical & Knowledge workers and enhance communication

(c) Examples can include:

- Word processing software is used to write letters, technical reports, articles and any other documents in the past would have been typed on a typewriter and to manage general correspondence
- Desktop publisher allows the user to lay out each publication like newsletters, business cards, calendars, brochures, etc.
- Spread sheets are used more especially for calculation using the correct formula and data can be summarised inform of chart.
- Document Imaging Systems converts paper based documents and images into electronic form so that they can be stored and accessed by computer. Documents, images and drawings can be scanned into the computer and stored on high capacity storage media such as optical disks.

SOLUTION FOUR

(a) Advantages of using Teleconferencing facilitates

- Teleconferences are similar to phone calls but they can expand participants on the call to more than 2.
- Can be held using internet facilities – virtual communicating
- can be used on the move
- can reduce organizational costs such as printing or traveling
- wireless internet can work very well
- documents and comments can be posted as the conference is in session
- more than two people can participate
- there is instant feedback

(b) Tailor made software is developed to meet the specific needs of the organisation. The software is developed from the scratch. This can be done in two ways

- **In-house development: -** where employee in the IT department system develop the software from scratch
- **Outsourcing: -** the organization hires outsider to develop the software on their behalf

(c)

MacOS - Developed by Apple for its devices and hardware only

UNIX – A non-proprietary operating system that works on PC networks and mainframe systems

LINUX - A freely distributed operating system that works on many hardware platforms

Android – A mobile operating system developed by google and specifically designed for touch screen devices

File – configuration of a document commands

Home – General purpose commands
Insert – Commands for inserting different items in a document
Design – commands for configuring the styles of the way content is presented in a document
Layout – commands that allow us to specify the way a document should be prepared
References – Commands that allow us to add references points or use them in a document
Review – Comments for proofreading the content of a document
View - Commands that allow us to view the content from a specific perspective

SOLUTION FIVE

(a) The type of letter expected to be written from the scenario provided is a cover letter or application letter. An application letter is a letter that introduces a job applicant to potential employers by summarizing the job applicant's strongest points, skills and abilities for the job. It is meant to secure a job interview and finally get a job or employment. A covering letter is a document that accompanies a letter that is sent to a recipient.

(b) The documents expected to be attached to this type of a letter are: curriculum vitae, copies of professional and academic certificates and a copy of a National Registration Card / passport or a valid identification card, Letter of Recommendation and Statement of results.

5 (c)

C/o Mr. Chanda Bwalya

Zambezi Corporation Limited

P O Box 30149

Kitwe

Date: (any date during exam time)

The Human Resources manager

G C Accounting Consultancy Limited

P O Box 30041

Kitwe

Dear sir/Madam

Subject: **Application for a Job Position as an Assistant Accountant**

With reference to the advertisement that you published in the Zambia Daily Mail Newspaper on (any **date during examination time**), I am writing to express my strong interest in working at your company and perform account assistant functions effectively.

I am confident I can rise to the challenge if you are seeking for a dynamic and result oriented professional to augment your team. My ability to get along with others and make necessary adjustments to meet deadlines has all contributed to my growth. I am interested in expanding my nonprofessional horizons by seeking new challenges in the accounting field.

Thank you for your time and contribution. I look forward to meeting you to talk about this position further.

I have enclosed a photocopy of my certificate, National Registration Card and curricular vitae for your review. You quick response to this matter will be appreciated.

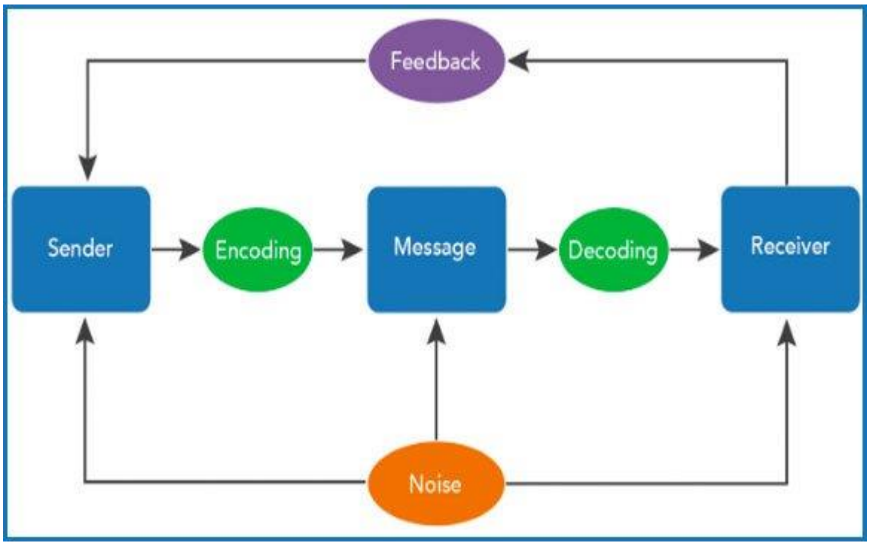
Yours faithfully,

Sender's signature

Kelvin Maboshe

SOLUTION SIX

(a) Communication cycle



(b) Roles of receiver

(i) Giving feedback when the message is sent to notify the sender how effective the message is.

(ii) To decode or interpret the message so that they a receiver a give the right feedback to the sender of the message.

(iii) Pay attention when the message is being transmitted to minimize the barriers for communication to be effective.

(iv) To encourage participation in the communication process.

(v) In case of oral communication, to ask questions where the other party is not clear so that they understand the information that is being communicated.

vii) To prepare appropriate feedback.

vii) Select appropriate medium for feedback

(c) Importance of feedback

- To complete the communication process
- It shows whether or not the message has been received
- It shows whether or not the message has been understood
- It helps to correct mistakes
- It shows respect and courtesy

(d) Purpose of communication

- To inform

- To persuade
- To confirm
- To coordinate activities
- To educate

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

CA ZAMBIA APPLICATION ADVANCED DIPLOMA IN ACCOUNTANCY

CA 2.1: FINANCIAL REPORTING

MONDAY 13 JUNE 2022

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

INSTRUCTIONS TO CANDIDATES

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

2. This paper is divided into TWO sections:

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

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

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

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

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

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

8. Present legible and tidy work.

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

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

Pamba Plc. specialises in oil production and has shareholdings in two other companies, Sunta and Anaya. You are the Group Finance Manager and the Group Chief Financial Officer has given you the statements of financial position of all three companies as at 31 December 2021 below.

Statements of Financial Position as at 31 December 2021

Assets	Pamba	Sunta	Anaya
	K' 000	K' 000	K' 000
Non-Current Assets			
Property, plant & equipment	3,790	1,630	795
Investments	6,000	200	125
	9,790	1,830	920
Current Assets			
Inventories	1,175	765	325
Trade receivables	940	670	210
Bank	500	180	100
	2,615	1,615	635
Total assets	12,405	3,445	1,555
Equity:			
Equity share capital of K1 each	5,000	2,000	500
Retained earnings	5,885	710	750
	10,885	2,710	1,250
Non-Current Liabilities:			
5% Loan notes	100	35	30
Current Liabilities:			
Contingent consideration	190	-	-
Trade payables	705	600	200
Taxation	525	100	75
	1, 420	700	275
Total equity and liabilities	12, 405	3, 445	1,555

Relevant additional information:

(i) Pamba acquired 1,600,000 ordinary shares in Sunta on 1 January 2021, when Sunta's retained earnings were K760,000. As consideration Pamba issued of 1,000,000 equity shares. The market prices of Pamba's and Sunta's shares at the date of acquisition were K3.75 and K3 each respectively. In addition Pamba agreed to pay K200,000 on 1 January 2022 which was contingent upon Sunta making an increase in profit for the year of 25% or more for the year ending 31 December 2021. The contingent consideration had a fair value of K190,000 at the date of acquisition; however, as at 31 December 2021 Sunta reported a loss. Pamba has recorded both the issue of shares and the contingent consideration.

(ii) Pamba acquired 150,000 ordinary shares of Anaya on 1 January 2021 for cash consideration of K560,000 when Anaya's retained earnings were K670,000.

(iii) Other investments are equity investments in entities outside the Pamba group and represent holdings of less than 5% of the equity of the investee.

(iv) The fair value of Sunta's net assets on 1 January 2021 was equal to their carrying amounts except for a building whose fair value exceeded its carrying amount by K125,000. Sunta has not adjusted the carrying amount of this asset as a result of the fair value exercise. At that date the asset had a remaining useful life of 5 years. Buildings are depreciated on straight line basis.

(v) Pamba's policy is to measure any non-controlling interests at their fair value at the acquisition date. For this purpose Sunta's share price at that date can be deemed to be representative of the fair value of the shares held by the non-controlling interest.

(vi) Because of a loss made by Sunta during the year, an impairment review was undertaken on 31 December 2021 and goodwill was found to be impaired by K255, 000. There was no impairment in respect of the investment in Anaya.

(vii) During the financial year ended 31 December 2021, Sunta sold goods to Pamba for K150,000. These goods were sold at a mark-up of 50%. Of these goods, 40% remained in the inventory of Pamba at 31 December 2021. At 31 December 2021, Pamba owed Sunta K10,000. No dividends were paid or proposed during the year by the subsidiary and an associate.

(xi) During December 2021 Pamba sold goods to external customers with a warranty covering customers for the cost of repairs of any defects that are discovered within the first 3 months after purchase. Past experience suggests that 70% of the goods sold will have no defects, 20% will have minor defects and 10% will have major defects. If minor defects were detected in all products sold, the cost of repairs would be K50,000; If major defects were detected in all products sold, the cost would be K20,000. Pamba has not made any provision. Pamba also incurred K30,000 for training employees in the use of new equipment and treated this cost as a receivable as economic benefits are expected in the next 1 year due to skilled employees.

Required:

(a) Prepare the consolidated statement of financial position of Pamba group as at 31 December 2021. (35 marks)

(b) The Board of Directors of Pamba has been advised by the Finance Director to issue a convertible debt as a source of finance.

Required:

Explain the accounting treatment for a convertible debt. (5 marks)

[Total: 40 Marks]

SECTION B

There are FOUR (4) questions in this section.

Attempt any THREE (3) questions in this section.

<u>QUESTION TWO</u>

Zamboni Trading Ltd has prepared the following draft financial statements for your review

Zamboni Trading Ltd

Statement of profit or loss for the year ended 31 May 2020

	K000
Revenue	30,000
Raw materials consumed	(9,500)
Manufacturing overheads	(5,000)
Increase in inventories of work in progress and finished goods	1,400
Staff costs	(4,700)
Distribution costs	(900)
Depreciation	(4,250)
Interest payable	(350)
Interim dividend paid	(200)
	6,500

Statement of financial position as at 31 May 2020

	K000	**K000**
Assets		
Non-current assets		
Freehold land and buildings		20,000
Plant and machinery		14,000
Fixtures and fittings		5,600
		39,600
Current assets		
Prepayments	200	
Trade receivables	7,400	
Inventories	4,600	
Cash at bank	700	
		12,900
Total assets		**52,500**
Equity and liabilities		
Share Capital		21,000
Revaluation reserve		5,000
Retained Earnings		14,000
Total equity		40,000
Current liabilities		7,300
Non-current liabilities		
8% Loan notes 2024		5,200

Total equity and liabilities	**52,500**

Additional relevant information:

(i) Income tax of K2.1 million is yet to be provided for on profit for the current year. An unpaid under-provision for the previous year's liability of K400,000 has been identified on 5 June 2020 and has not been reflected in the draft accounts.

(ii) There was a revaluation of land and buildings during the year, creating the revaluation reserve of K5 million (land element K1 million). The effect on depreciation has been to increase the buildings charge by K300,000. Zamboni Trading Ltd adopts a policy of transferring the revaluation surplus included in equity to retained earnings as it is realized. The revaluation has already been accounted for in the draft statement of financial position. However, the transfer from the evaluation reserve is yet to be done.

(iii) Staff costs comprise 70% factory staff, 20% general office staff and 10% goods delivery staff.

(iv) An analysis of depreciation charge shows the following:

	K000
Buildings (50% production, 50% administration)	1,000
Plant and machinery	2,550
Fixtures and fittings (30% production, 70% administration)	700

Required:

Prepare the following:

(a) Statement of profit or loss and Other Comprehensive Income for the year ended 31 May 2020. (10 marks)

(b) Statement of financial position as at 31 May 2020. (6 marks)

(c) Statement of changes in equity for the year to 31 May 2020. (4 marks)

[Total: 20 Marks]

QUESTION THREE

Vitendwe Plc is considering growth through acquisition of a 100% stake in a suitable limited company. Vitendwe has obtained financial statements of two acquisition targets operating in the same industry, Wiza Ltd and Kanyi Ltd

Statements of Profit or Loss for the year ended 31 December 2022

	Wiza	Kanyi
	K'000	K'000
Revenue	24,000	41,000
Cost of sales	(21,000)	(36,000)
Gross profit	3,000	5,000
Operating expenses	(480)	(1,000)
Finance costs	(420)	(1,200)

	Wiza	Kanyi
Profit before tax	2,100	2,800
Income tax expense	(300)	(800)
Profit for the year	1,800	2,000
Note: dividends paid during the year	500	1,400

Statements of financial position as at 31 December 2022

		Wiza		Kanyi
		K'000		K'000
Assets				
Non-current assets				
Freehold factory (note (i))		8,800		nil
Plant and Equipment (note (ii))		10,000		4,400
Right of Use Assets (note (ii))		nil		10,600
		18,800		15,000
Current assets				
Inventory		4,000		7,200
Trade receivables		4,800		7,400
Bank		1,200		nil
Total assets		28,800		29,600
Equity and liabilities				
Equity shares of K2 each		4,000		4,000
Property revaluation reserve		1,800		nil
Retained earnings		5,200		1,600
		11,000		5,600
Non-current liabilities				
Lease obligations (note (iii))	nil		6,400	
5% loan notes	6,000		6,000	
Deferred tax	1,200		200	
Government grants	2,400		nil	
		9,600		12,600
Current liabilities				
Bank overdraft	nil		2,400	
Trade payables	6,200		7,600	
Government grants	800		nil	
Lease obligations (note (iii))	nil		1,000	
Current Tax	1,200		400	
		8,200		11,400
Total equity and liabilities		28,800		29,600

Further information:

(i) The original carrying amounts in respect of the companies Plant and equipment are as follows:

	Wiza	Kanyi
	K'000	K'000
Owned Plant	16,000	20,000
Right of Use Assets	nil	15,000

(ii) None of the companies disposed of plant during the year.

(iii) The interest rate implicit within Kanyi's leases is 8% per annum. For the purpose of calculating ROCE and gearing, all lease obligations are treated as long-term interest bearing borrowings.

(iv) The Directors of Vitendwe Plc would like to undertake a comparative financial analysis of the two acquisition targets based on the above financial statements using the following ratios:

Return on year end capital employed – ROCE (capital employed taken as shareholders' funds plus long-term interest bearing borrowings – see note (iii) above)
Pre-tax return on equity (ROE)
Net asset (total assets less current liabilities) turnover
Gross profit margin
Operating profit margin
Current ratio
Inventory holding period
Trade receivables' collection Period
Trade payables' payment period
Gearing (see note (iii) above
Interest cover
Dividend cover

Required:

(a) Calculate the above ratios for the Wiza and Kanyi based on the above financial statements**.** (10 marks)

(b) Prepare a report to the Directors of Vitendwe Plc that assesses the relative financial performance and financial position of Wiza and Kanyi for the year ended 31 December 2022, advising them of which acquisition target is more appropriate based on the ratios above. (10 marks)

[Total: 20 Marks]

QUESTION FOUR

Kamonde Ltd is a farming entity with a diverse range of activities including animal and crop husbandry. The directors of Kamonde Ltd are preparing financial statements for the year ended 31 December 2022. They require advice on how the following transactions must be accounted for in the financial statements:

Transaction 1 – Broiler poultry (chickens for meat) production

Broiler chickens are normally raised over a period of six weeks within the company's chicken runs. The process involves buying day old chicks and raising them to full grown chickens which are harvested through slaughter or sold as live chickens at open markets. The following information relates to broiler chicken production, harvesting and sales during the year to 31 December 2022:

				K'000
Opening inventory at 1 January 2022				
	Harvested chickens for sale in live state (2000 chickens)			200
	Slaughtered and Frozen chickens (1,000 chickens)			105
	Work In Progress	(500 Chickens)		30
Purchases of day old chicks		(32,000 chicks)		450
Production costs:				
	Feed		1,200	
	Labour		90	
	Power		120	
	Overheads		30	
			___	1,440.

A total of 31,000 chickens were sold (20,000 live at average price of K108 each and 11,000 slaughtered and frozen at an average price of K115 each) during the year to 31 December 2022. There were no deaths of live chickens from the inventory at 1 January 2022 (opening inventory). Of the day old chicks purchased during the period, the mortality rate was 1%. Closing inventory at 31 December 2022 includes 800 chickens slaughtered in December 2022, 1,800 full grown chickens harvested for sale as live chickens (all harvested during December 2022) and the remainder as work in progress with an average age of 4 weeks. The open market prices during December 2022 were K110 for each full grown harvested live chicken, K116 for each slaughtered chicken and K65 for each live 4 week old chicken. The cost of transporting each chicken to the market/customers is K2 and (for live chickens only) the market charges an average of K1.50 per chicken, regardless of age of the chicken. It costs K5 to slaughter and package each chicken before sell.

Transaction 2 – Farm buildings

Kamonde Ltd constructed a farm building on 1 January 2012 at a cost of K10 million. However, the company received a grant equal to 25% of the cost of the building from the government on 1 April 2012.

Kamonde Ltd had originally estimated the total useful economic life of the building as 50 years. However, during the year to 31 December 2017, the total useful economic life was revised to 45 years. The company has a policy to revalue buildings in accordance with IAS 16 Property Plant and Equipment. The building was last revalued to a fair value of K9.5 million on 1 January 2020. A revaluation to a fair value of K8.5 million on 1 January 2022 is yet to be reflected in the financial statements for the year to 31 December 2022. Kamonde Ltd has a policy of making transfers from the revaluation reserve to retained earnings in respect of realised revaluation surpluses. For capital grants from the government, Kamonde's policy is to account for the received grants separately as deferred income which is subsequently recognised in profit or loss over the related asset's useful economic life.

Required:

(a) Briefly state the IAS 41 Agriculture, recognition and measurement provisions as regards Biological Assets up to point of harvest. (3 marks)

(b) Explain how Kamonde Ltd must account for the broiler chickens activity in transaction 1 above showing amounts to report in financial statements for the year ended 31 December 2022 by way of extracts. (7 marks)

(c) Explain how Kamonde accounts for the farm building and the related grant in transaction 2 above in accordance with IAS 16 Property Plant and Equipment, and IAS 20 Government Grants showing amounts to report in the financial statements for the year ended 31 December 2022 by way of extracts. (10 marks)

[Total: 20 Marks]

<u>QUESTION FIVE</u>

Leasing is an important source of finance for many businesses. IFRS 16 *Leases* provides the principles to be adopted regarding recognition, measurement, presentation and disclosures of leases in the books of both lessees and lessors so that they both provide relevant information that faithfully represent the transactions.

Doka has entered into a lease agreement for an item of equipment which it has leased out to Pinka the lessee. The equipment has an original useful economic life of six (6) years. The lease, which commenced on 1 January 2020, has a term of five (5) years.

Legal title at the end of the lease remains with Doka, but the lessee can continue to lease the asset indefinitely at a rental that is substantially below market value. If Pinka cancels the lease, it must make a payment to Doka to recover its remaining investment. Gains or losses from fluctuations in fair value of the equipment accrue to Pinka. Doka's required rate of return on the lease is 10%.

On 1 January 2020, Pinka made a payment for initial lease rental of K85,000 and was to pay the same amount every 1 January from 2021 to 2024.

The equipment cost Doka K540,000 on 1 January 2020 and has a nil residual value.

Required:

(a) Explain the features in a lease that indicate a lease contract is a finance lease. (8 marks)

(b) Explain how Doka must account for the lease with Pinka in its financial statements for the year ended 31 December 2020. (12 marks)

[Total: 20 Marks]

END OF PAPER

CA2.1 SUGGESTED SOLUTIONS

SOLUTION ONE

(a) Pamba statement of financial position as at 31 December 2021

		K' 000
Assets		
Non-current assets		
Property, plant and equipment	3, 790 + 1, 630 + 125 w2 – 25 w2	5, 520
Goodwill	2, 255 – 255 w4	2, 000
Associate w6		584
Other investments	6, 000 – 3,750 w3 – 190 w3 – 560 w6 + 200	1, 700
		9,804
Current assets		
Inventory	1, 175 + 765 – 20 w5	1, 920
Receivables	940 + 670 – 30 w7 – 10 w10	1, 570
Bank	500 + 180	680
		4, 170
Total assets		13,974
Equity and liabilities		
Equity shares		5, 000
Retained Earnings w8		5, 777
		10,777
NCI w9		1, 130
11,907		
Non-current liabilities		
5% Loan notes	100 + 35	135
Current liabilities		
Contingent consideration	190 – 190	-
Payables	705 + 600 +12 w7 – 10 w10	1, 307
Taxation	525 + 100	625
		1, 932
		13,974

Workings **K' 000**

W1: Group structure
Pamba in Sunta 1, 600/2, 000 x 100% = 80% NCI 20%
Pamba in Amaya 150/500 x 100% =30%

W2:

Net assets of Sunta	@ acquisition 1.1.2021	@ SOFP year end
Ordinary shares	2, 000	2, 000
Share premium	-	-
Retained Earnings	760	710
Fair value adjustment:		

Property		125	125
Dep on fair value	125/5yrs	-	(25)
		2, 885	2, 810

Post acq Retained Earnings 2, 810 – 2, 885 = (75)
Parent (75) x 80% = (60) NCI = (75) x 20% = (15)

W3: Goodwill

Parent/Pamba consideration:		
Shares consideration	1, 000 @ K3.75	3, 750
Contingent consideration		190
NCI: (2, 000 x 20%) x K3		1, 200
Less Net assets @ acquisition w2		(2,885)
Goodwill @ acquisition		2, 255
Less impairment loss		(255)
Carrying amount		2,000

W4; Goodwill impairment
Parent 255 x 80% = 204 NCI 255 X 20% = 51

W5: Unrealised profit:
Sunta sold goods [150 x 40%] = 60 x50/150 = 20
Parent R/Earnings Dr: 20 x 80% = 16 NCI Dr:20 x 20% = 4 Inventory Cr: 20

W6: Associate

Consideration	560
Retained earnings (750 – 670) x 30%	24
	584

W7: Parent/Pamba adjustments
Provision
(50 x 20%) + (20 x 10%) = 12 R/Earnings Dr: 12 Payables Cr: 12

Training cost
R/Earnings Dr: 30 Receivables Cr: 30

W8: Group/ parent Retained Earnings

Pamba R/earnings	5, 885
From subsidiary: Sunta w2	(60)
Unrealised profit w5	(16)
Goodwill impairment w4	(204)
Decrease in Contingent consideration	190
From associate: Amaya w6	24
Pamba adjustments:	
Provision w7	(12)
Training cost w7	(30)
	5, 777

W9: NCI

At acquisition	(see goodwill working)	1, 200
From subsidiary: Sunta		
R/Earnings w2		(15)
Unrealised profit w5		(4)
Goodwill impairment w4		(51)

1, 130

W10: Inter-group debts

Payables	Dr: 10	Receivables	Cr: 10

(b)

Convertible debt

1. The present value of the debt/liability is calculated by discounting future cash flows using the effective interest rate.
2. Equity is the difference between the total convertible debt and the present value of the debt liability
3. Equity reported in the statement of financial position remains unchanged from reporting period to the next.
4. The liability is measured at amortised cost annually.
5. The finance cost is calculated using the effective interest rate and it is reported in the statement of profit or loss

SOLUTION TWO

(a) Zamboni Trading Ltd a) Statement of profit or loss for the year ended 31 May 2020

	K000
Revenue	30,000
Cost of sales (w1)	(19,650)
Gross profit	10,350
Distribution costs (w1)	(1,370)
Administrative expenses (w1)	(1,930)
Profit from operations	7,050
Finance costs	(350)
Profit before tax	6,700
Tax (w2) (2,100 +400)	(2,500)
Profit after tax	4,200
OCI	
Revaluation of property	5,000
Total Comprehensive Income	9,200

b) **Statement of financial position as at 31 May 2020**

	K000	**K000**
Assets		
Non-current assets		
Property, plant and equipment		39,600
Current assets		
Inventory	4,600	
Trade and other receivables (7,400 + 200)	7,600	
Cash and cash equivalents	700	
		12,900
Total assets		**52,500**
Equity and liabilities		
Capital and reserves		
Equity shares		21,000
Revaluation reserve (5000-300)		4,700
Retained earnings (14000+300-2500)		11,800

Total equity		37,500
Non-current liabilities		
8% Loan notes 2024		5,200
Current liabilities		
Trade and other payables	7,300	
Taxation (2,100 + 400)	2,500	
		9,800
Total equity and liabilities		**52,500**

c) **Statement of changes in equity for the year ended 31 May 2020**

	Share capital	**Revaluation reserve**	**Retained profits**	**Total**
	K000	**K000**	**K000**	**K000**
Balance at beginning of year	21,000	0	7,500	28,500
Dividends paid			(200)	(200)
Profit for the period			4,200	4,200
Other comprehensive income:				
Revaluation of non current assets		5,000		5,000
Transfer of excess depreciation on revaluation		(300)	300	0
Balance at end of year	**21,000**	**4,700**	**11,800**	**37,500**

Workings

1 **Allocation of expenses**

	Cost of sales	**Admin**	**Distrib**
	K000	**K000**	**K000**
Raw materials consumed	9,500		
Manufacturing overheads	5,000		
Increase in inventories	(1,400)		
Staff costs (70%/20%/10%)	3,290	940	470
Distribution costs			900
Depreciation			
Building (50%/50%)	500	500	
Plant and machinery	2,550		
Fixtures and fittings (30%/70%)	210	490	
	19,650	1,930	1,370

2 Retained earnings

	K000	**K000**
Accumulated profits carried forward per question		14,000
Less tax charge		
- Current year estimate	2,100	
- Underprovision in previous year	400	
		(2,500)
Add transfer of excess depreciation on revalued building		300
		11,800

SOLUTION THREE

(a)

Area of analysis	**Ratio**	**Formula**	**Wiza**	**Kanyi**
Profitability	ROCE	PBITX100/(Equity+interest bearing liabilities)	(2100+420)X100/(6000+11000) =14.8%	(2800+1200)X100/(6400+6000+2400+1000+5600) =18.7%
	Asset T/O	Revenue/(Total assets less current liabilities)	24000/20600 =1.2 times	41000/18200 =2.3 times
	GP Margin	GPX100/Revenue	3000X100/24000 =12.5%	5000X100/41000 =12.2%
	OP Margin	PBITX100/Revenue	2520X100/24000 =10.5%	4000X100/41000 =9.8%
Liquidity	Current Ratio	Current assets/current liabilities	(4000+4800+1200)/8200 =1.2:1	(7200+7400)/11400 =1.3:1
	Inventory Holding Period	Closing inventoryX365/(Cost of sales)	4000X365/21000 =69.5 days	7200X365/36000 =73 days
	Trade Receivables Period	Closing trade receivablesX365/revenue	4800X365/24000 =73 days	7400X365/41000 =65.9 days
	Trade Payables Period	Closing trade payablesX365/cost of sales	6200X365/21000 =107.8 days	7600X365/36000 =77.1 days
Gearing	Gearing Ratio	Interest bearing liabilitiesX100/(Equity+interest bearing liabilities)	6000X100/(6000+11000) =35.3%	(6400+6000+2400+1000)X100/(15800+5600) =73.8%
	Interest Cover	PBIT/Finance costs	2520/420 =6 times	4000/1200 =3.3 times
Shareholders	ROE	PATX100/Equity	2100X100/11000 =19.1%	2800X100/5600 =50%
	Dividend Cover	PAT/Dividends	1800/500 =3.6 times	2000/1400 =1.4 times

(b) REPORT

To : Directors of Vitendwe Plc
From : Financial Analyst
Date : December 2022
Subject: Relative financial performance and financial position of Wiza and Kanyi for the year ended 31 December 20220.

---

1. INTRODUCTION

This report analyses the relative financial performance and position of Wiza Ltd and Kanyi Ltd using ratio analysis. The areas of analysis include Profitabiity, Liquidity, Gearing and perforformance from Shareholders' point of view.

2. PROFITABILITY

Overall, Kanyi is much more profitable than Wiza as measured by the return on capital employed (ROCE). Kanyi's ROCE of 18.7% is higher than that of Wiza of only 14.8%. ROCE is traditionally seen as a measure of management's overall efficiency in the use of the available capital (both debt and equity).

The main source of Kanyi's superior profitability is its ability to generate revenue using the available capital as measured by the Asset Turnover. Kanyi's asset turnover stands at 2.3 times whilst that of Wiza at only 1.2 times. Kanyi's asset turnover is therefore about double that of Wiza. The two companies' profit margins (gross profit and operating profit) are broadly similar though Wiza has a slight edge on profit margin performance. It could be that Wiza charges higher prices than Kanyi or has better cost control (both cost of sales and other operating costs) than kanyi. Wiza has gross profit and operating profit margins of 12.5% and 10.5% compared to those of Kanyi at 12.2% and 9.8% respectively.

In conclusion, Kanyi is a better acquisition target than Wiza with regard to profitability.

3. LIQUIDITY

Both companies appear to have relatively low liquidity as measured by the current ratio. Both Wiza and Kanyi have about the same current ratio of 1.2 and 1·3 respectively though Wiza is in a better position with a cash balance of K1.2 million in the bank whereas Kanyi has a bank overdraft amounting to K2.4 million. In this respect Kanyi's policy of high dividend
payouts (leading to a low dividend cover and low retained earnings) is very questionable.

Looking in more depth, both companies have similar inventory days; Kanyi collects its receivables one week earlier than Wiza (perhaps its credit control procedures are more active due to its large overdraft), and of notable difference is that Wiza receives (or takes) a lot longer credit period from its suppliers (107.8 days compared to 77.1 days). This may be a reflection of Wiza being able to negotiate better credit terms due to possibly having higher credit rating.

4. GEARING AND SHAREHOLDERS INTERESTS

From the gearing ratio it can be seen that 73.8% of Kanyi's assets are financed by borrowings with substantial financing of assets through leases. This is very high in absolute terms and about double Wiza's level of gearing (of only 35.3%. The effect of Kanyi's high gearing is a higher return on equity (ROE). Whilst this may seem advantageous to the equity shareholders of Kanyi, it does not come without risk. The interest cover of Kanyi is only 3·3 times whereas that of Wiza is 6 times. Kanyi's low interest cover is a direct consequence of its high gearing and it makes profits vulnerable to relatively small changes in operating activity. For example, small reductions in sales, profit margins or small increases in operating expenses could result in losses and mean that interest charges would not be covered.

Another observation is that Wiza has been able to take advantage of the receipt of government grants whilst Kanyi has not. This may be due to Wiza purchasing its plant (which may then be eligible for grants) whereas Kanyi leases its plant. It may be that the lessor has received any grants available on the purchase of the plant and passed some of this benefit on to Kanyi via lower lease finance costs (at 8% per annum, this is considerably lower than Merlot has to pay on its 10% loan notes).

5. CONCLUSION

Although both companies may operate in a similar industry and have similar profits after tax, they would represent very different purchases. Kanyi's sales revenues are over 70% more than those of Wiza, it is financed by high levels of debt, it chooses to lease rather than buy its replacement plant. Should Kanyi be replacing the owned plant at end the plant's life, its replacement will either require a cash injection if it is to be purchased (Kanyi's overdraft of K2·4 million already requires serious attention) or create even higher levels of gearing if it continues its policy of leasing. In short although Kanyi's overall return seems more attractive than that of Wiza, it would represent a much more risky investment. Ultimately the investment decision may be determined by Vitendwe's attitude to risk, possible synergies with its existing business activities, and not least, by the asking price for each investment.

SOLUTION FOUR

(a) IAS 41 *Agriculture* prescribes the accounting treatment for agricultural activity – the transformation of biological assets (living plants and animals) into agricultural produce (harvested product of the entity's biological assets). The standard generally requires biological assets to be measured at fair value less costs to sell. **Costs to sell** are defined as incremental costs directly attributable to the disposal of an asset, excluding finance costs and income taxes. [IAS 41.5]

Initial recognition

An entity should recognise a biological asset or agriculture produce only when the entity controls the asset as a result of past events, it is probable that future economic benefits will flow to the entity, and the fair value or cost of the asset can be measured reliably. [IAS 41.10]

Measurement

Biological assets should be measured on initial recognition and at subsequent reporting dates at fair value less estimated costs to sell, unless fair value cannot be reliably measured. [IAS 41.12]

Agricultural produce should be measured at fair value less estimated costs to sell at the point of harvest. [IAS 41.13] Because harvested produce is a marketable commodity, there is no 'measurement reliability' exception for produce.

The gain on initial recognition of biological assets at fair value less costs to sell, and changes in fair value less costs to sell of biological assets during a period, are reported in net profit or loss. [IAS 41.26]

A gain on initial recognition of agricultural produce at fair value less costs to sell should be included in net profit or loss for the period in which it arises. [IAS 41.28]

All costs related to biological assets that are measured at fair value are recognised as expenses when incurred, other than costs to purchase biological assets.

Fair value measurement stops at harvest. IAS 2 *Inventories* applies after harvest. Fair value at point of harvest must be taken as cost of inventory in subsequently measuring the inventory in accordance with IAS 2.

(b) Kamonde must measure the biological assets (the 4 weeks old chickens) at their fair value at 31 December less costs to sale. This will be computed as follows:

Number of 4 weeks old chickens:

Total Inventory of all chickens at 1.1.2022 (2000+1000+500)	3,500	
Add Day old chicks added to production during the year	32,000	
Less mortality 1%X32,000	(320)	
Less Sales	(31,000)	
Less Harvested Chickens in closing inventory:		
▪ Slaughtered		(800)
▪ Live		(1,800)

1,580

Valuation of biological assets (4 week old chickens) at 31.12.2022			K'000
Gross fair value	1,580X65		103
Less costs to sell	(2+1.5)X1,580		(6)
Fair value less costs to sale			97

The K97,000 value of the 4 weeks old chickens will be presented separately in SFP under the heading 'Biological Assets'.

The inventory of harvested produce from biological assets will be measured at fair value at the point of harvest (December 2022) less costs to sell. This will be computed as follows:

		K'000
Live Chickens:		
Gross fair value	1,800X110	198
Less costs to sell	(2+1.5)X1,800	(6)
Point of harvest Fair value less costs to sell		192
Slaughtered Chickens:		
Gross fair value	800X116	93
Less costs to sell	(2+5)X800	(6)
Point of harvest Fair value less costs to sell		87

Therefore the total amount to report under current assets within Inventory at 31 December 2022 in respect of the harvested produce from biological assets will be K279,000 (ie 192,000+87,000).

The following amounts will be reported in the SPL for the year to 31 December 2022:

		K'000	K'000
Revenue	(20,000X108+11,000X115)		3,425
Cost of sales			
Opening inventory	(200+105)	305	
Costs of managing biological assets	(450+1,440)	1,890	
Closing inventory		(279)	
Increase in value of biological assets	(97-30)	(67)	
			(1,849)

(c) 1. The building will be accounted for as follows:

		K'000	
Carrying amount b/d 1.1.2022	(9,500X35/37)		8,986
Revaluation loss at 1.1.2022	(balance)		(486)
Fair value at 1.1.2022 as new carrying amount upon revaluation		8,500	
Depreciation charge for y/e 31.12.2022 to report in SPL	8,500/35		(243)

Carrying amount to report in the SFP at 31.12.2022			8,257

Cost model carrying amount at 1.1.2022:

Original cost		10,000
Accum deprec to 31.12.2016	10,000/50X5	(1,000)
Cost model amount at 1.1.2017		9,000
Accum depreciation to from 1.1.2017 to 1.1.2022	9,000/40X5	(1,125)
Cost model carrying amount at 1.1.2022		7,875

Since the cost model carrying amount (historic cost) of the building of K7,875,000 at 1.1.2022 is less than the carrying amount (based on past revaluations) b/d at 1.1.2022 of K8,986,000, Kamonde Plc must have reported a revaluation reserve b/d at 1.1.2022 of K1,111,000 (ie 8,986,000-7,875,000). Therefore, the whole revaluation loss of K486,000 at 1.1.2022 must be reported as other comprehensive income. It is a partial reversal of the balance in the revaluation reserve at 1.1.2022. In addition, Kamonde must make a transfer from the remainder of the revaluation reserve balance to retained earnings. Movements in the revaluation reserve will be as follows:

			K'000
Bal b/d 1.1.2022			1,111
Revaluation loss at 1.1.2022			(486)
	625		
transfer to retained earnings 625/35		(18)	
Bal c/d 31.12.2022		607	

2. The government grant will be accounted for as follows:

			K'000
Initial credit to deferred grant income account 1.1.2012	25%X10,000		2,500
Grant income recognised in SPL up to 31.12.2016	2,500/50X5		(250)
			2,250
Grant income recognised in SPL from 1.1.2017 to 31.12.2022			
- amount per year	2,250/40 = 56.25		
- total	56.25X6	(338)	
Deferred Grant income balance at 31.12.2022		1,912	
Current liability portion			(56)
Non Current liability portion	(balance)	1,856	

Extracts from fiinancial statements for the year to 31.12.2022 in respect of the building and government grant are as follows:

SPLOCI		**K'000**
- **P/L**		
Deprecition	(243)	

Government grant income		56
- **OCI**		
Loss on revaluation of building	(486)	
SFP		
- Non current assets		
PPE	8,257	
- Equity		
Revaluation reserve	607	
- Non current liabilities		
Government grants	1,856	
- Current liabilities		
Government grants		56

SOLUTION FIVE

(a) Features of a finance lease include:

- Finance lease transfers substantially all risks and rewards incidental to the ownership of an asset that is subject of a lease to the lessee.
- At the inception of the lease, **the present value of the minimum lease payments amounts to at least substantially all of the fair value** of the leased asset.
- If the lessee is entitled to cancel a lease, the lessor's losses associated with the cancellation are borne by the lessee.
- Gains or losses from fluctuations in fair value are borne by the lessee
- The lessee has the ability to continue to lease asset for a secondary period at a rent that is substantially lower than market rent.
- The lease transfers ownership of the asset to the lessee by the end of the lease term.
- The lease term is for the major part of the asset's economic life, even if title is not transferred.
- The lessee has an option to buy the asset at a price expected to be lower than the fair value at the time the option is exercised.
- The leased assets are of a specialized nature so that only the lessee can use them without major modifications being made.

(b) The lease contract between Doka and Pinka is a finance lease due to the following provisions:

- The lessee Pinka continues to lease the asset indefinitely at a rental substantially below market rate.
- Lessee Pinka is to bear costs associated with contract cancellation.
- Lessee Pinka to bear gains and losses associated with fluctuation in fair values of the leased asset.
- Lease term (5 years) forms major/substantial part of the asset's useful economic life (6 years).

Despite one feature in this contract pointing to an operating lease, that is, legal title of the leased asset remains with lessor (Doka), the qualifying features far outweigh the non qualifying features, hence Doka to account for the lease as finance lease.

- Doka would have to derecognize the asset from its books as it will be recognized by Pinka (Lessee)

Net investment in finance lease

Year ending:	Bal b/f	Lease rental	Sub-total	Interest	Bal c/f
	'K'	'K'	'K'	'K'	'K'
31/12/2020	-	-	455,000	45,500	500,500
31/12/2021	500,500	(85,000)	415,500		

Based on the above table, Doka would recognize the asset net investment in Finance lease (NIIFL) at 31 December 2020 in its statement of financial position in terms of current asset portion of K85,000 being rental receivable within 12 months and non current asset portion of K415,500 being remainder of the total investment in the lease at 31 December 2020.

Further, Doka would recognize interest income of K45,500 (10%* 455,500) in its statement of profit or loss for the year ended 31 December 2020.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

CA ZAMBIA APPLICATION ADVANCED DIPLOMA IN ACCOUNTANCY

CA 2.2: MANAGEMENT ACCOUNTING

TUESDAY 14 JUNE 2022

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)

Mongu Packaging Ltd (MPL) based in the western part of Zambia, buys rice from the local farmers, packs and sells it to other regions of the country. The company has employed 70 warehouse workers. In its 2022 expansion programme, MPL intends to export some of its products to a neighbouring country. The current economic environment will help the company to have a breakthrough in its export market. The world is faced with a number of covid-19 variants and this has affected the way business is carried out. The management of MPL has argued on the need to continue with budgeting. It has decided to enhance the budgetary system and is hopeful to immediately address the concern of cash flows. The currently year end closing bank balance is projected to be an overdraft of K1,085,000.

Budgetary information was gathered and is as follows:-

(i) The current sales price is currently K20.50 per kg but will be increased by 10% at the start of Quarter 2 in 2022. Sales are projected for each quarter as follows:-

	Quarter 1	**Quarter 2**	**Quarter 3**	**Quarter 4**
Year 2021	-	-	-	200,000kgs
Year 2022	350,000kgs	485,000kgs	305,000kgs	160,000kgs

(ii) All sales are on credit and debts are settled in the quarter following sale. Irrecoverable debts of 5% of total revenue are anticipated.

(iii) MPL'S quarterly inventory policy is 200,000 kgs of unshelled rice at the beginning and end of each quarter.

(iv) The shelled rice is packed into 50kgs bags and stored in racks of 100 bags. 100 kgs of unshelled rice is required for each bag of 50kgs shelled rice.

(v) Labour is projected at a rate of K40.00 per hour for the first Quarter and thereafter increased to K45. The labour time for both packing and stacking is 8 hours per day for each employee. Wages are paid in the same quarter incurred.

(vi) The variable overheads cost is K4.5 per kg and is expected to increase by K0.50 with effect from Quarter 3 of 2022. Variable overheads are paid in the same quarter incurred.

(vii) The unshelled rice is sourced from various suppliers including small scale farmers at a price of K9.85 per kg. MPL's suppliers are paid in the same quarter of the transaction.

(viii) Fixed costs are forecast to be K17,500 per month and paid on quarterly basis. Depreciation per month is K2,895 and is not included in the forecast fixed costs of K17,500.

(ix) Assume six (6) days in a week and four (4) weeks in a month.

Required:

(a) Explain five (5) objectives of budgetary planning and control systems. (5 marks)

(b) Explain four (4) changes that may make it difficult to forecast future events. (4 marks)

(c) Prepare a cash budget for MPL for the year 2022, providing quarterly balances.

(20 marks)

(d) Explain possible management actions from the above cash budget, three (3) for cash deficit and three (3) for cash surplus. (6 marks)

(e) Calculate the projected profit for 2022. (5 marks)

[Total: 40 Marks]

SECTION B

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

<u>QUESTION TWO</u>

Lubasi Lubasi is an accountant working for Zambia Book Centre (ZBC). He is in charge of inventory management for ZBC and one of the books he keeps in inventory is a receipt book used by different districts in his territory. Mr Lubasi Lubasi conducted inventory taking on December 31 2021 in the presence of external auditors and it was discovered that Mr Lubasi Lubasi's bin cards were showing that he had 500 receipt book while the actual receipt books counted were only 450 at the total cost of K4,500. Auditors requested the organisation to amend the records accordingly to ensure that there were no misstatements in the inventory records.

Your supervisor has provided you with additional transactions for the month of January 2022 as indicated below.

Date	Description	Quantity	Cost Value (K)	Sales value (K)
05	Purchases	2,000	24,000	
10	Sales	1,500		9,000
15	Purchases	3,000	45,000	
20	Purchases	500	10,000	
29	Sales	2,500		62,500

Required:

(a) Calculate the value of the closing Inventory of receipt books for ZBC for the period ending 31 January 2022 using :

- (i) First In First Out (FIFO) Method (5 marks)
- (ii) Last In First Out (LIFO) Method (5 marks)
- (iii) Cumulative Weighted Average Pricing (AVCO) Method rounding off to (2 decimal points) (5 marks)

(b) Calculate the profit made on the sales for each method in (a) above. (2 marks)

(c) Explain three (3) possible reasons why the records of Receipts books for Mr Lubasi Lubasi are not matching with the actual receipts available as at 31 December 2021. (3 marks)

[Total:20 Marks]

QUESTION THREE

Muchinga Ltd is a manufacturing company based in Lusaka. The actual production overhead costs and activity levels for Departments X and Y of Muchinga Ltd for the month of June 2022 were as follows:

	Department X	Department Y
Production overhead cost (K)	320,000	349,000
Direct labour (hours)	1,200	1,600
Machine usage (hours)	1,000	1,400

Muchinga Ltd absorbs overheads on a direct labour hour basis at K250 per hour in Department X and on a machine hour basis at K275 per hour in Department Y.

Required:

(a) In relation to the actual production overheads costs and activity levels information for each department:

(i) Calculate the under or over absorption of overheads for each department. (4 marks)

(ii) Explain the accounting treatment of the under and over absorption of overheads in the statement of profit or loss. (4 marks)

The budget and actual records of Muchinga Ltd for 2022 provided the following information in relation to materials and labour planning and operations:

Materials planning and operations
A new product B to be produced requires raw materials cost per unit of K40.00 (2 kg of raw materials at K20 per kg). Due to a rise in prices for the raw materials during the year, the average market price of the raw material has risen to K30 per kg. During the year, 1,000 units of B were produced at a cost of K65,000 for 2,200 kg of raw material were used in the production of product B.

Labour planning and operations
Product A requires three (3) hours of labour per unit at a standard rate of K120 per hour. In a June 2022 the budget was to produce 500 units. Actual results were as follows:

Hours worked	1,700 hours
Production	540 units
Wages cost	K210,000

Shortly after production was started, it was realised that the labour force would claim an extra K5 per hour in the production of A due changes in the labour market.

Required:

(b) Calculate the following:

(i) Material total planning variance	(2 marks)
(ii) Labour total planning variance	(2 marks)
(iii) Material operational price variance	(2 marks)
(iv) Material operational usage variance	(2 marks)
(v) Labour operational rate variance	(2 marks)
(vi) Labour operational efficiency variance	(2 marks)

[Total: 20 Marks]

QUESTION FOUR

(a) Life cycle costing has a different purpose from cost accumulation systems that measure actual costs of production and sales.

Required:

(i) Explain the purpose of life cycle costing (2 marks)

(ii) Explain any four (4) benefits of life cycle costing (4 marks)

(b) High-grade Ltd's process costing information for the month of January 2022 is as follows:

- Opening work in progress: 30,000 units valued at K164,000. The degree of completion for the opening work in progress was as follows:

Materials	100%
Conversion	60%

- Units started during January: 60,000 units valued at K396,000
- Conversion cost added in January: K335,000
- Units completed during January: 80,000 units
- The balance of the units was work in progress on 31 January 2022 whose degree of completion was as follows:

Materials	100%
Conversion	50%

- There were no losses in the process

Required:

Using the FIFO method:

(i) Calculate the equivalent units of production for each element of cost. (3 marks)

(ii) Calculate the cost per equivalent unit of production. (3 marks)

(iii) Prepare the process account for the month of January, 2022. (8 marks)

[Total: 20 Marks]

QUESTION FIVE

Tizone Manufacturing Ltd (TML) was established in 2015. TML produces carbonated drinks. The company has since grown from a single product to four products in first three (3) years in its operations. The management is reviewing TML's performance for the immediate past year.
The following information concerning the four products manufactured by TML is given below:

Product	Chipokapoka	Fighter	Warrior	Kaimbi
Selling price (K/unit)	31.50	42.75	40.95	
Material X1X (kg/unit)	2.00	3.00	3.00	
Material X2X (kg/unit)	3.00	3.30	2.40	4.50
Direct labour (hours/unit)	0.90	1.80	2.25	2.55
Variable production overheads (K/unit)	1.65	1.95	1.65	2.10
Fixed production overheads (K/unit)	2.25	2.40	1.96	2.10
Expected demand for next month (units)	1,425	1,500	1,350	

Products chipokapoka, fighter and warrior are sold to customers of TML, while product kaimbi is a component that is used in the manufacture of other products.

Material X1X, is expected to be in short supply in the next period. TML has just received a delivery of 8,250kg of Material X1X and this is expected to be the amount held in inventory at the start of the next month. The current market price for Material X1X is K3.75 per kg.

Material X2X is available at a price of K2.00 per kg and TML does not expect any problems in securing supplies of this material.

Direct labour is paid at a rate of K4.00 per hour.

Greens Limited has recently approached TML with an offer to supply a substitute for Product kaimbi at a price of K15.30 per unit. TML would need to pay an annual fee of K75,000 for the right to use this patented substitute.

Required:

(a) Calculate the optimum production for Products chipokapoka, fighter and warrior for the next period, on the assumption that additional supplies of Material X1X are not purchased. (9 marks)

(b) Calculate the maximum price per kg that TML will be willing to pay if it decided to purchase further supplies of Material X1X to meet demand for Products chipokapoka fighter and warrior. (4 marks)

(c) Discuss whether TML Plc should manufacture Product kaimbi or buy the substitute offered by Greens Limited. Your answer must be supported by appropriate calculations. (7 marks)

[Total 20 Marks]

END OF PAPER

CA2.2 SUGGESTED SOLUTIONS

SOLUTION ONE

(a) **Objectives of budgetary planning and control systems**

- **Planning** for the future in line with the objectives of the organisation.
- **Controlling** costs by comparing the plan or the budget with the actual results and investigating significant differences between the two.
- **Co-ordination** of the different activities of the business by ensuring that managers are working towards the same common goal (as stated in the budget).
- **Communication.** The budgets communicate the targets of the organisation to individual managers.
- **Motivation.** Budgets can motivate managers by encouraging them to beat targets or budgets set at the beginning of the budget period. Bonuses are often based on 'beating budgets'. Budgets, if badly set, can also demotivate employees.
- **Evaluation** – The performance of managers is often judged by looking at how well the manager has performed 'against budget'.
- **Authorisation** – Budgets act as a form of authorisation of expenditure.

(b) **Changes that may make it difficult to forecast future events**

(i) **Political and economic changes**

Changes in interest rates, exchange rates or inflation can mean that future sales and costs are difficult to forecast.

(ii) **Environmental changes**

The eruption of pandemics might have a considerable impact on some companies' markets.

(iii) **Technological changes**

These may mean that the past is not a reliable indication of likely future events. For example, new faster machinery may make it difficult to use current output levels as the basis for forecasting future production output.

(iv) **Technological advances**

Advanced manufacturing technology is changing the cost structure of many firms. Direct labour costs are reducing in significance, and fixed manufacturing costs are increasing. This causes forecasting difficulties because of the resulting changes in cost behaviour patterns, breakeven points and so on.

(v) **Social changes**

Alterations in taste, fashion and the social acceptability of products can cause forecasting difficulties.

(c) **Cash budget for MPL for the year 2022**

Quarter	**1**	**2**	**3**	**4**
	K'000	**K'000**	**K'000**	**K'000**
Cash receipts :				
Trade sales (w1)	3,895	6,816	10,390	6,534
Total cash receipts	**3,895**	**6,816**	**10,390**	**6,534**
Cash payments:				
Trade purchases (w2)	(3,448)	(4,777)	(3,004)	(1,576)
Labour cost (w3)	(1,613)	(1,814)	(1,814)	(1,814)
Variable Overheads (w4)	(1,575)	(2,183)	(1,525)	(800)
Fixed cost (w5)	(53)	(53)	(53)	(53)
Total cash payments	**(6,689)**	**(8,827)**	**(6,396)**	**(4,243)**
Net cash flow	(2,794)	(2,011)	3,994	2,291
Opening cash balance	1,085	(1,709)	(3,720)	274
Closing cash balance	(1,709)	(3,720)	274	2,565

Workings:

1. **Sales**

Quarter	4 -2021	1-2022	2-2022	3-2022	4-2022
Shelled rice (kgs)	200,000	350,000	485,000	305,000	160,000
Selling price (K)	20.50	20.50	22.55	22.55	22.55
Sales (K)	4,100,000	7,175,000	10,936,750	6,877,750	3,608,000
Less: 5% irrecoverable debts	(205,000)	(358,750)	(546,838)	(343,888)	(180,400)
Net sales	3,895,000	6,816,250	10,389,912	6,533,862	3,427,600
Cash receipt		3,895,000	6,816,250	10,389,912	6,533,862

2. **Purchases**

Quarter	4 -2021	1-2022	2-2022	3-2022	4-2022
Sales (kgs)	200,000	350,000	485,000	305,000	160,000
Opening inventory (kgs)	(200,000)	(200,000)	(200,000)	(200,000)	(200,000)
Closing inventory (kgs)	200,000	200,000	200,000	200,000	200,000
Purchases (kgs)	200,000	350,000	485,000	305,000	160,000
Purchase price (K)	9.85	9.85	9.85	9.85	9.85
Purchases cost (K)	1,970,000	3,447,500	4,777,250	3,004,250	1,576,000

3. **Labour cost**

Quarter	1	2	3	4
Total hours per quarter (8x6x4x 70)	40,320	40,320	40,320	40,320
Labour rate	K40/hr	K45/hr	K45/hr	K45/hr
Labour cost (K)	1,612,800	1,814,400	1,814,400	1,814,400

4. Variable overheads

Quarter	1	2	3	4
Rice (Kgs)	350,000	485,000	305,000	160,000
VOR (K/Kg)	4.5	4.5	5	5
Variable Overhead cost (K)	1,575,000	2,182,500	1,525,000	800,000

5. Fixed costs

K17,500 /mth x 3 months = K52,500 per quarter

(d) **Possible Management action**

The first half of the year 2022 will experience a cash deficit and therefore the following action could be taken:

(i) **Postpone some payments**
(ii) **Negotiate with suppliers on the possibility of credit terms**
(iii) **Review the credit policy with the customers by reducing the days**

The second half of the year 2022 will experience a cash surplus and therefore the following action could be taken:

(i) **Pay the payables**
(ii) **Purchase non-current assets**
(iii) **Invest in short term deposits**

(e) **Projected profit**

	K	**K**
Sales (7,175+10,936.75+6,877.75+3,608)		28,597,500
Less cost of sales:		
Opening inventory (200,000 x 9.85)	1,970,000	
Add purchases (3,447.5 + 4,777.25+3,004.25+1,576)	12,805,000	
Less closing inventory (200,000 x 9.85)	(1,970,000)	(12,805,000)
Gross profit		15,792,500
Expenses:		
Bad debts (358.75+546.838+343.888+180.4)	1,429,876	
Labour (1,612.8 + 1,814.4+1,814.4+1,814.4)	7,056,000	
Variable overheads (1,575+2,182.5 +1,525+800)	6,082,500	
Fixed costs (17,500 x 12)	210,000	
Depreciation (2,895 x 12)	34,740	(14,812,116)
Projected profit		**979,384**

SOLUTION TWO

(a)

(i)

FIFO METHOD FOR THE MONTH OF JANUARY 2022									
DATE	DESCRIPTION	QTY	UNIT PRICE	TOTAL	DATE	DESCRIPTION	QTY	UNIT PRICE	TOTAL
1	BALANCE BF	450	10	4,500	10	SALES/ISSUES	450	10	4,500
5	PURCHASES/RECEIPTS	2,000	12	24,000			1,050	12	12,600
						TOTAL	**1,500**		**17,100**
11	BALANCE	950	12	11,400					-
15	PURCHASES/RECEIPTS	3,000	15	45,000	29	SALES/ISSUES	950	12	11,400
20	PURCHASES/RECEIPTS	500	20	10,000			1,550	15	23,250
				-		**TOTAL**	**2,500**		**34,650**
31	BALANCES	1,450	15	21,750					-
	BALANCES	500	20	10,000					-
	TOTAL	**1,950**		**31,750**					-
ANSWER		**THE VALUE OF CLOSING INVENTORY USING FIFO IS**							**31,750**

(a) (ii)

LIFO METHOD FOR THE MONTH OF JANUARY 2022									
DATE	DESCRIPTION	QTY	UNIT PRICE	TOTAL	DATE	DESCRIPTION	QTY	UNIT PRICE	TOTAL
1	BALANCE BF	450	10	4,500	10	SALES/ISSUES	1,500	12	18,000
5	PURCHASES/RECEIPTS	2,000	12	24,000		**TOTAL**	**1,500**		**18,000**
11	BALANCE	450	10	4,500					-
	BALANCE	500	12	6,000	29	SALES/ISSUES	500	20	10,000
15	PURCHASES/RECEIPTS	3,000	15	45,000			2,000	15	30,000
20	PURCHASES/RECEIPTS	500	20	10,000		**TOTAL**	**2,500**		**40,000**
31	BALANCES	450	10	4,500					-
	BALANCES	500	12	6,000					
	BALANCES	1,000	15	15,000					-
	TOTAL	**1,950**		**25,500**					-

(a) (iii)

AVCO METHOD FOR THE MONTH OF JANUARY 2022									
DATE	DESCRIPTION	QTY	UNIT PRICE	TOTAL	DATE	DESCRIPTION	QTY	UNIT PRICE	TOTAL
1	BALANCE BF	450	10	4,500	10	SALES/ISSUES	1,500	11.63	17,445
5	PURCHASES/RECEIPTS	2,000	12	24,000		**TOTAL**	**1,500**		**17,445**
	TOTAL	**2,450**	**11.63**	**28,500**					
11	BALANCE	950	11.63	11,049					-
15	PURCHASES/RECEIPTS	3,000	15	45,000	29	SALES/ISSUES	2,500	14.84	37,100
20	PURCHASES/RECEIPTS	500	20	10,000		**TOTAL**	**2,500**		**37,100**
	TOTAL	**4,450**	**14.84**	**66,049**					
									-
31	BALANCES	1,950	14.84	28,938					-
	TOTAL	**1,950**		**28,938**					-
ANSWER		**THE VALUE OF CLOSING INVENTORY USING AVCO IS**							**28,938**

(b) PROFIT CALCULATION

DETAILS	FIFO	LIFO	AVCO
SALES ON 10 JANUARY	9,000	9,000	9,000
SALES ON 29 JANUARY	62,500	62,500	62,500
TOTAL SALES FOR A MONTH	**71,500**	**71,500**	**71,500**
LESS VALUE OF ISSUED ITEMS			
ISSUE OR SALES ON 10	17,100	18,000	17,445
ISSUE OR SALES ON 29	34,650	40,000	37,100
TOTAL COST OF ISSUE	**51,750**	**58,000**	**54,545**
PROFIT	**19,750**	**13,500**	**16,955**

ALTRNATIVE WORKINGS OR SOLUTION

SALES	**71,500**	**71,500**	**71,500**
OPENING INVENTORY	4,500	4,500	4,500
PURCHASES	79,000	79,000	79,000
TOTAL INVENTORY	**83,500**	**83,500**	**83,500**
LESS CLOSING INVENTORY	31,750	25,500	28,938
COST OF SALES	51,750	58,000	54,562
GROSS PROFIT	**19,750**	**13,500**	**16,938**

(c) The main reason inventory recorded and actual inventory may differ may be due to any of the following reasons:

I. Theft of receipt books and the stolen books have not been recorded in the inventory records

II. Wrong delivery of quantity specified where more or less quantity is supplied to the organization and while Mr Lubasi records the quantity on the delivery note which may be different from the actual delivery.

III. Errors during recording of the inventory during issue or receipt process

IV. Damages of receipt books not being recorded in the inventory record.

SOLUTION THREE

(a)

(i) Muchinga Ltd under or over absorption of overheads

	Department X	Department Y
	K	**K**
Overheads incurred	320 000	349 000
Overheads absorbed:		
Department X (1 200 hrs x K250/hr)	300 000	
Department Y (1 400 hrs x K275/hr)		385 000
Under/(over) absorption	20 000	(36 000)

(ii) An under absorption of overheads is added to cost of sales or subtracted from the gross profit in the statement of profit or loss whereas an over absorption is subtracted from the cost of sales or added to the gross profit in the statement of profit or loss

(b)

(i) Materials and labour planning variances

Materials planning variance

	K
Revised standard cost (1 000 x 2 kg x K30)	60, 000
Original standard cost (1 000 x 2 kg x K20)	40, 000
Total planning variance	20, 000 (A)

(ii) *Labour planning variance*

	K
Revised standard cost (540 x 3 hrs x K125)	202, 500
Original standard cost (540 x 3 hrs x K120)	194,400
Total planning variance	8 ,100 (A)

(iii) Material operational price and usage variances

Operational price variance

	K
Actual price of actual materials (2 200 kg)	65, 000
Revised standard price of actual materials (K30 x 2 200 kg)	66, 000
Operational price variance	1, 000 (F)

(iv) *Operational usage variance*

Actual quantity should have been (1 000 x 2 kgs)	2, 000 kgs
But was	2, 200 kgs
Operational usage variance in Kgs	200 kgs (A)
x revised standard cost per kg	x K30
Operational usage variance in kwacha	K6, 000 (A)

(v) Labour operational rate and efficiency variances

Operating rate variance

	K
Actual cost (for 1 700 hours)	210, 000

Revised standard cost of actual hours (1 700 hrs x K125)	212, 500
Total operating variance	2, 500 (F)

(vi) *Operational efficiency variance*

540 units should have taken (540 x 3 hours)	1, 620 hours
But took	1, 700 hours
Operational efficiency variance in hours	80 hours (A)
x revised standard rate per hour	x K125
Operational efficiency variance in kwacha	K10, 000 (A)

SOLUTION FOUR

(a)

(i) **Purpose of life cycle costing**

The purpose of life cycle costing is to assess the total costs of a product over its entire life, to assess the expected profitability from the product over its full life. Products that are not expected to be profitable after allowing for design and development costs, or clean-up costs, should not be considered for commercial development.

(ii) **Benefits of life cycle costing**

The benefits associated with life cycle costing include the following:

1. It helps management to assess profitability over the full life of a product, which in turn helps management to decide whether to develop the product, or to continue making the product.
2. It can be very useful for organisations that continually develop products with a relatively short life, where it may be possible to estimate sales volumes and prices with reasonable accuracy.
3. The life cycle concept results in earlier actions to generate more revenue or to lower costs than otherwise might be considered.
4. Better decisions should follow from a more accurate and realistic assessment of revenues and costs, at least within a particular life cycle stage.
5. It encourages longer-term thinking and forward planning, and may provide more useful information than traditional reports of historical costs and profits in each accounting period.

(b)

(i) **Equivalent units of production**

	Units	Materials %	Materials Units	Conversion %	Conversion Units
Completed units					
From opening WIP	30 000	0	0	40	12, 000
From current prod.	50 000	100	50, 000	100	50, 000
Closing WIP	10 000	100	10, 000	50	5,,000
			60, 000		67, 000

(ii) **Cost per equivalent unit**

Costs	Materials K	Conversion K
Costs incurred in January	396,000	335, 000
Cost per equivalent unit	$\frac{396,000}{60,000}$	$\frac{335,000}{67,000}$

= <u>K6.60/unit</u> <u>K5.00/unit</u>

Total Cost per unit = K6.60+ K5.00 = <u>K11.60/unit</u>

(iii) **Process Account**

Process account

	Units	K		Units	K
Opening WIP	30, 000	164 000	Finished output	80, 000	804, 000
Materials added	60,000	396 000	Closing WIP	10 000	91 000
Conversion costs		335 000			
	90, 000	895 000		90, 000	895 000

Workings

1. Valuations K K

- Finished output

From opening WIP

Value at 1st Jan	164, 000		
Materials (0 x K6.60/unit)	0		
Conversion (12 000 units x K5.00)	60, 000		
		224, 000	
From current production (50 000 units x K11.6)			580, 000
			804, 000

- Closing WIP

Materials (10 000 x K6.6/unit)	66, 000	
Conversion (5 000 x K5.00/unit)	25, 000	
		91, 000

SOLUTION FIVE

(a)The optimum production schedule is found using limiting factor analysis.

	Chipokapoka	Fighter	Warrior
	K/unit	K/unit	K/unit
Material X1X	7.50	11.25	11.25
Material X2X	6·00	6.60	4.80
Labour	3.60	7.20	9.00
Variable o/h	1.65	1.95	1.65
Variable costs	18.75	27.00	26.70
Selling price	31.50	42.75	40.95
Contribution	12.75	15.75	14.25
Material X1X (kg/unit)	3	4.5	4.5
Contribution/kg	6.375	5.25	4.75
Ranking	1	2	3

Optimum Production:

Product	Demand (units)	X1X used (kg)	Production (units)	X1X available(kg)
				8,250
Chipokapoka	1,425	2,850	1,425	5,400
Fighter	1,500	4,500	1,500	900
Warrior	1,350	900	300	

The optimum production schedule is 1,425 units of Product Chipokapoka, 1,500 units of Fighter and 300 units of Warrior.

(b) Further supplies of Material X1X will be used to produce additional units of Product Warrior. The contribution per kg of Material X1X of Product Warrior is K4.75 and so if TML pays 4.75 + 3.75 = K8.50 per kg for Material X1X, the additional units of Product Warrior produced will make a zero contribution towards fixed costs. K8.50 is therefore the maximum price.

(c) The variable cost of Product Kaimbi:

	K/unit
Material X2X: (4.5 x K2)	9.00
Labour: (2.55 x 4)	10.20
Variable overhead:	2.10
Total variable cost	**21.30**

The substitute offered by Green gives a saving of K6 per unit. However, TML plc would also pay an annual fee of K75,000 for the right to use the substitute. The company would need to manufacture more than 75,000/6 = 12,500 units per year of Product Kaimbi, or 1,042 units per month, in order for the offered substitute to be financially acceptable. If it needed less than 12,500 units of Product Kaimbi per year, it would be cheaper to manufacture the product in house. This evaluation is from a short-term perspective: in the longer term, buying in may lead to fixed cost savings and lower investment, increasing the benefits of buying in and lowering the break-even point. TML plc would also need to assure itself that the quality of the substitute was acceptable and that this quality could be maintained: the lower price offered by Green Ltd might be associated with poorer quality than that deemed necessary by TML plc. Orders for the substitute product would also need to be delivered promptly in order to avoid production hold-ups. TML plc could also become dependent on Green Limited for supplies of the substitute product and might be vulnerable to future price increases by the supplier. Such price increases might reduce or even eliminate the cost saving of buying in.

END OF SOLUTION

CA ZAMBIA PROGRAMME EXAMINATIONS

CA APPLICATION ADVANCED DIPLOMA IN ACCOUNTANCY

CA 2.3: AUDITING PRINCIPLES AND PRACTICE

THURSDAY 16 JUNE 2022

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

INSTRUCTIONS TO CANDIDATES

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

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

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

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

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

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

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

8. Present legible and tidy work.

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

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

SECTION A

This question is compulsory and must be attempted

<u>QUESTION ONE – COMPULSORY</u>

Lunsefwa Ltd is a trading company involved in the importation and sales of bearings in the country. The customer base of Lunsefwa Ltd is wide ranging from large industrial customers to small companies dealing in vehicle spares.

The company has a large warehouse stocking a wide range of bearings. Due to the large range of its products, the company has relied on perpetual inventory count to determine its closing inventory value. The previous auditors of Lunsefwa Ltd modified the audit opinion for the financial statements for the year ended 31 December 2020 because they could not obtain sufficient appropriate evidence for the figure of inventory which they considered material. As a result there was a disagreement with the previous auditors and the previous auditors did not seek re-election.

Your firm of Chartered Accountants was appointed auditor of Lunsefwa Ltd at the beginning of the year 2021. As part of non-audit services, your firm and Lunsefwa Ltd have agreed that you assist the company come up with good effective internal controls for the company. Poor internal controls were part of the reasons why perpetual inventory count could not work as expected.

The receivables figure for Lunsefwa Ltd has grown over the years with the age analysis showing an increase in old debts arising from disputes with customers. The company has provided 2% as an allowance for receivables according to the policy it has followed over the last ten (10) years. You have agreed with the management of Lunsefwa Ltd that effective the current year, a physical inventory count should be conducted to determine the correct value of inventory at the period end. The company has engaged a temporal employee with experience in inventory control to organize the inventory count and come up with suitable inventory count instructions.

The audit team for the audit of the financial statements of Lunsefwa Ltd comprises of four (4) new Audit Assistants and one (1) Audit Assistant who has worked for your firm for three (3) years.

You have been provided with the inventory count instructions that have been prepared and you are planning attendance at the inventory count. You are required to guide the audit team with regards to the work that should be performed before, during and after the inventory count.

Lunsefwa Ltd has a Stores Department, Purchasing Department, Finance Department and Administration Department. You read in the media that there is a legal dispute with the employees in that the company has not complied with the minimum wage legislation since inception two (2) years ago. Non-compliance with this law could result in stiff penalties in addition to being required to pay all underpayments with interest to staff.

Required:

(a) Explain briefly each of the five (5) elements of internal control systems. (10 marks)

(b) Identify and explain six (6) audit risks in the audit of the financial statements of Lunsefwa Ltd and suggest suitable responses. (12 marks)

(c) Suggest seven (7) inventory count instructions that should be included in the inventory count instructions for the planned year-end inventory count. (7 marks)

(d) Explain the work that the auditors who will attend the physical inventory count will do at each of the stages below:

(i) Four (4) matters before the inventory count. (4 marks)
(ii) Four (4) matters during the inventory count. (4 marks)
(iii) Three (3) matters after the inventory count. (3 marks)

[Total: 40 Marks]

SECTION B

There are FOUR (4) questions in this section.

Attempt any THREE (3) questions in this section.

QUESTION TWO

You are an Audit Senior in Mulenga Accountants, a firm which provides audit and assurance services. You are responsible for the financial statement audit for Ethics Ltd for the year ended 31 March 2022. Ethics Ltd is a wholesaler of aluminium products such as door frames and window frames. You are currently reviewing the governance structure of Ethics Ltd, as part of the risk assessment process.

The company has a board of seven (7) members, comprising four (4) Non-Executive Directors (NEDs) and three (3) Executive Directors (EDs). One (1) of the NEDs is chairperson of the board. The Chief Executive Officer (CEO) is one (1) of the EDs.

The board members are appointed at each Annual General Meeting (AGM) by the shareholders on the recommendation of the CEO. The CEO's recommendations are never questioned by the shareholders. In an effort to save costs amidst the COVID-19 pandemic, induction of board members has been suspended.

The company secretary is concerned about the poor attendance at both the board meetings and AGM. The board meets twice a year. The first meeting focuses on scrutinising the strategic plans while the second meeting evaluates the performance of the Executive Directors (EDs).

The Audit Committee is made of EDs and is headed by the Finance Director. The main roles of the Audit Committee are 'oversight', 'assessment' and 'review' of other functions and systems in Ethics Ltd. In fact, most of the board objectives relating to internal controls and financial reporting are delegated to the Audit Committee. The Internal Audit function reports to the Audit Committee.

The Training Partner is currently updating the training manual for Mulenga Accountants and would like you to provide specific notes on eligibility and signing of the auditor's report.

Required:

(a) Explain who is eligible to act as the auditor of a limited company under the provisions of the Companies Act and state, with reasons, whether a newly qualified CA Zambia graduate can sign the auditor's report. (6 marks)

(b) Using the information given on the governance structure for Ethics Ltd:

(i) Explain seven (7) deficiencies in the governance principles of Ethics Ltd. (7 marks)

(ii) Provide a recommendation on how each deficiency can be minimised. (7 marks)

[Total: 20 Marks]

QUESTION THREE

You are an Audit Manager in Buka Associates, a firm of chartered accountants. The Finance Manager for Kalulu Ltd informed the Engagement Partner that the company is ready for the financial statement audit for the year ended 31 March 2022. He also complained that Buka Associates may have performed last year's financial statement audit negligently. The reason being that the Internal Audit function was able to discover fraudulent activities relating to receivables, a few weeks after the completion of the financial statement audit for the year ended 31 March 2021. The board is disappointed with Buka Associates and would like to know the external auditor's responsibility regarding detection and prevention of fraud before taking further action. The Engagement Partner asked you to provide appropriate details pertaining to the external auditor's responsibility regarding detection and prevention of fraud since he has arranged a meeting to discuss the issue next week.

The Engagement Partner thinks there was undue reliance on receivables' confirmation during the financial statement audit for the year ended 31 March 2021. The use of negative confirmation could have been wrong. Negative confirmation provides less persuasive audit evidence and is not used as the sole substantive procedure to audit receivables unless a number of conditions are present. It is possible that if Computer Assisted Audit Techniques (CAATs) were used, the audit findings and conclusions in respect of receivables could have been different. The sales and receivables systems are computerised.

For the audit of the financial statements for the year ended 31 March 2022, the Engagement Partner wants the audit team to use positive confirmation and carry out alternative procedures if no reply is received from the receivables' confirmation.

Required:

(a) Define fraud and explain the extent of the responsibility of an external auditor regarding prevention and detection of fraud. (6 marks)

(b) Describe how audit software can be used to assist in the detection of fraud when auditing receivables in the financial statements of Kalulu Ltd. (4 marks)

(c) List the conditions which must exist before the auditors decide to use negative confirmation. (5 marks)

(d) Suggest five (5) audit procedures which might be used to verify receivable balances, if no reply is received from the receivables' confirmation performed by Buka Associates. (5 marks)

[Total: 20 Marks]

QUESTION FOUR

You are an Audit Supervisor responsible for the audit of Impala Ltd. Impala Ltd is a new audit client of your firm. You are currently assisting the Audit Manager in planning the audit of the financial statements for Impala Ltd for the year ended 30 September 2021.

The Audit Manager has stated that the auditor is unlikely to place the same amount of reliance on evidence obtained from management compared to his own or third party evidence because of the inherent risk in management evidence. One of the Junior Auditors commented, however, that there is a provision in the Companies Act that gives some assurance over the quality of management evidence.

The previous auditors have informed the Audit Manager that the area of accruals is one (1) of the risky areas in the audit of the financial statements for Impala Ltd. The company does not have a robust system for identifying accruals and in most cases, the figures recognised in the financial statements under accruals tend to be grossly understated. The draft financial statements for the year ended 30 September 2021 show an accruals figure of K600,000.

The Engagement Partner has emphasised the need to use analytical procedures in order to minimise audit risk to an acceptably low level. This is very effective and promotes cost effectiveness in an audit.

Required:

(a) Discuss the inherent risk in the evidence obtained from management and explain, giving appropriate examples, three (3) key management evidence. (8 marks)

(b) Explain the provision in the Companies Act that gives confidence on audit evidence obtained from management. (2 marks)

(c) Explain the purposes of using analytical procedures at each of the three (3) stages of the audit for Impala Ltd. (7 marks)

(d) Recommend three (3) substantive analytical procedures you should perform on the accruals figure shown in the draft financial statements for Impala Ltd. (3 marks)

[Total: 20 Marks]

QUESTION FIVE

You are an Audit Supervisor in Mambwe Associates, a firm of accountants. You are responsible for the training of recently recruited CA-Zambia graduates and the audit of financial statements for Njokwe Ltd.

The Managing Partner has instructed you to urgently conduct training for the recently recruited CA-Zambia graduates on audit working papers. Last week, the CA-Zambia graduates were given copies of audit working papers for Mambwe Associates and were told to identify specific items of concern. Most of the recently recruited CA-Zambia graduates have identified the following items as of particular concern:

1. Page reference
2. Client's year-end date
3. Signature of the reviewer
4. Test objective
5. How the number of samples to test was determined.

The audit of the financial statements for Njokwe Ltd for the year ended 31 March 2022 is currently in progress. The audit plan does not include sufficient details on the audit of trade payables. The Auditor assigned to this area has asked for your guidance.

Required:

(a) Define audit working papers and explain five (5) reasons for maintaining audit working papers. (7 marks)

(b) Explain the reasons for including the five (5) items mentioned in the scenario on the audit working papers for Mambwe Associates. (5 marks)

(c) Recommend eight (8) audit procedures which should be performed regarding the completeness of trade payables shown in the financial statements of Njokwe Ltd. (8 marks)

[Total: 20 Marks]

END OF PAPER

CA2.3 SUGGESTED SOLUTIONS

SOLUTION ONE

(a) **Elements of internal control:**

(i) **Internal control environment:**
This is the governance and management function and attitude of those charged with governance towards internal control. This is the culture that has been put by management and the control environment may be strong or weak depending on the attitude of management and those charged with governance.

(ii) **The risk assessment processes of the organization:**
These are the processes that management of the entity puts in place for the identification of business risks that exist. Risk assessment is related to internal controls in that controls are put in place in response to the risks that have been identified.

(iii) **The information system relevant to the financial statements:**
This is an element of internal control that the auditor should gain an understanding of and it relates to the information system that is used by the client company. It consists of the procedures for initiating, recording and processing the transactions of the entity.

(iv) **Control activities:**
These are the policies and procedures that the organization puts in place. These procedures are designed to prevent or to detect and correct errors. For example control related to authorization and other controls such as segregation of duties.

(v) **Monitoring of controls:**
This is the process that the organization uses to assess the effectiveness of internal controls. It includes the assessment of the design and operation of the internal controls. The auditor requires to know how the organization does this.

(b) **Audit risks in the audit of the financial statements of Lunsefwa Ltd:**

(i) **First time to audit financial statements of Lunsefwa Ltd:**
This is the first time that the firm will be auditing the financial statements of Lunsefwa Ltd. This means that the firm may not have all the skills and competences required to audit the company. The audit team will be learning and therefore the detection risk is high which could result in the misstatement of the financial statements.

Audit response:
There will be need for close supervision of the work that is carried out. Quality control review by someone not involved in the audit will be appropriate to reduce this risk.

(ii) **Opening balances:**
The firm will be auditing financial statements that were audited by a different firm of auditors in the previous year. The opening balances which are the closing balances for the previous year could impact the financial statements for the current year. If the opening balances are misstated, there is a risk that the balances for the current year may be misstated resulting in the misstatement of the current year figures.

Audit response:
Ensure that the opening balances have been correctly carried forward to the year under audit. There will be need for the audit team to be alert and look out for transactions in the current year that give evidence of opening balances.

(iii) **Poor internal controls:**
Internal controls are meant to help prevent and detect errors and fraud in an organization. The internal controls in Lunsefwa Ltd have been described as poor which means that errors and fraud may not be detected. Auditors do not perform audit procedures on all transactions and balances. Poor internal controls could result in material errors and fraud not being detected which may result in the financial statements being misstated.

Audit response:
In view of the internal controls that have been described as poor, no reliance on internal controls should be placed in designing the nature and extent of further procedures. The audit team should perform substantive audit procedures for all material items in the financial statements.

(iv) **Irrecoverable accounts receivable:**
The age analysis of the receivables figure for Lunsefwa Ltd shows that there is an increase in the old debts. The company makes a provision of 2% of the receivables at the period end. There is a risk that the receivables in the statement of financial position are overstated. Further, the policy used in calculating may not be in line with the provisions of IFRS 9 Financial Instruments resulting in the misstatement of the receivables.

Audit response:
Review the receivables age analysis and assess whether the provision made in the financial statements is in line with the provisions of IFRS 9 and if not discuss with management.

(v) **Experience of the audit team:**
The composition of the audit team is such that a majority of the team members are new and do not have auditing experience. This increases detection risk which could result in the financial statements being misstated.

Audit response:
Consider changing the composition of the audit team and replace inexperienced audit team members with more experienced members. Close supervision and guidance of the audit team could also reduce this risk.

(vi) **Non-compliance with laws and regulations:**
Lunsefwa Ltd is not compliant with the laws on minimum wages. The company could suffer penalties for not following the law. There is a risk that provisions in the financial statements are understated which could have material impact on the financial statements resulting in them being misstated.

Audit response:
Discuss this matter with management and establish the consequences of the non-compliance with laws and regulations. If there is likelihood that the company will be charged penalties, establish if a provision has been made in the financial statement. The auditors may seek advice of the in-house legal person on the consequences of not complying with the relations.

(c) **Suggested inventory count instructions:**

(i) There should be no sales or receiving of goods on the day of the inventory count.
(ii) Inventory count should take place on the same day at both locations.
(iii) Inventory count sheets should be pre-numbered and accounted for at the end of the inventory count.
(iv) Counting should be in teams of two with one member counting and the other recording the counts in the inventory sheets.
(v) The counts should be recorded in ink to avoid alterations.
(vi) Old, obsolete and slow moving items should be separated for determination of provision for slow moving items and inventory valuation.
(vii) Inventory held for third parties should be identified and separated so that it is not included in the inventory for Lunsefwa Ltd.
(viii) The inventory counting should be supervised by a senior person who is not involved in handling inventory.

(ix) Ensure that all inventory is clearly marked for easy of identification and the warehouse is tidy and orderly

(d) (i) **Audit work before inventory count:**

- Gain knowledge of the inventory held by Lunsefwa Ltd including quantities and values.
- Discuss with management on the inventory count arrangements that have been put in place.
- Assess the risks with regards inventory considering matters such as nature and volume of the inventory, methods of accounting for the inventory and the related internal controls and accounting systems.
- Review the inventory count instruction to confirm that they are adequate and can be relied upon for an effective inventory count.

(ii) **Audit work during inventory count:**

- The need to observe the way that the inventory count is being conducted and if it is in accordance with the inventory instructions.
- The auditor to perform test counts which will be used to compare with the counts by the client count teams.
- Ensure that the procedures for damaged, obsolete and slow moving items are separately identified and auditor should obtain information about the condition of inventory.
- Ensure third party inventory is separately identified for purposes of following up that not included in final inventory valuation for the company.
- Conclude whether the inventory count has been properly carried out and can be relied as a basis for inventory valuation.
- During the count gain an impression of the value of inventory and compare with the figure in the financial.

(iii) **Audit work after the inventory count**

- Trace items that were test counted to final inventory sheets
- Observe whether all count records have been included in the final inventory sheets
- Inspect that inventory sheets to ensure they are supported by count records
- Review replies from third parties about inventory held by or for them

SOLUTION TWO

(a) **Eligibility to act as the auditor of a limited company under the provisions of the Companies Act 2017**

Section 254 of the Companies Act 2017 states that an auditing firm may be appointed to be the auditor of a company if—

- at least one partner of the firm is ordinarily resident in Zambia;
- all or some of the partners, including the partner who is ordinarily resident in Zambia, are qualified for appointment as auditors;
- the firm is not indebted to the company; or
- a partner of the firm is not a member, director or employee of the company or a related company.

Section 255 of the Companies Act 2017 states that an auditor's report shall be signed, on behalf of a firm appointed as the auditor of a company, by a partner of the firm who is a qualified auditor.

According to section 256 of the Companies Act 2017, a person shall not be appointed as auditor of a company unless that person is qualified and is registered to practice as an auditor by a body regulating the audit practice in Zambia.

The Companies Act 2017 states that auditor has the same meaning assigned to the word in the Accountants Act, 2008 and other written laws relating to the regulation of auditors and appointed to perform auditing function for a company.

The Accountants Act, 2008 defines an auditor as a person holding a practicing certificate or a firm registered under the Act and appointed to perform any auditing function.

The newly qualified CA Zambia graduate cannot sign on auditor's report because he or she does not hold a practicing certificate as required by the Accountants Act, 2008. He may have the theoretical knowledge but lacks the necessary competencies. Before he or she is given certification, he or she will be required to sit and pass competence practice examination.

(b) **(i) & (ii) Governance structure for Ethics Ltd**

Deficiencies	Explanations	Recommendations
(1) The CEO's recommendations are never questioned by the shareholders.	It is possible that the CEO could recommend people who may not question his decisions. This is a recipe for bad governance.	The shareholders should put in a place an independent nomination committee made of non-executive directors (NEDs).
(2) Suspension of induction of board members.	Induction is important for effective participation of board members. Its suspension is not good for governance and will	The suspension must be lifted immediately.

	have a negative impact of board performance.	
(3) Poor attendance at board meetings.	This means oversight of management could be poor. Direction and control is likely to be ineffective.	Only qualified and experienced persons who can spare sufficient time for Ethics Ltd's business should be appointed as board members.
(4) The AGM is poorly attended	The shareholders will be unable to hold the directors accountable, which is bad for governance. This could eventually encourage unethical behaviour.	Shareholders should be encouraged to attend meetings by clearly explaining the consequences of their non-attendance on the company and in particular, their investment.
(5) The board meets twice a year.	Meeting twice a year is grossly insufficient. The board may not be spending adequate time on important issues.	The board must meet at least four times in a year.
(6) No mention of performance evaluation for the board and its members.	Without performance evaluation for the board, it will be very difficult to: • improve board effectiveness • maximise strengths • tackle weaknesses	At least once a year, the performance of the board as a whole, its committees and its members should be evaluated.
(7) The Audit Committee is made of EDs and is headed by the Finance Director.	This can create a self-review threat which not good for governance. The Audit Committee is not independent as it reviews its own decisions.	The Audit Committee should consist entirely of independent non-executive directors (NEDs).
(8) The Internal Audit function reports to the Audit Committee.	The composition of the Audit Committee simply means the Internal Audit function effectively reports to management. This significantly impairs the Internal Audit function's independence which is cardinal in good corporate governance.	At the moment, the Internal Audit function could report to the board and thereafter to Audit Committee once it is properly reconstituted.

SOLUTION THREE

(a) **Fraud and responsibility of auditor**

Fraud is an intentional act by one or more individuals among management, those charged with governance, employees or third parties involving the use of deception to obtain an unjust or illegal advantage. Fraud may be perpetrated by an individual, or colluded in, with people internal or external to the business.

In accordance with ISA 200 *Overall Objectives of the Independent Auditor* the external auditor is responsible for obtaining reasonable assurance that the financial statements, taken as a whole, are free from material misstatement, whether caused by fraud or error.

Therefore, the external auditor has some responsibility for considering the risk of material misstatement due to fraud.

In order to achieve this, auditors must maintain an attitude of professional skepticism. This means that the auditor must recognize the possibility that a material misstatement due to fraud could occur, regardless of the auditor's prior experience of the client's integrity and honesty.

ISA 315 *Identifying and Assessing the Risks of Material Misstatement Through Understanding the Entity and Its Environment* goes further than this general concept and requires that engagement teams discuss the susceptibility of their clients to fraud.

The engagement team should also obtain information for use in identifying the risk of fraud when performing risk assessment procedures.

To be able to make such an assessment auditors must identify, through enquiry, how management assesses and responds to the risk of fraud. The auditor must also enquire of management, internal auditors and those charged with governance if they are aware of any actual or suspected fraudulent activity.

ISA 240 *The Auditor's Responsibility Relating to Fraud in an Audit of Financial Statements* states that the primary responsibility for prevention and detection of fraud is with those charged with governance and the management of an entity. The external auditor is responsible for maintaining professional scepticism throughout the audit, considering the possibility of management overriding controls, and recognizing that audit procedures effective for detecting errors may not be effective for detecting fraud.

(b) **Use of audit software to assist in the detection of fraud when auditing receivables in the financial statements**

- Calculation checks – For example, re-calculation of receivable balances for a number of customers to ensure the mathematical calculation is correct.
- Reviewing the list of receivables and printing a list of customers with overdue balances for further investigation.
- Detecting unreasonable receivables balances – extraction of details of invoices that have been outstanding for long for further investigation.
- Detecting violation of system rules - For example, where other people besides the accountant responsible for receivables have been overriding system rules like using restricted passwords to amend customer details and balances.

(c) **Conditions which must exist before the auditors decide to use negative confirmation**

- The risk of material misstatement has been assessed as low
- The auditor has obtained sufficient appropriate audit evidence on the operating effectiveness of relevant controls
- The population consists of a large number of small, homogeneous account balances
- A very low exception rate is expected
- The auditor is not aware of circumstances or conditions that would cause customers to disregard the requests.

(d) **Alternative procedures which might be used to verify receivable balances**

- If a reply is not received from the initial confirmation letter, a second request should be sent. If a reply is not received from this second request then the receivable should be contacted by telephone. It is important that the client's permission is obtained prior to any direct contact.
- If direct confirmation is not possible or successful, the following procedures should be used:
  - Review cash received after the year-end to see if the balances have been cleared
  - Agree individual outstanding invoices to independent evidence such as delivery notes signed by the customer
  - Review credit notes issued after the year-end to ensure receivable should be reduced
  - Review make-up of receivable balance and ensure that it consists of recent invoices
  - Check authorization for any unusual entries (journals, contras) in the accounts.

SOLUTION FOUR

(a) **Inherent risk in management evidence and examples**

Management may be under pressure to distort the financial statements e.g. to meet the expectations put on a company as a result of a profit forecast or hide their own fraudulent activities. On any audit, therefore, the auditor must try and make a judgement on how reliable he thinks the management evidence will be and set his testing levels accordingly.

Examples of management evidence include:

- Letter of representation – this is a letter addressed to the auditor concerning material decisions made by management in the production of the financial statements. The statements in this letter should always be supported by other corroborative evidence, but it remains a crucial form of evidence at the completion of any audit.
- Discussions with management during the audit concerning internal control system. The auditor may note potential weakness in the system and will therefore need management’s comments as to the accuracy of this information.
- Evidence regarding other auditor queries raised e.g. problems with the financial statements. The auditor may disagree with, say, the depreciation rate of a particular class of asset. He will therefore need management's comment on this.

(b) **Provision in the Companies Act that gives some assurance over the quality of management evidence**

The Companies Act indicates that should the management give the auditor knowingly false information, they are guilty of a criminal offence. The auditor therefore can gain some assurance over the quality of evidence because of this statement.

(c) **Purposes of using analytical procedures**

ISA 520 *Analytical Procedures* gives detailed guidance in this area. Analytical procedures mean the evaluation of financial and other information, and the review of plausible relationships in that information. The review also includes identifying fluctuations and relationships that do not appear consistent with other relevant information or results.

The purposes of using analytical procedures at each of the three (3) stages of the audit for Impala Ltd are:

- Risk assessment procedures – analytical procedures are used at the beginning of the audit to ***help*** the auditor obtain an understanding of Impala Ltd and assess the risk of material misstatement. Audit procedures can then be directed to these “risky areas”.
- Analytical procedures as substantive procedures – analytical procedures can be used as substantive procedures ***in determining*** the risk of material

misstatement at the assertion level during work on the audit of the financial statement audit for Impala Ltd.

- Analytical procedures in the overall review at the end of the audit – analytical procedures ***help*** the auditor at the end of the audit in forming an overall conclusion as to whether the financial statements as a whole are consistent with the auditor's understanding of Impala Ltd.

(d) **Analytical procedures can be used on accruals as follows:**

- Comparison of accruals to prior periods to identify unusual changes or fluctuations in amounts
- Comparison of accruals with budgets and/or forecasts, or the expectations of the auditor in order to determine the potential accuracy of the accrual
- Comparison of the accruals to subsequent payments.

SOLUTION FIVE

(a) **Working papers and reasons for maintaining working papers**

ISA 230 *Audit Documentation* establishes standards and provides guidance regarding documentation in the context of the audit of financial statements.

Working papers are the documents created by the auditors when performing their work.

The reasons for maintaining working papers include:

- Provides evidence of the auditor's basis for a conclusion about the achievement of overall objective of the audit
- Provides evidence that the audit was planned and performed in accordance with ISAs and applicable legal and regulatory requirements
- Assists the engagement team to plan and perform the audit
- Assists members of the engagement team responsible for supervision to direct, supervise and review the audit work
- Enables the engagement team to be accountable for its work
- Retains a record of matters of continuing significance for future audits

(b) **Reasons for including the items on the working paper for Mambwe Associates**

- **Page reference** – to make it easy to file the audit working papers in the audit file or locate the working paper should there be queries. This also makes the work of reviewers easier.
- **Client's year-end date** – to ensure audit working papers are filed in the correct year's audit file and are related to the correct accounting period under audit.
- **Signature of the reviewer** – this gives confidence that any omissions have been noted and appropriately corrected. One of the requirements of quality control at the individual audit level is that audit work must be reviewed by someone else other than the one who did the work. The signature is evidence of such reviews.
- **Test objective** – this highlights the financial statement assertion(s) being verified.
- **How the sample size was determined** – this details how the sample size was determined and helps determine whether sufficient and appropriate audit evidence was obtained for the testing.

(c) **Main audit procedures regarding the completeness of trade payables shown in the financial statements of Njokwe Ltd**

- Obtain a listing of trade payables and agree the total to the general ledger by casting and cross-casting
- Test for unrecorded liabilities by enquiries of management on how unrecorded liabilities are identified and examining post year-end transactions
- Obtain selected suppliers' statements and reconcile these to the relevant suppliers' accounts

- Examine files of unmatched purchase orders and supplier invoices for any unrecorded liabilities
- Perform a confirmation for a sample of trade payables
- Compare the current year balances for trade payables with the previous year's.
- Compare the amounts owed to a sample of individual suppliers in the trade payables listing with amounts owed to these suppliers in the previous year
- Compare the payables turnover and payables days to the previous year and industry data.

END OF SOLUTIONS

Zambia Institute of Chartered Accountants

CA-ZAMBIA PROGRAMME EXAMINATIONS

CA APPLICATION ADVANCED DIPLOMA IN ACCOUNTANCY

CA 2.4: TAXATION

THURSDAY 16 JUNE 2022

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

Income Tax

Standard personal income tax rates

Income band	Taxable amount	Rate
K1 to K54,000	first K54,000	0%
K54,001 to K57,600	next K3,600	25%
K57,601 to K82,800	next K25,200	30%
Over K82,800		37.5%

Income from farming for individuals

K1 to K54,000	first K54,000	0%
Over K54,000		10%

Company income tax rates

On income from manufacturing and other	30%
On income from farming	10%
On income from mineral processing	30%
On income from mining operations	30%

Income from farming for individuals

K1 to K54,000	first K54,000	0%
Over K54,000		10%

Company Income Tax rates

On income from manufacturing and other	30%
On income from farming	10%
On income of Banks and other Financial Institutions	30%
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 –	Standard wear and tear allowance	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%

Rental Income Tax

Annual Rental Income

K800,000 or below	4%
Above K800,000	12.5%

Presumptive tax for transporters

Seating capacity	Tax per annum	Tax per quarter
	K	K
Less than 12 passengers and taxis	1,080	270
From 12 to 17 passengers	2,160	540
From 18 to 21 passengers	4,320	1,080
From 22 to 35 passengers	6,480	1,620
From 36 to 49 passengers	8,640	2,160
From 50 to 63 passengers	10,800	2,700
From 64 passengers and over	12,960	3,240

Property transfer tax

Rate of tax on realised value of land, land and buildings and shares	5%
Rate on realised value of intellectual property	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 mineral processing licence or an interest in the mineral processing licence;	10%

Value Added Tax

Registration threshold	K800,000
Standard Value Added Tax Rate (on VAT exclusive turnover)	16%

Customs and Excise duties on used motor vehicles

	Aged 2 to 5 years		Aged 5 years and over	
Motor vehicles for the transport of ten or more persons, including the driver	**Customs duty K**	**Excise duty K**	**Customs duty K**	**Excise duty K**
Sitting capacity of 10 but not exceeding 14 persons including the driver	17,778	22,223	8,889	11,112
Sitting capacity exceeding 14 but not exceeding 32 persons	38,924	0	13,840	0
Sitting capacity of 33 but not exceeding 44 persons	86,497	0	19,462	0
Sitting capacity exceeding 44 persons	108,121	0	43,248	0

	Aged 2 to 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 to 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	30,697	13,302	24,119	10,452
Double cabs GVW exceeding 3.0 tonnes but not exceeding 5.0 tonnes, **with spark ignition internal combustion piston engine**	33,766	14,632	26,531	11,497
Panel Vans				
GVW not exceeding 1.0 tonne	13,353	5,786	7,630	3,061
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	13,907	10,662	6,413	4,916
GVW exceeding 2.0 tonnes but not exceeding 5.0 tonnes	15,453	11,847	7,726	5,923
GVW exceeding 5.0 tonnes but not exceeding 10.0 tonnes	24,724	18,955	9,272	7,108
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	19,462	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

Nchelenge Plc is a company which is listed on the Lusaka Securities Exchange (LuSE) carrying on farming and retail operations. In January 2022, the Directors estimated the taxable business profits from retail operations and farming operations for the tax year 2022 to be as follows:

	K
Estimated taxable profit from retail operations	2,600,000
Estimated taxable profits from farming operations	15,800,000

Provisional income tax relating to the tax year 2022, was computed correctly and paid on the relevant due dates.

At the end of the tax year 2022, the actual final taxable profit from retail operations for the tax year 2022, after capital allowances have been established to be K3,250,000. The final taxable profits from farming operations for the tax year 2022, have however, not yet been determined.

The summarised statement of profit or loss from farming operations show that Nchelenge plc made a net profit as per accounts of K18,500,400 for the year ended 31 December 2022. This net profit figure was arrived at after accounting for the following the items:

(1) Legal and professional fees which included K26,000 for legal fees in connection with the grant of a new five-year lease of farm land, legal fees incurred in recovering loans from major customers of K16,600, legal fees amounting to K280,000 in relation to defending the company against action for alleged unfair dismissal of former employees and professional fees in respect of accountancy services amounting to K450,000.

(2) Bad debt expenses comprising increase in specific provision for bad debts of K123,200, trade debts written off amounting to K236,400, staff loans written off amounting to K120,000 and loans to customers previously written off subsequently recovered of K76,300.

(3) Staff costs amounting to K26,500,000. These comprised director's subscriptions to the local fitness gym of K106,000, employee's subscriptions to the lottery club of K32,000, lease rentals for a house leased by the company on behalf of the Marketing Director amounting to K80,000. The Marketing Director's gross annual emoluments are K840,000. This amount is included within the figure for staff wages above. The leased house has a market value of K1,500,000. Also included within staff wages are the gross earnings for the Managing Director of K800,000 who is accommodated in a company owned house which had a market value of K1,800,000 in the tax year 2022. The remaining balance represents employee's salaries and wages.

(4) Other operating expenses include expenditure on staff refreshments amounting to K26,500, leasing and hire charges for business assets of K84,500, donation to an

approved amateur sporting athletic club amounting to K350,000, entertaining suppliers of farming inputs amounting to K12,400, theft of farm produce by farm employees valued at K44,600, traffic fines imposed on directors whilst performing company business amounting to K18,500, traffic fines for company drivers of K36,400, the cost of free trade samples to customers for advertising purposes amounting to K180,500, depreciation of K444,000, amortisation of intangible assets of K486,000, animal feed of K567,200, political party donations of K850,000 and miscellaneous allowable business expenses of K6,347,200.

(5) Other income credited to the accounts which included debenture interest of K170,000 (net), Government of Zambia Bond interest of K382,500 (net), dividends of K340,000 (net) and profit on sale of farm implements of K28,000. Withholding tax where applicable was paid on the appropriate due date.

Additional information is available:

The following additional information is available:

(i) On 1 January 2022, the income tax values of implements, plant and machinery relating to farming operations were as follows:

	ITV b/f	Cost
	K	K
Toyota Hilux Double cab van (3,000cc)	324,000	540,000
Pool car (1,800cc)	232,800	388,000
Toyota Landcruiser Prado (2,200cc)	480,000	600,000

The pool car was used in the operations of the Marketing Department but it had private use of 30% by the company's Marketing Director. The Toyota Hilux Double cab van is the Managing Director's personal to holder motor car and it has a cylinder capacity of 3,000 cc, his private use of the car is 60%. The Toyota Land Cruiser Prado is the Finance Director's personal to holder motor car and it has a cylinder capacity of 2,600 cc. His private use of the car was 30%.

The company sold farm implement for K165,000 on 1 April 2022. The original cost of this was K150,000 and the Income tax value at 1 April 2022 was zero.

(ii) The company incurred the following capital expenditure relating to farming business during the year:

	K
Construction animal dipping tanks	875,000
Purchase of animal feed dispensing machine	175,000
Construction of piglet barn	300,000
Construction of farm dwellings for farm employees K120,000 each unit	600,000
Expenditure on prevention of soil erosion	190,000
Development expenditure on Citrus fruit plantation	450,000

Required:

(a) Calculate the amount of provisional income tax paid by Nchelenge plc for the tax year 2022. You should clearly state the due date when the provisional income tax was paid and the amount paid on each due date.
(7 marks)

(b) Calculate the maximum capital allowances claimable by Nchelenge plc for the tax year 2022.
(11 marks)

(c) Compute the final tax adjusted farming profit for Nchelenge plc for the tax year 2022.
(12 marks)

(d) Calculate the final amount of income tax payable by Nchelenge plc for the tax year 2022. (10 marks)

[Total: 40 Marks]

SECTION B

Attempt any three (3) questions in this section.

QUESTION TWO

Joseph Mubita had been employed at GHS Limited until 31 August 2022, when he retired from employment. In the year 2022 he was entitled to a basic salary amounting to K44,200 per month. He was also entitled to a housing allowance amounting to 22% of the basic salary and a transport allowance amounting to 13% of the basic salary. In January 2022, he was paid a uniform allowance amounting to K16,000.

In February 2022, he received two bonuses. The first bonus amounted to K12,800 which was declared in December 2021 for meeting the performance targets for the last quarter of 2021. The bonus could not be paid in December 2021 due to liquidity problems. The second bonus was a general-purpose bonus amounting to K15,000 which was declared in January 2022. The company had always paid monthly life assurance premiums amounting to K1,200 on his behalf. During the year 2022 the company paid a total amount of K21,400 towards his children's school fees.

On 3 May 2022, he received a labour day award consisting of a four-plate cooker valued at K17,000 and cash amounting to K5,000.

He was provided with free meals at the company's staff canteen. The cost of these meals on the company amounted to K1,800 per month.

Upon retiring on 31 August 2022, he was paid the following benefits in addition to the final salary:

	K
Pension	421,300
Severance pay	47,900
Accrued leave pay	51,600
Repatriation pay	22,100

During the year ended 31 December 2022, he made the following payments:

	K
Donation to political party	2,900
Donation to approved public benefit organization	11,100
Professional subscription	2,800
Travelling expenses (from home to the office)	15,000
Purchase of uniforms	14,000
Pay as you earn	102,360

The company had always deducted employees' NAPSA contributions at a rate of 5% of his gross employment earnings and National Health Insurance Management Authority (NHIMA) contributions at the rate of 1% of his basic salary.

During the year ended 31 December 2022, he received the following investments income:

	K
Dividends from TXL Limited	17,000
Dividend from KMM mining Plc	21,000
Fixed deposit interest	12,000
Royalties	34,850

The above amounts represent the actual amounts of investments income received. Withholding tax had been deducted at source where applicable.

Required:

(a) Calculate the amount of withholding tax paid by Joseph on each type of investment income and the total withholding tax paid. (4 marks)

(b) Compute the amount of income tax payable by Joseph Mubita for the tax year 2022. You should indicate in your computation by the use of a zero (0) any items of income or benefits which are not taxable. (16 marks)

[Total: 20 Marks]

QUESTION THREE

CBG Solutions Limited is a Zambian resident company engaged in manufacturing. The company imported the following motor vehicles in February 2022.

(1) A second hand Toyota Noah motor car with a cylinder capacity of 2,000 cc at a cost of US$5,000 free on board. Insurance costs and freight charges amounted to US$1,900 and US$3,100 respectively. Other incidental costs incurred up to the point of entry into Zambia amounted to US$1,200. Costs incurred by the company to register the vehicle in Zambia amounted to K5,000. The Toyota Noah is classified as a station wagon. The Toyota Noah was manufactured in 2020.

(2) A second hand twenty (20) tonne Mitsubishi Canter Truck at a cost of US$10,000 free on board. Insurance costs and freight charges amounted to US$2,000 and US$3,500 respectively. Other incidental costs incurred by the company up to the point of entry into Zambia amounted to US$1,500. Costs incurred by the company to register the motor vehicle in Zambia amounted to K8,000. The Mitsubishi Canter Truck was manufactured in 2020.

The exchange rate quoted by the local Bureau de Change at the date of importation was K16.90 per US$1. CBG Solutions paid for the motor vehicles at an exchange rate of K17.10 per US$1 which it had agreed with a financial institution in a forward contract. The exchange rate quoted by the Bank of Zambia at the same date was K16.85 per US$1 which the Commissioner General approved.

Required:

(a) Explain the conditions to be met for the customs officers to use transaction value method in determining the value for duty purposes. (4 marks)

(b) Explain the functions of the customs services of the Zambia Revenue Authority. (5 marks)

(c) Calculate the amount of import taxes paid by the company on the importation of the following motor vehicles:

(i) Toyota Noah Station Wagon. (5½ marks)

(ii) Mitsubishi Canter Truck. (5½ marks)

[Total: 20 Marks]

QUESTION FOUR

Mukando Limited is a Zambian resident company registered for Value Added Tax (VAT). During the year ended 31 December 2022, the company had the following transactions:

(1) Revenue
The revenue was made up of the following:

	K
Exempt sales	500,000
Zero-rated sales	400,000
Standard-rated sales	1,600,000
Total sales	2,500,000

30% of standard-rated sales were made to non-registered customers.

(2) Purchases
The purchases comprised of the following:

	K
Exempt purchases	300,000
Zero-rated purchases	300,000
Standard-rated purchases	1,000,000
Total	1,600,000

25% of the standard-rated purchases were made from non-registered suppliers.

(3) Operating expenses
Operating expenses comprised the following:

	K
Entertaining customers (VAT inclusive)	16,240
Entertaining employees (VAT inclusive)	24,940
Telephone expenses (VAT inclusive)	10,672
Internet services (VAT inclusive)	29,000
Petrol	26,000
Diesel	20,000
Stationery expenses (VAT inclusive)	39,324
General overheads (VAT inclusive)	255,200
Total	421,376

(4) Non-current assets
The company bought the following non-current assets:

	K
Toyota Hilux (Double Cab) Van (VAT inclusive)	240,000

Office equipment (VAT inclusive)	81,200
Mitsubishi Light truck (VAT inclusive)	185,600

Non-current assets are used to make both taxable and exempt supplies in proportion to sales.

(5) Unless stated otherwise all the above figures are exclusive of VAT.

(6) All the expenses were incurred in making both taxable and exempt supplies in proportion to sales.

Required:

(a) Explain the differences between zero-rated supplies and exempt supplies in the context of VAT.

(3 marks)

(b) Prepare a computation of VAT payable or refundable for the year ended 31 December 2022. You should indicate by the use of zero (0) for all the items on which VAT is neither payable nor claimable. (15 marks)

(c) Calculate the amount of the penalty to be charged on the company if the VAT payable calculated in part (b) above is paid late by 13 days.

(2 marks)

[Total: 20 Marks]

QUESTION FIVE

PNC Mining Company Limited is a Zambian resident company which completed the exploration of base metals in 2021 in Sinazongwe District of Southern Province. The company was issued with a license to extract vanadium and within the same year it started mining operations meant for the export market in China. The company's gross sales of vanadium for the year to 31 December 2022 were K2,080,000. The value of the sales was the norm value for the purposes of mineral royalty tax. During the year ended 31 December 2022, the company made profit before taxation of K740,000 after dealing with the following items of income and expenditure:

Income:

	K
Dividends received from TPX Limited, a company resident in Zambia	126,900
Interest from a fixed deposit account with a Zambian bank	73,100
Debenture interest from another Zambian company	29,750

All of the above income represents the actual amounts received. Withholding tax charged at source

Expenditure:

(1) Mineral royalty tax was paid during the year and charged in the statement of profit or loss.

(2) Depreciation charged for the year on non-current assets was K77,300.

(3) Expenditure on repairs and maintenance comprised:

	K
Construction of clinic on a mine site	610,000
Construction of road in the local council Township	320,000
Repairs to the staff mine recreation club	60,000
Other repairs and maintenance (all allowable)	38,500

(4) Entertainment expenditure included; entertaining foreign customers of K95,000, entertaining local suppliers of K70,000, entertaining staff of K45,000.

(5) The company made donations of K50,000 to a Public Benefit Organisation which is approved by the minister of Finance and National Planning.

(6) Professional and legal fees charged during the year were as follows:

	K
Accountancy and audit fees	105,000
Legal fees in connection with issue of share capital	30,000
Legal fees for the recovery of loans from former employee s	15,000
Legal fees in connection with recovery of trade debts	12,000

(7) A foreign exchange loss of K25,000 arising from translating US dollars held in a US dollar account.

Additional information:

(i) The provisional income tax paid by the company during the tax year 2022, was K386,100.

(ii) At 1 January 2022, the company held the following assets which were acquired a year ago from local Zambian vendors and paid for in Zambian Kwacha at the following costs:

	K
Mining equipment	910,000
Office equipment	340,000
Delivery truck	523,420

Required:

(a) Calculate the amount of mineral royalty tax paid by PNC mining company for the tax year 2022 and explain its income tax treatment when computing the taxable profit for the year. (2 marks)

(b) Compute the capital allowances claimable on implements, plant and machinery and other qualifying mining expenditure. (5 marks)

(c) Calculate tax adjusted mining profit for PNC mining company for the tax year 2022. (7 marks)

(d) Calculate the company income tax payable by PNC mining company for the tax year 2022. (6 marks)

[Total: 20 Marks]

END OF PAPER

CA2.4 SUGGESTED SOLUTION

SOLUTION ONE

(a) COMPUTATION OF PROVISIONAL INCOME TAX

	K
Estimated Taxable profit from retail operations	2,600,000
Estimated Taxable profit from retail operations	15,800,000
	18,400,000
Provisional Income Tax on:	
Non-farming income (K2, 600,000 x 30%)	780,000
Farming income (K15, 800,000 x 10%)	1,580,000
	2,360,000
Provisional income tax paid per quarter (K2,360,000/4)	590,000

The relevant due dates and amounts paid are as follows:

Instalment	Quarter ended	Due Date	Amount Paid K
1st	31 March 2022	10 April 2022	590,000
2nd	30 June 2022	10 July 2022	590,000
3rd	30 September 2022	10 October 2022	590,000
4th	31 December 2022	10 January 2023	590,000
		Total	2,360,000

(b) COMPUTATION OF CAPITAL ALLOWNACES

	K	K
Toyota Hilux		
Wear & tear allowance		
(K540, 000 x 20%)		108,000
Pool car		
Wear & tear allowance		
(K388, 000 x 20%)		77,600
Toyota Land cruiser		
Wear & tear allowance		
(K600, 000 x 20%)		120,000
Farm implements		
ITV b/f	0	
Proceeds (restricted to cost)	(150,000)	
	(150,000)	(150,000)
Dipping Tank		
Farm improvement allowance		

(K875,000 x 100%)		875,000
<u>Animal feed dispensing machine</u>		
Wear & tear allowance		175000
(K175,000 x 100%)		
<u>Piglet Barn</u>		
Farm improvement allowance		
(K300,000 x 100%)		300,000
<u>Farm dwellings</u>		
Farm improvement allowance		
Restricted to K20,000x 100% x 5		100,000
<u>Prevention of Soil erosion</u>		
Farm works allowance		
(K190,000 x 100%)		190,000
<u>Development of plantation</u>		
Development allowance		
(K450,000 x 10%)		45,000
		1,840,600

(c) COMPUATION OF TAXABLE FARMING PROFIT

	K	K
Net Profit as per accounts		18,500,400
Add:		
Amortisation	486,000	
Legal fees for grant of new lease	26,000	
Legal fees for loan recovery from major customer	16,600	
Staff loans written off	120,000	
Accommodation benefit (MD's Accommodation)		
(K800,000 x 30%)	240,000	
Staff refreshments	26,500	
Entertaining suppliers	12,400	
Traffic fines for directors	18,500	
Depreciation	444,000	
Donation to political parties	850,000	
Personal to holder motor car benefit:		
- MD's Toyota Hilux	40,000	
- FD's Toyota Land cruiser	30,000	
		2,310,000
		20,810,400
Less		
Debenture interest	170,000	
GRZ bond interest	382,500	
Dividends	340,000	
Profit on sale of farm implements	28,000	
Customer loans recovered	76,300	
Capital allowances (W)	1,840,600	
		(2,837,400)
Final Taxable Profits		17,973,000

(d) NCHELENGE PLC

COMPANY INCOME TAX COMPUTATION FOR THE TAX YEAR 2022

	K
<u>Non-farming income</u>	
Taxable Profit from retailing	3,250,000
Debenture interest (K170,000 x 100/85)	200,000
Interest on GRZ Bonds (K382,500 x 100/85)	450,000
Total non-farming income	3,900,000
Taxable farming profit	17,973,000
Total taxable income	21,873,000
Company income Tax on non-farming income	
(K3,900,000 x 30%)	1,170,000
Company income Tax on farming income	
(K17,943,000 x 10%)	1,797,300
	2,967,300
Less Tax already paid	
WHT on loan note interest	
(K200,000 x 15%)	(30,000)
WHT on Copy right royalties	
(K380,000 x 15%)	(67,500)
Provisional income tax paid	(2,360,000)
Company income Tax payable	509,800

SOLUTION TWO

(a) COMPUTATION OF WITHHOLDING TAX FOR THE YEAR 2022

	K
Dividends from TXL Limited: K17,000 x 15/85	3,000
Dividends from KMM mining plc	0
Fixed deposit interest	0
Royalties: K34,850 x 15/85	6,150
Total withholding tax	9,150

(b) JOSEPH MUBITA

PERSONAL INCOME TAX PAYABLE FOR THE YEAR 2022

	K	K
Basic salary: K44,200 x 8		353,600
Housing allowance: K353,600 x 22%		77,792
Transport allowance: K353,600 x 13%		45,968
Uniform allowance		16,000
Performance target bonus		0
General purpose bonus		15,000
Life assurance premiums: K1,200 x 8		9,600
Children's school fees		21,400
Labour day award		0
Free meals		0
Pension		0
Severance pay		0
Repatriation pay		0
Accrued leave pay		51,600
		590,960
Investment income		
Royalties: K34,850 x 100/85		41,000
		631,960
Less:		
Donation to public benefit organisation	11,100	
Professional subscription	2,800	
Cost of uniforms	14,000	
		(27,900)
Taxable income		604,060
Income Tax		
First K54,000 @0%		0
Next K3,600 @ 25%		900
Next K25,200 @30%		7,560
Excess (K604,060 – K82,800) @37.5%		195,473
Income tax liability		203,933
Less:		
WHT- Royalties: K41,000 x 15%		(6,150)
Pay as you earn		(102,360)
Income tax payable		95,423

SOLUTION THREE

(a) The following are the conditions to be met:

(1) There should be no restrictions to the use of the imported goods.

(2) There should be no conditions to deter the determination of the value for duty purposes.

(3) No part of the proceeds arising on resale of the imported goods should accrue to the seller (exporter), unless it is included in the value.

(4) No relationship should exist between the importer and the exporter which can influence the value.

(1 mark per valid point up to 4 marks)

(b) The functions of the customs services of ZRA are as follows:

(1) Collection and management of customs and excise duties and other duties.

(2) Licensing and control of warehouses and premises for the manufacturing of certain goods.

(3) Regulation of imports and exports.

(4) Providing statistical data to the Government on imports and exports.

(5) Facilitation of international trade, travel and movement of goods.

(1 mark per valid point up to 5 marks)

(c) Computation of import taxes on:

(i) Toyota Harrier Car

	$
Cost	5,000
Insurance	1,900
Freight charges	3,100
Incidental costs	1,200
VDP in US$	11,200
Exchange rate	x K16.85
VDP in ZMW	188,720

Import taxes	Value of the vehicle K	Import taxes K
Value for duty purposes	188,720	
Customs duty	16,545	16,545
Excise duty	21,508	21,508
VDP for import VAT	226,773	
Import VAT @16%	36,284	36,284
Total value of the vehicle	263,057	
Total import taxes		74,337

(ii) Mitsubishi Canter Truck

	$
Cost	10,000
Insurance	2,000
Freight charges	3,500
Incidental costs	1,500
VDP in US$	17,000
Exchange rate	x K16.85

VDP in ZMW		286,450

	Value of the vehicle K	Import taxes K
Value for duty purposes	286,450	
Customs duty	30,905	30,905
Excise duty	23,694	23,694
VDP for import VAT	341,049	
Import VAT @16%	54,568	54,568
Total value of the vehicle	395,617	
Total import taxes		109,167

SOLUTION FOUR

(a) The following are the differences between zero-rated supplies and exempt supplies:

(1) The trader dealing in zero-rated supplies is a taxable person for the purposes of value added tax whereas the person dealing in exempt supplies is not.

(2) A trader dealing in taxable supplies may be permitted to register for value added tax if he wishes to do so whereas a trader dealing in exempt supplies may not be permitted.

(3) A trader dealing in taxable supplies can claim the input VAT on purchases and expenses for as long as the input VAT is recoverable whereas a trader dealing in exempt supplies cannot recover the input VAT.

(1 mark per valid point up to 3 marks)

(b) VAT payable

Output VAT	K	K
Exempt sales		0
Zero-rated sales		0
Standard-rated sales		
(K1,600,000 x 16%)		256,000
		256,000
Input VAT		
Exempt purchases	0	
Zero-rated purchases	0	
Standard-rated purchases		
(K1,000,000 x 75% x 16%)	120,000	
Entertaining customers	0	
Entertaining employees	0	
Telephone expenses	0	
Internet services	0	
Petro (zero-rated)	0	
Diesel (zero-rated)	0	
Stationery expenses		
(K39,324 x 4/29 x 80%)	4,339	
General expenses		
(K255,200 x 4/29 x 80%)	28,160	
Toyota Hilux double cab van	0	
Office equipment		
(K81,200 x 4/29 x 80%)	8,960	
Hino light truck		
(K185,600 x 4/29 x 80%)	20,480	
		(181,939)
VAT payable		74,061

Recoverable input VAT = $\frac{\text{K400,000 + K1,600,000}}{\text{K2,500,000}}$ x 100

= 80%

(c) The penalty for late payment of VAT is calculated at a rate of 0.5% per day the VAT remains unpaid. The penalty payable if the VAT calculated in part (b) is paid late by thirteen (13) days will be: K74,061 x 0.5% x 13 = K4,814.

SOLUTION FIVE

(a) Mineral royalty tax = K2,080,000 x 8% = K166,400

The above amount of mineral royalty will be allowable when computing the taxable profit of the company. Since the amount has already been charged as an expense to the statement of profit or loss, no adjustment will be required.

(b) COMPUTATION OF CAPITAL ALLOWANCES FOT THE TAX YEAR 2022

	K
Construction of clinic (610,000 x 20%)	122,000
Mining equipment (910,000 x 20%)	182,000
Office equipment (340,000 x 25%)	85,000
Delivery Truck (523,420 x 25%)	130,855
	519,855

(c) PNC MINING COMPANY
COMPUTATION OF TAXABLE BUSINESS PROFIT FOR THE TAX YEAR 2022

	K	K
Profit before tax		740,000
ADD:		
Depreciation	77,300	
Construction of clinic	610,000	
Construction of road	320,000	
Entertaining foreign customers	95,000	
Entertaining suppliers	70,000	
Legal fees – Issue of share capital	30,000	
Legal fees – recovery of loan	15,000	
Exchange loss	25,000	
		1,242,300
		1,982,300
LESS:		
Dividends	126,900	
Fixed deposit interest	73,100	
Debenture interest	29,750	
Capital allowances (W)	519,855	
		(749,605)
Taxable business profit		1,232,695

(d) PNC MINING

COMPANY INCOM TAX COMPUTATION FOR THE TAX YEAR 2022

		K
Taxable mining profit		1,232,695
Fixed deposit interest		
(K73,100 x 100/85)	86,000	
Debenture interest		
(K29,750 x 100/85)	35,000	
		121,000
		1,353,695
Company Income Tax on:		
Mining profits		
(K1,232,695 x 30%)		369,809
Non-Mining profits		
(K121,000 x 30%)		36,300
		406,109
Provisional income tax		(386,100)
Company income tax [payable		20,009

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

CA ZAMBIA APPLICATION ADVANCED DIPLOMA IN ACCOUNTANCY

CA 2.5: FINANCIAL MANAGEMENT

FRIDAY 17 JUNE 2022

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)

JOLG Inc. is a Zambian based company which deals in specialized equipment and machinery. The company has been reviewing its investment and financing decisions to optimize its operations. JOLG Inc. has limited budget and also needs to improve its credit ratings in order to obtain external financing for its investments.

The finance manager of JOLG Inc. believes that one way of optimizing its operations is through cost management and therefore, reviewing the asset replacement policy would be important. Further, the financing of the replacement of assets with identical ones shall be done in the year of the optimal replacement period.

Replacement Policy

JOLG Inc. has a machine that cost K72.1 million with a maximum life of three (3) years which is under consideration for replacement with an identical one. The following financial information relates to the machine:

Year	**1**	**2**	**3**
	K'million	**K'million**	**K'million**
Running Costs	7.21	9.61	12.1
Estimated Residual Value	24.1	16.61	9.61

Financing of the asset

In order to finance the equipment, JOLG Inc. is considering whether to buy a new equipment at a cost of K100 million or alternatively to lease it for annual rentals payable at the start of each year of K35 million. If JOLG Inc. decides to buy the equipment, the company will need to borrow funds at a before tax interest cost of 10% per year. Buying the equipment will require payment for it on the last day of current financial year. JOLG Inc. will use the equipment for a period of six (6) years, with a disposal value after 6 years of K10 million. The corporate tax is payable annually in arrear at an annual rate of 30%. The equipment qualifies for capital allowances at 25% per year on a reducing balance basis.

Other information

The company has a gearing level of 30% and an equity beta of 1.3. The market expected rate of return is 15% and the risk free rate of return is 8%. JOLG Inc. has issued irredeemable debt of K100 nominal value with annual interest of 9% per year, based on the nominal value. The current market price of this debt is K90.

Required:

(a) Explain the relationship between investment and financing decisions (4 marks)

(b) Evaluate the optimal replacement cycle for the existing machine. (13 marks)

(c) Evaluate whether JOLG Inc. should lease or buy the new equipment. (17 marks)

(d) Discuss the reasons that may cause capital rationing for JOLG Inc. (6 marks)

[Total: 40 Marks]

SECTION B

There are FOUR (4) questions in this section.

Attempt any THREE (3) questions in this section.

QUESTION TWO

Tiyende Ltd is an SME with positive growth prospects. Recently, the management of the company has been assessing its working capital cash cycle. Arising from the assessment, management is considering initiatives to reduce the cash cycle.

Tiyende Ltd currently monitors its working capital cash cycle through cash, Receivables, Inventory and Payables. Management is considering an initiative to reduce the cash cycle in order to manage the size and cost of the company's working capital.

Below are the components of the current working capital of Tiyende Ltd.

	K'000	Days
Cash	1,000	
Receivables	4,000	30
Inventory	6,000	60
Payables	4,000	40

Management has proposed, the following changes to the current working capital of Tiyende Ltd:

Balance Sheet Item	Change
Cash	50% increase
Receivables	25% reduction
Payables	25% increase
Current ratio	Reduction to 1.9 times

The cost of short term funds to the company is given as 20% per annum.

Required:

(a) Calculate the company's net working capital under the current and proposed policies.

(5 marks)

(b) Compute the change in the company's working capital financing and advise management whether to implement the new policy. (3 marks)

(c) Explain two (2) benefits of the cash operating cycle in ascertaining the working capital needs of the company. (4 marks)

(d) Explain three (3) advantages to be derived from an effective management of Accounts Receivables. (3 marks)

(e) Briefly explain five (5) important functions performed by the Finance Manager for Tiyende Ltd, in order for the company to achieve its objectives. (5 marks)

[Total: 20 Marks]

QUESTION THREE

Western Transport Plc, a trucking company, wishes to increase its fleet of trucks. Senior management has decided to finance this expansion program by raising the funds from existing shareholders through a one for five rights issue.

Western Transport Plc. has 500,000 ordinary shares with a par value of K15 per share. The management team has decided that the rights issue be issued at a 25% discount to the current market value in order for the share issue to be successful. The shares of the company are currently being traded on the Lusaka Stock Exchange at a price: earnings ratio of 4 times. You are advised to ignore share issue costs.

The most recent statement of profit or loss of the company is as follows:

Statement of Profit or Loss for the year ended 31 December 2021.

	K000
Sales revenue	65,116
Cost of sales	(17,700)
Gross Profit	47,416
Less: operating expenses	(24,960)
Profit before interest and tax	22,456
Loan interest payable	(1,248)
Profit before tax	21,208
Corporation tax@25%	(5,302)
Profit after taxation	15,906

Required:

(a) Discuss the arguments for and against the use of a rights issue of shares rather than a public issue of shares. (6 marks)

(b) Calculate the theoretical ex-rights price of an ordinary share in Western Transport Plc. (6 marks)

(c) Calculate the price at which the rights in Western Transport Plc. are likely to be traded. (2 marks)

(d) Evaluate, at the time of the rights issue, the impact to an investor who holds 2,000 ordinary shares before and after the announcement of the rights issue in the following situations:

(i) Option 1 – Taking up the rights issue.
(ii) Option 2 – Selling the rights.
(iii) Option 3. – Doing nothing.

(6 marks)
[Total: 20 Marks]

QUESTION FOUR

GreyRhino is a company that is listed on a major stock exchange. The company has struggled to maintain profitability in the last two years due to poor economic conditions in its home country and as a consequence it has decided not to pay a dividend in the current year. However, there are now clear signs of economic recovery and GreyRhino is optimistic that payment of dividends will resume in the future. Forecast financial information relating to the company is as follows:

Year	2022 (Current)	2023	2024
Earnings (K'000)	3,000	3,600	4,300
Dividends (K'000)	nil	500	1,000

The company is optimistic that earnings and dividends will increase after 2024 at a constant annual rate of 3% per year. GreyRhino currently has a before-tax cost of debt of 5% per year and an equity beta of 1.6, and on a market value basis, the company is currently financed 75% by equity and 25% by debt.

During the course of the last two years the company acted to reduce its gearing and was able to redeem a large amount of debt. Since there are now clear signs of economic recovery, GreyRhino plans to raise further debt in order to modernize some of its non-current assets and to support the expected growth in earnings. This additional debt would mean that the capital structure of the company would change and it would be financed 60% by equity and 40% by debt on a market value basis. The before-tax cost of debt of GreyRhino would increase to 6% per year and the equity beta of GreyRhino would increase to 2.

The risk-free rate of return is 4% per year and the equity risk premium is 5% per year. In order to stimulate economic activity the Government has reduced the profit tax rate to 20% per year.

The current average price: earnings ratio of listed companies similar to GreyRhino is 5 times.

Required:

(a) Estimate the value of GreyRhino using the price: earnings ratio method and discuss the usefulness of the variables that you have used. (4 marks)

(b) Calculate the current cost of equity of GreyRhino, and determine the value of the company using the dividend valuation model. (4 marks)

(c) Calculate the current weighted average after-tax cost of capital of GreyRhino, and the weighted average after-tax cost of capital following the new debt issue, and comment on the difference between the two values. (6 marks)

(d) Discuss how the shareholders of GreyRhino can assess the extent to which they face any of the following risks, explaining in each case the nature of the risk being assessed:

(i) Business risk;

(ii) Financial risk;

(iii) Systematic risk

(6 marks)

[Total: 20 Marks]

QUESTION FIVE

A Small and Medium Enterprise (SME), Soya Foods Ltd intends to borrow K500, 000 to finance a project involving an expansion of its existing factory. It has obtained an offer from Arc Bank. The term sheet of the loan facility is as follows:

Annual interest rate:	24%
Duration:	2 years
Interest method:	compound interest with quarterly compounding
Payment plan:	equal instalments at the end of each quarter

Required:

(a) (i) Compute the quarterly instalment payment . (3 marks)

(ii) Prepare a loan amortization schedule to show the periodic interest charges, instalment payments, principal payments, and balance of the loan at the end of each quarter. (7 marks)

(b) Explain two (2) circumstances under which the weighted average cost of capital can be used in investment appraisal. (4 marks)

(c) Explain three (3) limitations of the dividend growth model (DGM) in estimating the cost of equity of a company. (6 marks)

[Total: 20 Marks]

END OF PAPER

Formula Sheet

Economic order quantity

$$= \sqrt{\frac{2C_0D}{C_H}}$$

Miller – Orr Model

$$\text{Return point} = \text{Lower limit} + (\frac{1}{3} \times \text{spread})$$

$$\text{Spread} = 3\left[\frac{\frac{3}{4} \times \text{transaction cost} \times \text{variance of cash flows}}{\text{interest rate}}\right]^{\frac{1}{3}}$$

The Capital Asset Pricing Model

$$E(r_i) = R_f + \beta_i(E(r_m) - R_f)$$

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

$$\text{WACC} = \left[\frac{V_e}{V_e + V_d}\right]k_e + \left[\frac{V_d}{V_e + V_d}\right]k_d(1-T)$$

The Fisher formula

$$(1+i) = (1+r)(1+h)$$

Purchasing power parity and interest rate parity

$$s_1 = S_0 x \frac{(1+h_c)}{(1+h_b)} \qquad f_0 = s_0 x \frac{(1+i_c)}{(1+i_b)}$$

Present Value Table

Present value of 1 i.e. $(1 + r)^{-n}$

Where r = discount rate
n = number of periods until payment

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	0·980	0·961	0·943	0·925	0·907	0·890	0·873	0·857	0·842	0·826	2
3	0·971	0·942	0·915	0·889	0·864	0·840	0·816	0·794	0·772	0·751	3
4	0·961	0·924	0·888	0·855	0·823	0·792	0·763	0·735	0·708	0·683	4
5	0·951	0·906	0·863	0·822	0·784	0·747	0·713	0·681	0·650	0·621	5
6	0·942	0·888	0·837	0·790	0·746	0·705	0·666	0·630	0·596	0·564	6
7	0·933	0·871	0·813	0·760	0·711	0·665	0·623	0·583	0·547	0·513	7
8	0·923	0·853	0·789	0·731	0·677	0·627	0·582	0·540	0·502	0·467	8
9	0·914	0·837	0·766	0·703	0·645	0·592	0·544	0·500	0·460	0·424	9
10	0·905	0·820	0·744	0·676	0·614	0·558	0·508	0·463	0·422	0·386	10
11	0·896	0·804	0·722	0·650	0·585	0·527	0·475	0·429	0·388	0·350	11
12	0·887	0·788	0·701	0·625	0·557	0·497	0·444	0·397	0·356	0·319	12
13	0·879	0·773	0·681	0·601	0·530	0·469	0·415	0·368	0·326	0·290	13
14	0·870	0·758	0·661	0·577	0·505	0·442	0·388	0·340	0·299	0·263	14
15	0·861	0·743	0·642	0·555	0·481	0·417	0·362	0·315	0·275	0·239	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	0·812	0·797	0·783	0·769	0·756	0·743	0·731	0·718	0·706	0·694	2
3	0·731	0·712	0·693	0·675	0·658	0·641	0·624	0·609	0·593	0·579	3
4	0·659	0·636	0·613	0·592	0·572	0·552	0·534	0·516	0·499	0·482	4
5	0·593	0·567	0·543	0·519	0·497	0·476	0·456	0·437	0·419	0·402	5
6	0·535	0·507	0·480	0·456	0·432	0·410	0·390	0·370	0·352	0·335	6
7	0·482	0·452	0·425	0·400	0·376	0·354	0·333	0·314	0·296	0·279	7
8	0·434	0·404	0·376	0·351	0·327	0·305	0·285	0·266	0·249	0·233	8
9	0·391	0·361	0·333	0·308	0·284	0·263	0·243	0·225	0·209	0·194	9
10	0·352	0·322	0·295	0·270	0·247	0·227	0·208	0·191	0·176	0·162	10
11	0·317	0·287	0·261	0·237	0·215	0·195	0·178	0·162	0·148	0·135	11
12	0·286	0·257	0·231	0·208	0·187	0·168	0·152	0·137	0·124	0·112	12
13	0·258	0·229	0·204	0·182	0·163	0·145	0·130	0·116	0·104	0·093	13
14	0·232	0·205	0·181	0·160	0·141	0·125	0·111	0·099	0·088	0·078	14
15	0·209	0·183	0·160	0·140	0·123	0·108	0·095	0·084	0·074	0·065	15

Annuity Table

Present value of an annuity of 1 i.e. $\frac{1-(1+r)^{-n}}{r}$

Where r = discount rate
n = number of periods

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	1·970	1·942	1·913	1·886	1·859	1·833	1·808	1·783	1·759	1·736	2
3	2·941	2·884	2·829	2·775	2·723	2·673	2·624	2·577	2·531	2·487	3
4	3·902	3·808	3·717	3·630	3·546	3·465	3·387	3·312	3·240	3·170	4
5	4·853	4·713	4·580	4·452	4·329	4·212	4·100	3·993	3·890	3·791	5
6	5·795	5·601	5·417	5·242	5·076	4·917	4·767	4·623	4·486	4·355	6
7	6·728	6·472	6·230	6·002	5·786	5·582	5·389	5·206	5·033	4·868	7
8	7·652	7·325	7·020	6·733	6·463	6·210	5·971	5·747	5·535	5·335	8
9	8·566	8·162	7·786	7·435	7·108	6·802	6·515	6·247	5·995	5·759	9
10	9·471	8·983	8·530	8·111	7·722	7·360	7·024	6·710	6·418	6·145	10
11	10·37	9·787	9·253	8·760	8·306	7·887	7·499	7·139	6·805	6·495	11
12	11·26	10·58	9·954	9·385	8·863	8·384	7·943	7·536	7·161	6·814	12
13	12·13	11·35	10·63	9·986	9·394	8·853	8·358	7·904	7·487	7·103	13
14	13·00	12·11	11·30	10·56	9·899	9·295	8·745	8·244	7·786	7·367	14
15	13·87	12·85	11·94	11·12	10·38	9·712	9·108	8·559	8·061	7·606	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	1·713	1·690	1·668	1·647	1·626	1·605	1·585	1·566	1·547	1·528	2
3	2·444	2·402	2·361	2·322	2·283	2·246	2·210	2·174	2·140	2·106	3
4	3·102	3·037	2·974	2·914	2·855	2·798	2·743	2·690	2·639	2·589	4
5	3·696	3·605	3·517	3·433	3·352	3·274	3·199	3·127	3·058	2·991	5
6	4·231	4·111	3·998	3·889	3·784	3·685	3·589	3·498	3·410	3·326	6
7	4·712	4·564	4·423	4·288	4·160	4·039	3·922	3·812	3·706	3·605	7
8	5·146	4·968	4·799	4·639	4·487	4·344	4·207	4·078	3·954	3·837	8
9	5·537	5·328	5·132	4·946	4·772	4·607	4·451	4·303	4·163	4·031	9
10	5·889	5·650	5·426	5·216	5·019	4·833	4·659	4·494	4·339	4·192	10
11	6·207	5·938	5·687	5·453	5·234	5·029	4·836	4·656	4·486	4·327	11
12	6·492	6·194	5·918	5·660	5·421	5·197	4·988	4·793	4·611	4·439	12
13	6·750	6·424	6·122	5·842	5·583	5·342	5·118	4·910	4·715	4·533	13
14	6·982	6·628	6·302	6·002	5·724	5·468	5·229	5·008	4·802	4·611	14
15	7·191	6·811	6·462	6·142	5·847	5·575	5·324	5·092	4·876	4·675	15

CA2.5 SUGESTED SOLUTIONS

SOLUTION ONE – (COMPULSORY)

a) Relationship between investment decisions and financing decisions.

Firm's investment decisions are shown to be directly related to financing decisions in that investment decisions of the firm with high creditworthiness are extremely sensitive to the availability of internal funds. Less creditworthy firms are much less sensitive to internal fund availability. Financing decisions includes an inflow of cash and investment decisions includes outflow of cash. Investment decisions will impact financing decisions. Every time a firm makes an investment decisions, it has to decide on the form of financing that will follow that decision.

b)

One year replacement cycle	**Cash flow (K'm)**	**d.f@14%**	**P.V. (K'm)**
0	(72.1)	1	(72.1)
1	(7.21)	0.877	(6.323)
1	24.1	0.877	21.136
		NPV	**(57.287)**

Equivalent Annual Cost = K57.287million/0.877 = K65.322million

One year replacement cycle	Cash flow (K'm)	d.f@14%	P.V. (K'm)
0	(72.1)	1	(72.1)
1	(7.21)	0.877	(6.323)
2	(9.61)	0.769	(7.390)
2	16.61	0.769	12.773
		NPV	**(73.04)**

Equivalent Annual Cost = K73.04million/1.647 = K44.35million

One year replacement cycle	Cash flow (K'm)	d.f@14%	P.V. (K'm)
0	(72.1)	1	(72.1)
1	(7.21)	0.877	(6.323)
2	(9.61)	0.769	(7.390)
3	(12.1)	0.675	(8.168)
3	9.61	0.675	6.487
		NPV	**(87.494)**

Equivalent Annual Costs = K87.494million/2.322 = K37.68million

The machine should be replaced every after three (3) years.

WORKINGS

Cost of Capital

kd = 9/90 x 100% =10%(1-0.30) = 7%

ke= 8% + 1.3(15%-8%) = 17.1%

WACC = (17.1% x 0.7) + (7% x 0.3) = 14%

c) Students must note that the company planned to finance the replacement following the optimal replacement cycle and therefore, the cash flows start from year 3 which is the optimal replacement cycle.

After tax cost of debt= 10% x (1-0.3) = 7%

Option to Lease

Year	3	4	5	6	7	8
	K'm	K'm	K'm	K'm	K'm	K'm
Lease	(35)	(35)	(35)	(35)		
Tax saved			10.5	10.5	10.5	10.5
Net cash flow	**(35)**	**(35)**	**(24.5)**	**(24.5)**	**10.5**	**10.5**
Discount@7%	0.816	0.763	0.713	0.666	0.623	0.582
Present Values	**(28.56)**	**(26.71)**	**(17.47)**	**(16.32)**	**6.54**	**6.11**
NPV	**(76.41)**					

Option to Buy

Year	3	4	5	6	7	8
	K'm	K'm	K'm	K'm	K'm	K'm
Cost	(100)				10	
Tax relief on CA		7.5	5.63	4.22	3.16	6.49
Net cash flow	**(100)**	**7.5**	**5.63**	**4.22**	**3.16**	**6.49**
Discount@7%	0.816	0.763	0.713	0.666	0.623	0.582
Present Values	**(81.6)**	**5.72**	**4.01**	**2.81**	**1.97**	**3.78**
NPV	**(63.31)**					

The option to buy is much cheaper than to Lease and therefore, JOLG Ltd should buy the machine.

Capital allowances (if bought):

		WDV	CA@25%	Tax saved@30%
Year 0	Cost	100		
	C.A.	25,000	25	7.5
		75,000		
Year 1	C.A.	(18,750)	18.75	5.63
		56,250		

Year 2	C.A.	(14,062)	14.06	4.22
	42,188			
Year 3	C.A.	(10,547)	10.55	3.16
	31,641			
Year 4	Scrap	10,000	21.64	6.49
	C.A.	21,641		

(d)

Capital rationing is a situation in which a company has a limited amount of capital to invest in potential projects, such that the different possible investments need to be compared with one another in order to allocate the capital available most effectively. If an organization is in a capital rationing situation it will not be able to enter into all projects with positive NPVs because there is not enough capital for all of the investments.

Soft capital rationing is brought about by internal factors; hard capital rationing is brought about by external factors.

Soft capital rationing may arise for one of the following reasons.

i) Management may be reluctant to issue additional share capital because of concern that this may lead to outsiders gaining control of the business.
ii) Management may be unwilling to issue additional share capital if it will lead to a dilution of earnings per share.
iii) Management may not want to raise additional debt capital because they do not wish to be committed to large fixed interest payments.
iv) Management may wish to limit investment to a level that can be financed solely from retained earnings. They may not want to grow the company too quickly.

Hard capital rationing may arise for one of the following reasons.

i) Raising money through the stock market may not be possible if share prices are depressed.
ii) There may be restrictions on bank lending due to government control.
iii) Lending institutions may consider an organization to be too risky (e.g., too highly geared, poor prospects) to be granted further loan facilities.
iv) The costs associated with making small issues of capital may be too great.

SOLUTION TWO

(a)

	Before	**After**
	K'000	K'000
Cash	1,000	1,500
Debtors	4,000	3,000
Inventory	6,000	5,000
	11,000	9,500
Less creditors	(4,000)	(5,000)
Net working capital	**7,000**	**4,500**
Cost of capital @ 20%	**1,400**	**900**

(b)

Cost of capital @ 20% of Net Working Capital	1,400	900
Current Asset Ratio	2.75	1.9

Potential Savings = 1,400,000 - 900,0000 = K500,000

Management should therefore change the existing policy as that will potentially give the company savings of K500, 000. The reduction in the current ratio also confirms the_potential savings, through reduction in amounts tied up in current assets.

Item	
Change in cost of capital	
Advice to implement new policy	

(c)

The importance of the cash operating cycle in ascertaining the working capital needs of the company is as follows:

- A cash operating cycle is the sum of stock or inventory days and trade debtors or receivables days less the trade creditors or payables days.
- Investment in working capital requires financing which comes at a cost of 20% to the business. The longer the cash cycle the bigger the financing requirement and hence the cost and vice versa.
- Any management strategy that will reduce the cash cycle to the barest minimum will reduce the working capital locked up and its associated cost. This will have a positive impact on the profits and vice versa.

(d)

Advantages of effective management of Accounts Receivable

Good receivables management is a comprehensive process which helps the company in:

- Determining the customer’s credit rating in advance
- Frequently scanning and monitoring customers for credit risks
- Maintaining customer relations
- Detecting late payments in due time
- Detecting complaints in due time
- Reducing the total balance outstanding
- Preventing any bad debt in receivables outstanding

(e) **The roles played by financial managers are:**

Capital Structure

In order to meet the obligations of the business it is important to have enough cash

and liquidity. A firm can raise funds by the way of equity and debt. It is the responsibility of a financial manager to decide the ratio between debt and equity, or gearing. It is important to maintain a good level of gearing to avoid insolvency.

Allocation of Funds

Once the funds are raised, the funds should be allocated in such a manner that they are optimally used. In order to allocate funds in the best possible manner the following point must be considered:

- The size of the firm and its growth prospects
- Status of assets whether they are long-term or short-term
- Mode by which the funds are raised

These financial decisions directly and indirectly influence other managerial activities.

Profit Planning

Generating Profits is one of the primary objectives of any business organization. Profit generation is important for the sustainability of any organization. Profit arises due to many factors such as pricing, industry competition, state of the economy, mechanism of demand and supply, cost and output. A healthy mix of variable and fixed factors of production can lead to an increase in the profitability of the firm. In this regard, finance managers minimize financial and operating gearing.

Fixed costs are incurred by the use of fixed factors of production such as land and machinery. Fixed costs can cause huge fluctuations in profitability.

Dividend Policy

If company securities are traded on a stock market this involves a huge amount of risk. Therefore a financial manger must manage the risk involved in the trading of shares and debentures.

The financial manager makes decisions on whether to distribute profits in form of dividends or to reinvest them to achieve company growth.

Working Capital Management (cash management)

Cash Management is an important aspect of managing a business because it allows the process of monitoring, analyzing and adjustment of the cash flow of a business which will enhances liquidity and profits while also reducing risk.

Risk Management

The role of a Finance Manager is to communicate risk policies and processes for an organization. They provide hands-on development of risk models involving market, credit and operational risk, assure controls are operating effectively, and provide research and analytical support.

SOLUTION THREE

(a) When deciding between a rights issue and a public issue of shares, the following factors need to be considered.

(1) Assuming the rights issue is fully subscribed, the shareholder control over the company will remain unchanged as the rights are offered in proportion to the existing holdings. A public issue of shares would mean shares would be sold to other investors, so there will be some dilution of control for existing shareholders.

(2) A public issue of shares is expensive due to the associated fees such as underwriting and other regulatory costs. There will also be costs in advertising the issue to wider investors. Rights issues do not attract such high compliance costs and the costs of circulating the information to the existing shareholders will be lower than public issue advertising.

(3) As a result of the compliance and advertising required, a public issue will take longer to complete than a rights issue. If the funds are wanted quickly a rights issue may be a better option.

(4) In a public issue of shares there is greater competition for the shares on offer. If there is strong demand for the shares then it is possible to get a higher price for the shares and raise more capital than with a rights issue.

(5) New shares are normally issued at a discount to current market price. This means the share issue will decrease the market value of the shares. If there is a rights, this is not a problem provided the shareholders exercise their rights. However, in a public issue the existing shareholders will be worse off. Shareholders usually have "pre-emptive" rights which means that new issues must be offered to existing shareholders first.

(b)	K
Earnings per share K15906/K500	31.812
Market value per share (K31.812 X4)	127.248

Theoretical ex-rights price

	K
Original Shares 5 @ K127.248	636.24
Rights share 1 at K95.436	95.436
	731.676

Value of share following the rights issue K731.676/6

= K121.95

(c)
Value of rights

	K
Value of share following rights issue	121.95
Cost of acquiring a rights share	(95.436)
Value of rights	(26.514)

(d) Evaluation of options

(i) Take up rights issue

	K
Value of holding after rights issue	
(value of holding after rights issue (2000 + 400) x K121.95)	292,680
Less: cost of acquiring rights issue (400 x K95.436)	(38,174.4)
	254,506

(ii) Sell rights

	K
Value of holding after rights issue (2000 x K121.95)	243,900
Add sale of rights (400 x K26.514)	10,606
	254,506

(iii) Do nothing

	K
Value of holding after rights issue (2000 x K121.95)	243,900

Conclusion

The investor will be in the same financial position whether the rights offer is taken up or not. If the investor does nothing and therefore allows the rights issue to laps, he/she will be worse off than under the other two options.

SOLUTION FOUR

(a) **<u>Price/earnings ratio valuation</u>**

The value of the company using this valuation method is found by multiplying future earnings by a price/earnings ratio.

Using the earnings of GreyRhino in Year 1 and the price/earnings ratio of similar listed companies gives a value of 3,000,000 x 5 = <u>K15,000,000</u>.

Using the current average price/earnings ratio of similar listed companies as the basis for the valuation rests on two questionable assumptions. First, in terms of similarity, the valuation assumes similar business operations, similar capital structures, similar earnings growth prospects, and so on. In reality, no two companies are identical. Second, in terms of using an average price/earnings ratio, this may derive from companies that are large and small, successful and failing, low-geared and high-geared, and domestic or international in terms of markets served. The calculated company value therefore has a large degree of uncertainty attached to it.

The earnings figure used in the valuation does not include expected earnings growth. If average forecast earnings over the next three years are used (K3.63 million), the price/earnings ratio value increases by 21% to K18.15 million (3.63 x 5). Although earnings growth beyond the third year is still ignored, K18.15 million is likely to be a better estimate of the value of the company than K15 million because it recognizes that earnings are expected to increase by almost 50% in the next three years.

(b) <u>Value of company using the dividend valuation model</u>

The **current cost of equity** using the capital asset pricing model:

= 4 + (1.6 x 5) = **<u>12%</u>**

Since a dividend will not be paid in Year 1 (2022), the dividend growth model cannot be applied straight away. However, dividends after Year 3 (2024) are expected to grow at a constant annual rate of 3% per year and so the dividend growth model can be applied to these dividends. The present value of these dividends is a Year 3 (2024) present value, which will need discounting back to year 0. The market value of the company can then be found by adding this to the present value of the forecast dividends in Years 2 (2023) and 3 (2024).

PV of year 2 dividend = $500,000/1.12^2$ = K398, 597

PV of year 3 dividend = $1,000,000/1.12^3$ = K711, 780

Year 3 PV of dividends after year 3 = (1,000,000 x 1.03)/(0.12 – 0.03) = K11, 444, 444

Year 0 PV of these dividends = $11,444,444/1.12^3$ = K8, 145, 929

Market value from dividend valuation model = 398,597 + 711,780 + 8,145,929 = **K9, 256, 306** or approximately K9.3 million

Alternative calculation of dividend valuation method market value

The year 3 dividend of K1m can be treated as D_1 from the perspective of year 2
The year 2 value of future dividends using the dividend growth model will then be:
K1,000,000/(0.12 – 0.03) = K11, 111, 111

Year 0 PV of these dividends = $11,111,111/1.12^2$ = K8, 857, 710

Adding the PV of the year 2 dividend gives a market value of 8, 857, 710 + 398, 597 = **K9, 256, 308** which, allowing for rounding, is the same as the earlier calculated value.

(c) Current weighted average after-tax cost of capital

Current cost of equity using the capital asset pricing model = 12% After-tax cost of debt = 5 x (1 – 0.2) = 5 x 0.8 = 4%

Current after-tax **WACC** = (12 x 0.75) + (4 x 0.25) = **10% per year**

Weighted average after-tax cost of capital after new debt issue

Revised cost of equity = K_e = 4 + (2.0 x 5) = 14%

Revised after-tax cost of debt = 6 x (1 – 0.2) = 6 x 0.8 = 4.8%

Revised after-tax **WACC** = (14 x 0.6) + (4.8 x 0.4) = **10.32% per year**

Comment on Difference

The after-tax WACC has increased slightly from 10% to 10.32%. This change is a result of the increases in the cost of equity and the after-tax cost of debt, coupled with the change in gearing. Although the cost of equity has increased, the effect of the increase has been reduced because the proportion of equity finance has fallen from 75% to 60% of the long-term capital employed. Although the after-tax cost of debt has increased, the cost of debt is less than the cost of equity and the proportion of cheaper debt finance has increased from 25% to 40% of the long-term capital employed.

(d) **Nature and assessment of business risk**

(i) Business risk arises due to the nature of a company's business operations, which determines the business sector into which it is classified, and to the way in which a company conducts its business operations. Business risk is the variability in shareholder returns that arises as a result of business operations. It can therefore be related to the way in which profit before interest and tax (PBIT or operating profit) changes as revenue or turnover changes. This can be assessed from a shareholder perspective by calculating operational gearing, which essentially looks at the relative proportions of fixed operating costs to variable operating costs. One measure of operational gearing that can be used is (100 x contribution/PBIT), although other measures are also used.

Nature and assessment of financial risk

(ii) Financial risk arises due to the use of debt as a source of finance, and hence is related to the capital structure of a company. Financial risk is the variability in shareholder returns that arises due to the need to pay interest on debt. Financial risk can be assessed from a shareholder perspective in two ways. Firstly, balance sheet gearing can be calculated. There are a number of gearing measures that can be used, such as the debt/equity ratio, the debt ratio and financial gearing, and the calculation can be based on either market values or book values. Secondly, the interest coverage ratio can be calculated.

Nature and assessment of systematic risk

(iii) From a shareholder perspective, systematic risk is the sum of business risk and financial risk. Systematic risk is the risk that remains after a shareholder has diversified investments in a portfolio, so that the risk specific to individual companies has been diversified away and the shareholder is faced with risk relating to the market as a whole. Market risk and undiversifiable risk are therefore other names for systematic risk.

From a shareholder perspective, the systematic risk of a company can be assessed by the equity beta of the company. If the company has debt in its capital structure, the systematic risk reflected by the equity beta will include both business risk and financial risk. If a company is financed entirely by equity, the systematic risk reflected by the equity beta will be business risk alone, in which case the equity beta will be the same as the asset beta.

SOLUTION FIVE

(a) (i) **Instalment (Annuity) Computation**

Term Sheet Details:

Item	**Value**
The present value of the payments (PMT), Loan principal (PVA)	K500,000
Annual interest (i)	24%
Frequency (m)	4
Term (in years) - t	2
Number of periods (n) = Term x Frequency = 2 x 4	8

PVA (Prevent Value of Annuity) = PMT [PVIFA], where PVIFA = Prevent Value Annuity Factor, PMT = Payment Amount

PMT (payment) = PVA/PVIFA = $[500,000]/[(1-(1+r)^{-n}/r)] = 500,000/[(1-(1+i/m)^{-nm}/(i/m)]$

= $500,000/[(1-(1+24/4)^{-8}/(24/4)]$

= 500,000/6.2097939 =K**<u>80, 517.97</u>**

That is, the company will be required to pay **K80, 517.97** at the end of each quarter to amortize the loan.

ii) Amortization schedule

Period Qtr	**Interest**	**Instalment**	**Principal repayment**	**Outstanding balance**
0	-	-	-	500,000.00
1	30,000.00	80,517.97	50,517.97	449,482.03
2	26,968.92	80,517.97	53,549.05	395,932.98
3	23,755.98	80,517.97	56,761.99	339,170.99
4	20,350.26	80,517.97	60,167.71	279,003.28
5	16,740.20	80,517.97	63,777.77	215,225.51
6	12,913.53	80,517.97	67,604.44	147,621.07
7	8,857.26	80,517.97	71,660.71	75,960.36
8	4,557.61	80,517.97	75,960.35	-

(e) The weighted average cost of capital (WACC) can be used as a discount rate in investment appraisal provided that the risks of the investment project being evaluated are similar to the current risks of the investing company. The WACC would then reflect these risks and represent the average return required as compensation for these risks.

WACC can be used in investment appraisal provided that the business risk of the proposed investment is similar to the business risk of existing operations. Essentially this means that WACC can be used to evaluate an expansion of existing business. If the business risk of the investment project is different from the business risk of existing operations, a project- specific discount rate that reflects the business risk of the investment project should be considered. The capital asset pricing model (CAPM) can be used to derive such a project-specific discount rate.

WACC can be used in investment appraisal provided that the financial risk of the proposed investment is similar to the financial risk of existing operations. This means that financing for the project should be raised in proportions that broadly preserve the capital structure of the investing company. If this is not the case, an investment appraisal method called adjusted present value (APV) should be used. Alternatively, the CAPM-derived project-specific cost of capital can be adjusted to reflect the financial risk of the project financing.

A third constraint on using WACC in investment appraisal is that the proposed investment should be small in comparison with the size of the company. If this were not the case, the scale of the investment project could cause a change to occur in the perceived risk of the investing company, making the existing WACC an inappropriate discount rate.

(f) The dividend growth model has several difficulties attendant on its use as a way of estimating the cost of equity. For example, the model assumes that the future dividend growth rate is constant in perpetuity, an assumption that is not supported by the way that dividends change in practice. Each dividend paid by a company is the result of a dividend decision by managers, who will consider, but not be bound by, the dividends paid in previous periods. Estimating the future dividend growth rate is also very difficult. Historical dividend trends are usually analyzed and on the somewhat risky assumption that the future will repeat the past, the historic dividend growth rate is used as a substitute for the future dividend growth rate. The model also assumes that business risk, and hence business operations and the cost of equity, are constant in future periods, but reality shows us that companies, their business operations and their economic environment are subject to constant change.
It is sometimes said that the dividend growth model does not consider risk, but risk is implicit in the share price used by the model to calculate the cost of equity. A moment's thought will indicate that share prices fall as risk increases, indicating that increasing risk will lead to an increasing cost of equity. What is certainly true is that the dividend growth model does not consider risk explicitly in the same way as the capital asset pricing model (CAPM). Here, all investors are assumed to hold diversified portfolios and as a result only seek compensation (return) for the systematic risk of an investment. The CAPM represent the required rate of return (i.e. the cost of equity) as the sum of the risk-free rate of return and a risk premium reflecting the systematic risk of an individual company relative to the systematic risk of the stock market as a whole. This risk premium is the product of the company's equity beta and the equity risk premium. The CAPM therefore tells us what the cost of equity should be, given an individual company's level of systematic risk.

The individual components of the CAPM (the risk-free rate of return, the equity risk premium and the equity beta) are found by empirical research and so the CAPM gives rise to a much smaller degree of uncertainty than that attached to the future dividend growth rate in the dividend growth model. For this reason, it is usually suggested that the CAPM offers a better estimate of the cost of equity than the dividend growth model.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

CA APPLICATION ADVANCED DIPLOMA IN ACCOUNTANCY

CA 2.6 STRATEGIC BUSINESS ANALYSIS

WEDNESDAY 15 JUNE 2022

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

INSTRUCTIONS TO CANDIDATES

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

2. This paper is divided into TWO sections:

   Section A: One (1) compulsory scenario question.

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

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

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

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

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

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

8. Present legible and tidy work.

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

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

Zoom Trucking Company (ZTC)

ZTC was founded in 1956 by a British national, Mr. Roy Smith, who was based in what was then Southern Rhodesia (now Zimbabwe). The company's core business was transporting copper from the mines in Northern Rhodesia (now Zambia) through Rhodesia for onward transmission to overseas buyers in Europe and Asia. In 1965, the white settlers in Rhodesia, principally of British origin, unilaterally declared independence from Britain. Most countries roundly condemned the action by the white settlers because they were a minority group, and their move was perceived to be a coup against the majority black people who were seeking majority rule and political independence from Britain. The United Nations considered military intervention to wrestle political power from the white settlers but Britain, along with its Western allies, thwarted the move and instead prevailed on the UN to impose economic sanctions. Zambia, having attained political independence in 1964, advocated for black rule in Rhodesia and refused to recognize the white minority Government of the white settlers. On its part, it banned all forms of trade with Rhodesia. The Zambian Government informed management of ZTC that it would not permit the company to haul copper from its mines to Rhodesia. ZTC could thus no longer freight copper from Zambia through Rhodesia.

There was also another complication for ZTC. The company was headquartered in Rhodesia and its shareholders comprised whites who were openly sympathetic to the white minority regime that had unilaterally usurped political power and government in Rhodesia. The company consequently considered it necessary to shift its operations and moveable assets in Zambia to Rhodesia. The Zambian Government however objected to a free transfer of the company's assets to Rhodesia but allowed white personnel to move to Rhodesia if they so wished.

In the face of these developments, ZTC was compelled to restructure the company. It bought off the shares of a minority shareholder, Mr Ismail Singh, who had decided to sell his fifteen percent ownership in the company in exchange for the Zambian operations and assets of ZIC. Mr Singh then established a new company, Singh Transport Company (STC), from the sale of his shares.

Singh had all along been domiciled in Zambia and was known to be a sympathiser of the struggle for political independence by the African majority. His parents had immigrated to Zambia from India when he was ten (10) years old. The stories he had heard of British colonialism in India had not endeared Ismail to the English and his feelings had formed the basis for his unwavering support for the struggle for political independence. Although he was a shareholder of ZTC, Singh had refused to physically move to and reside in Rhodesia and had insisted that Zambia was his home. He had accordingly remained in Zambia from where he directed his business interests in Zambia and East Africa. Two (2) years after parting company with ZTC, Singh decided to form an alliance between Singh Transport Company and Zambia Haulage Company.

Zambia Haulage Company was founded by two indigenous Zambians who were former civil servants. The two (2) gentlemen were childhood friends and had gone to school together. At university, one of them had studied engineering and the other had studied public administration. Upon graduation, they had both joined the Ministry of Roads and Construction. After working for twenty (20) years, they had decided to retire from the civil service and form their own company, Zambia Haulage Company, which specialized in transporting goods between Zambia and Tanzania. Although there was a lot of business in the haulage business between Zambia and Tanzania, the company was unable to fully exploit the opportunity in the haulage business because it had an old fleet of trucks, and its trucks were constantly breaking down. The two (2) owners of Zambia Haulage Company welcomed the alliance with Singh Transport Company because, so they hoped, it would not only be an opportunity to recapitalize and modernize the company's trucks, but it might be time they could retire into the background and leave active management of the company to the more experienced and youthful Mr. Singh.

Required:

(a) Explain the significance of a company's external environment in the formulation of strategy. (5 marks)

(b) With the help of a diagram, discuss how the external environment of Zoom Trucking Company influenced the company's strategic direction. (15 marks)

(c) What was the strategic significance of the alliance between Singh Transport Company and Zambia Haulage Company? (5 marks)

(d) Discuss five (5) benefits of a strategic alliance. (15 marks)

[Total: 40 Marks]

SECTION B

There are FOUR (4) questions in this section.

Answer Any Three (3) from the following Questions.

<u>QUESTION TWO</u>

Breakfast for One

MyMuesli was formed in 2007 by three (3) university graduates from Germany. Within five (5) months of setting up in business they have achieved rapid growth in both sales and numbers employed with their innovative business model which allows the customer to create online their own muesli recipe from 75 different ingredients and then have the product posted to them.

The three (3) founders are all of the same age (being in their mid-twenties) all educated at the same university. Each of the founders studied related business subjects in public relations, marketing and law. The M company web site is MyMuesli.com and it was developed by them. The ingredients they use for the muesli are all sourced from organic farmers and can be sold to customers as being their own personalized healthy high quality designs. In their first year of operation, sales reached Euros 125,000 with a labour force of 30 people who are a mixture of fulltime and part-time workers. The three (3) founders are looking ahead very optimistically as they believe they are riding the trend to individualization and to quality organic food.

(Source: Thompson, J. & Martin, F. Strategic Management – Awareness and Change. Sixth Edition. South-Western CENGAGE Learning, UK, pp.63)

Required:

(a) Define the marketing mix, its significance and describe its elements which this company could have used. (7 marks)

(b) Describe the steps they could have followed to segment, target and position their business. (3 marks)

(c) Given the following financial data: Trade payables = K25,000; trade receivables = K50,000; sales = K 200,000; capital = K500,000; gross profit = K100,000; inventory = K150,000; purchases = K80,000; credit sales = K75,000; cost of sales = K 250,000.

Calculate the asset turnover, gross profit margin, receivables collection period, inventory days, payables payment period. (10 marks)

[Total: 20 Marks]

QUESTION THREE

Northern Foods in the UK is best known for certain brands: Fox's Biscuits, Goodfella's Pizza and Dalepak burgers. It had also produced own-label foods for Marks & Spencer and the leading supermarkets. Changes to the M&S supply chain and price demands from the supermarkets had hit its margins. A number of reasons were offered as to why Northern Foods got into difficulties:

- It had been more concerned with cash than with sales.
- It operated from too many (dispersed) sites.
- It was too ready to say 'yes' to its leading customers without examining the implications of the choices this implied.
- There had been inadequate innovation – say with healthy option foods.
- Across the business there was inadequate learning and sharing.

As a result, it faced some difficult decisions in 2009. One concerned the future of Fox's Biscuits. The factories were in need of improvement. There were two (2) key sites and neither was adequate. One new factory was needed – but where should it be located? Wherever was chosen, employee redundancies were implied.

(Source: Thompson, J. & Martin, F. Strategic Management – Awareness and Change. Sixth Edition. South-Western CENGAGE Learning,UK, pp.625)

Required:

(a) Suppose this company had the following business units: 2 dogs, 5 stars, 3 question marks and 4 cash cows, put these businesses on a suitable planning matrix and explain how you can balance this portfolio in terms of the strategies and actual actions. (6 marks)

(b) Describe the barriers to entry which the Northern Foods could use to stop competitors coming into the industry. (4 marks)

(c) The following fictitious data could apply here: Total costs = K100m; total assets = K400m; equity = K200m; sales = K400m.

Calculate the asset turnover, return on investment, return on equity, net income and return on sales. (10 marks)

[Total: 20 Marks]

QUESTION FOUR

The Zambia Coal Electricity Generating Company (ZCEGC) limited has lately been having problems in its operations. This has been chiefly due to a lift between management and members of the Board of Directors as how the company should be economically managed. The directors individually and severally have gone to the company to instruct management on strategies they must take to improve company performance and mangers have resisted this interference. Management has invited you to facilitate at a joint board and management seminar on roles of either party.

Required:

(a) Discuss briefly any five (5) functions of a Board of Directors of a company. (10 marks)

(b) Describe briefly any five (5) moral attributes that individual directors of the company should have as contained in the King report on corporate governance. (10 marks)

[Total: 20 Marks]

QUESTION FIVE

Chintobentobe Mining Limited is a company that has been operating in North western proving for some time. But due to financial challenges, the company has been placed under Care and Maintenance. You have been hired by the Consultant managing the company to advise on how a Turnaround strategy can be adopted to save the company from terminal decline or takeover and stir the company back to life.

Required:

(a) Suggest five (5) elements critical in implementing a Turnaround strategy. (10 marks)

(b) Zambia recently had Presidential and General Elections on 12 August, 2021. Discuss the Political and financial risks that affect business. (10 marks)

[Total: 20 Marks]

END OF PAPER

CA2.6 SUGGESTED SOLUTIONS

SOLUTION ONE

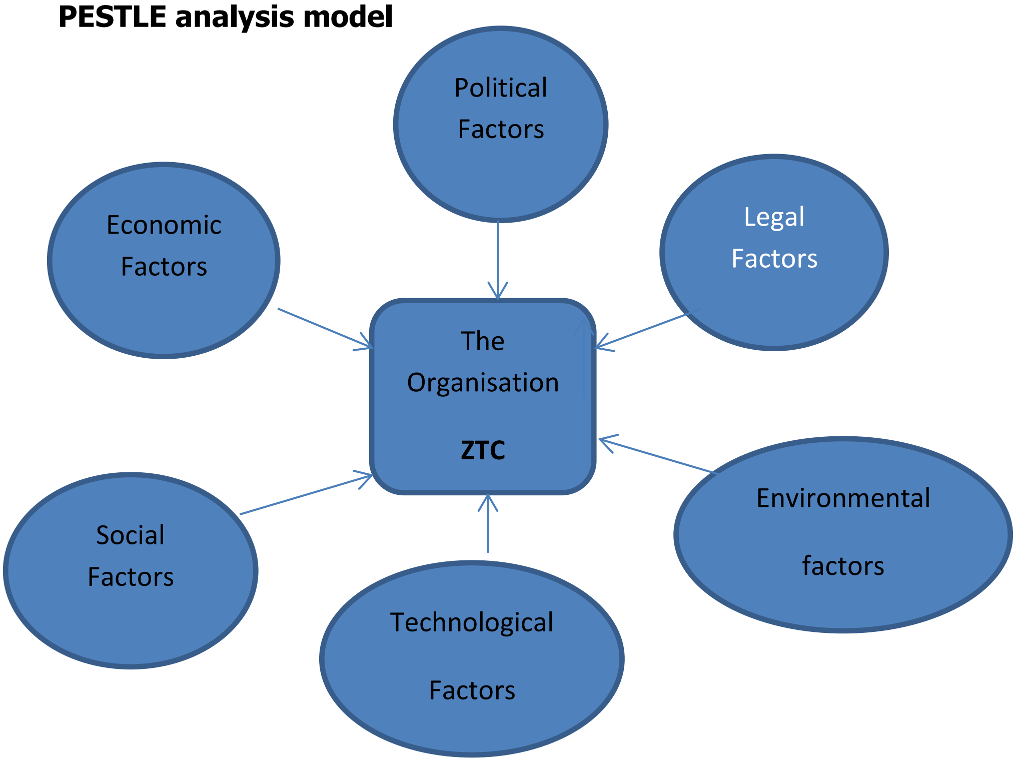
(a) Explain the significance of a company's external environment in the formulation of strategy.

The significance of a company's environment

A company's external environment refers to factors outside a firm's control, but which impact on a firm's success/profitability. In the case of strategic direction of a firm, the external environment entails opportunities and threats to success. A strategy is a way of navigating through the external environment by exploiting opportunities and overcoming the threats to profitability. Strategy is derived from opportunities and threats.

(b) With the help of a diagram, discuss how the external environment of Zoom

PESTLE analysis model



The external environment of Zoom Trucking Company and the company's strategic direction

Let's look at each element of a PESTEL analysis.

Political Factors

These determine the extent to which government and government policy may impact on an organisation or a specific industry. This would include political policy and stability as well as trade, fiscal and taxation policies too.

Economic Factors

An economic factor has a direct impact on the economy and its performance, which in turn directly impacts on the organisation and its profitability. Factors include interest rates, employment or unemployment rates, raw material costs and foreign exchange rates.

Social Factors

The focus here is on the social environment and identifying emerging trends. This helps a marketer to further understand consumer needs and wants in a social setting. Factors include changing family demographics, education levels, cultural trends, attitude changes and changes in lifestyles.

Technological Factors

Technological factors consider the rate of technological innovation and development that could affect a market or industry. Factors could include changes in digital or mobile technology, automation, research and development. There is often a tendency to focus on developments only in digital technology, but consideration must also be given to new methods of distribution, manufacturing and logistics.

Environmental Factors

Environmental factors are those that are influenced of the surrounding environment and the impact of ecological aspects. With the rise in importance of CSR (Corporate Sustainability Responsibility) and sustainability, this element is becoming more central to how organisations need to conduct their business. Factors include climate, recycling procedures, carbon footprint, waste disposal and sustainability.

Legal Factors

An organisation must understand what is legal and allowed within the territories they operate in. They also must be aware of any change in legislation and the impact this may have on business operations. Factors include employment legislation, consumer law, healthy and safety, international as well as trade regulation and restrictions.

The external environment that faced Zoom Trucking Company was a political one which comprised two elements. The first was the unilateral declaration of independence by the white settlers in Rhodesia. The second was the response to the unilateral declaration of independence by the Zambian government. These events made it untenable for the company to carry on ferrying copper from Zambia through Rhodesia.
The political fallout resulted in the company splitting and going in different directions. The Rhodesian wing of the company switched to doing business with South Africa and the Zambian wing was sold off and changed direction to East Africa.

(c) What was the strategic significance of the alliance between Singh Transport Company and Zambia Haulage Company?

Strategic significance of the alliance between Singh Transport Company and Zambia Haulage Company.

The alliance between Singh Transport Company and Zambia Haulage Company is strategic, implying that it is intended to facilitate the achievement of success. One of the partners, namely, Zambia Haulage Company, cannot fully exploit the opportunity because it does not have the requisite resources. The other partner seemingly has the resources but stands to access the market that is currently owned and served by Zambia Haulage Company.

(d) Discuss five (5) benefits of a strategic alliance.

Strategic appeal or benefits for such Cross-border alliances include the following:

1. Gaining better access to attractive country markets.
2. To capture economies of scale in production and/or marketing cost reduction can be the difference that allows a company to be cost-competitive.
3. To fill gaps in technical expertise and/or knowledge of local markets (buying habits and product preferences of consumers, local customers and so on.
4. To share distribution facilities and dealer networks, thus mutually strengthening their access to buyers.
5. Cross border allies can direct their competitive energies more toward mutual rivals and less toward one another, teaming up may help them close the gap on leading companies.
6. Benefit comes into play when companies desirous of entering a new foreign market, conclude that alliances with local companies are an effective way to tap into a partner's local market knowledge and help it establish working relationships with key officials in the host-country government.
7. Benefit comes into play when companies desirous of entering a new foreign market, conclude that alliances with local companies are an effective way to tap into a partner's local market knowledge and help it establish working relationships with key officials in the host-country government.

SOLUTION TWO

(a) **Define the marketing mix, its significance and describe its elements which this company could have used.**

The marketing mix is the set of controllable variables and their levels that the firm uses to influence the target market. These variables are product, price, place and promotion and are sometimes known as the 4Ps.

Significance

The marketing mix is a very important concept since the elements in it act partly as substitutes for each other and they must be integrated and mutually supporting. This is so that the product can be positioned in the market to appeal to the customer.

The Elements

Product

A product (goods or services) is anything that satisfies a need or want. It is not a 'thing' with 'features' but a package of benefits.

Form the firm's point of view, the product element of the marketing mix is what is being sold.

From the customer's point of view, a product is a solution to a problem or a package of benefits. Many products might satisfy the same customer need.

Customer value is the customer's estimate of how far a product or service goes towards satisfying his/her needs.

Every product has a price and so the customer makes a trade-off between the expenditure and the value offered.

Place

Place deals with how the product is distributed and how it reaches its customers.

Channel is where the products are sold.

Logistics. The location of warehouses and efficiency of the distribution system is also important. Arguably the speed of delivery is an important issue in place.

A firm can distribute the product itself (direct distribution) or distribute it through intermediary organizations such as retailers.

Product push: the firm directs its efforts to distributors to get them to stock the product.

Customer pull: the firm persuades consumers to demand the product from retailers and distributors, effectively pulling the product through the chain.

Promotion

This is the element of the mix which many of the practical activities of the marketing department are related to and over which the marketing department generally has most control over. A useful mnemonic is AIDA which summarizes the aims of promotion.

- Arouse Attention.
- Generate Interest.
- Inspire Desire.
- Initiate Action (i.e. buy the product)

Promotion in the marketing mix includes all marketing communications which let the public know of the product or service: advertising, sales promotion, direct selling by sales personnel, public relations.

Price

This is the only element of the marketing mix which directly brings in revenue. Price is influenced by many factors as follows:

- Economic influences: supply and demand; price and income elasticities.
- Competitors' prices. Competitors include other firms selling the same type of product, as well as firms selling substitute products. Generally, firms like to avoid price wars.
- Quality connotations. High price is often taken as being synonymous with quality, so pricing will reflect the product's image.
- Discounts. These can make the product attractive to distributors.
- Payment terms.
- Trade-in allowances.
- The stage in the product life cycle. Penetration pricing and skimming pricing.

(b) **Describe the steps they could have followed to segment, target and position their business.**

Segmentation

Step 1: Identify segmentation variables and segment the market

Step 2: Develop segment profiles.

Targeting

Step 3: Evaluate the attractiveness of each segment.

Step 4: Select the target segment(s)

Positioning

Step 5: Identify positioning concepts for each target segment.

Step 6: Select, develop and communicate the chosen concept.

(c) **Given the following financial data:** Trade payables = K 125,000; trade receivables = K150,000; sales = K 200,000; capital = K500,000; gross profit = K 100,000; inventory = K 350,000; purchases = K180,000; credit sales = K 75,000; cost of sales = K 250,000.

Calculate the asset turnover, gross profit margin, receivables collection period, inventory days, payables payment period.

(5x2 Marks)

Asset turnover = Sales/Capital employed

= K200,000 / K500,000

= 0.4 x 100 = **40%**

Gross profit margin = Gross profit / Sales

= K100,000/K200,000

= 0.5 x 100 = **50 %**

Receivables collection period = Trade receivables / Credit sales x 365

= K150,000 / K75,000

= 2 x 365 = **730 days**

Inventory days = Inventory / Cost of sales

= K350,000 / K250,000

= **1.4 days**

Payables payment period = Trade payables / Purchases x 365

= K125,000 / K180,000 x 365

= **253.5 days**

SOLUTION THREE

(a) Suppose this company had the following business units: 2 dogs, 5 stars, 3 question marks and 4 cash cows, put these businesses on a suitable planning matrix and explain how you can balance this portfolio in terms of the strategies and actual actions**.**

BCG Matrix

Relative Market Share

Market Growth		High	Low
	High	Stars (5)	Question Marks (3)
	Low	Cash Cows (4)	Dogs (2)

Portfolio balancing: The portfolio should be balanced by having cash cows providing finance for stars and question marks, and a minimum of dogs.

Actions

A corporate parent of any type will have to make decisions about acquiring, nurturing and disposing of business units.

Four major strategies can be pursued with respect to products, market segments and SBUs.

Build: A build strategy forgoes short-term earnings and profits in order to increase market share.

Hold: A hold strategy seeks to maintain the current position.

Harvest: A harvesting strategy seeks short-term earning and profits at the expense of long-term development.

Divest: A divestment strategy reduces negative cash flow and releases resources for use elsewhere.

i. In the short term, **stars** require capital expenditure in excess of the cash they generate in order to maintain their position in their competitive growth market, but promise high returns in the future. **Strategy: Build.**
ii. In due course, stars will become cash cows. **Cash cows** need very little capital expenditure since mature markets are likely to be quite stable and they generate high levels of cash income. Cash cows can now be used to finance the stars. **Strategy: Hold or Harvest if weak.**
iii. **Question marks** must be assessed as to whether they justify considerable capital expenditure in the hope of increasing their market share, or should they be allowed to die quietly as they are squeezed out of the expanding market by rival products. **Strategy: Build or Harvest.**

iv. **Dogs** may be ex-cash cows that have now fallen on hard time. Although they will show only a modest net cash outflow, or even a modest net cash inflow, they are cash traps which tie up funds and provide a poor return on investment. However, they may have a useful role, either to complete a product range or to keep competitors out. There are also many smaller niche businesses in markets that are difficult to consolidate that would count as dogs but which are quiet successful. **Strategy: Divest or Hold.**

(b) **Describe the any four (4) barriers to entry which the Northern Foods could use to stop competitors coming into the industry.**

Barriers to Entry

(i) Scale economies. High fixed costs often imply a high breakeven point, which depends on a large volume of sales. If the market as a whole is not growing, the new entrant has to capture a large slice of the market from existing competitors. This is expensive.

(ii) Product differentiation. Existing firms in an industry may have built up a good brand image and strong customer loyalty over a long period of time. A few firms may promote a large number of brands to crowd out the competition.

(iii) Capital requirements. When capital investment requirements are high, the barrier against new entrants will be strong, particularly when the investment would possibly be high-risk.

(iv) Knowledge requirements. It is much more difficult to enter an industry which requires significant specialist knowledge and skills, than an industry where no specialist skills are required.

(v) Switching costs. These refer to the costs (time, money, convenience) that a customer would have to incur by switching from one supplier's products to another's.

(vi) Access to distribution channels. Distribution channels carry a manufacturer's products to the end-buyer. New distribution channels are difficult to establish and existing ones are hard to gain access to.

(vii) Cost advantages of existing producers, independent of economies of scale include patent rights, experience and know-how, government subsidies and regulations and favoured access to raw materials.

(c) **The following fictitious data could apply here:** Total costs = K100m; total assets = K400m; equity = K200m; sales = K400m.

Calculate the asset turnover, return on investment, return on equity, net income and return on sales.

Asset turnover = Sales/Total assets

= K400m / K400m = 1 x 100 = **100%**

Return on investment = Return on sales x Asset turnover

= 0.75 x 1 = **75%**

Net income = Sales – Total costs

= K400m – K100m = **K300m**

Return on sales = Net income / Sales

= K300m / K400m x 100 = 0.75 x 100 = **75%**

Return on Equity = Return on investment x Total assets/Equity

= 0.75 x K400m/K200m

= 0.75 x 2 = 1.50 x 100 = **150%**

SOLUTION FOUR

(a) The board of directors should:

i. Ensure that it is well informed about the company's performance through scheduled meetings, correspondence, and visitations to the company operational areas from time to time.

ii. Guide and judge the Chief Executive Officer and other top managers on agreed benchmarks and targets.

iii. Have the courage to curb inappropriate or unduly risky management actions or strategic moves.

iv. Advice shareholders that the Chief Executive Officer is doing what the board expects.

v. Provide insight and advice to management and

vi. Be intensely involved in debating the pros and cons of key decisions and action and be able to challenge management on merits and demerits of their strategic moves.

(b) The King report lists five (5) moral attributes that individual directors should have:

i. **Conscience** – acting with intellectual honest and independence of mind in the best interest of the company and its stakeholders avoiding conflict of interest.
ii. **Inclusivity** – taking into account the legitimate interests and expectations of stakeholders.
iii. **Competence** – having the knowledge and skills required to govern a company effectively.
iv. **Commitment** – diligently performing duties and devoting enough time to company affairs.
v. **Courage** – having the courage to take the necessary risks and to act with integrity.

SOLUTION FIVE

(a) Suggest five elements critical in implementing a Turnaround strategy.

i. Crisis stabilization
The emphasis is on reducing costs and increasing revenue. An emphasis on reducing direct costs and improving productivity is more likely to be effective that efforts to reduce overheads.

ii. Management changes
It is usually likely that new managers are required at senior level. Previous managers allowed the situation to deteriorate. Managers experienced at turnaround are required. Managers brought from outside will not be prisoners of the old paradigm.

iii. Communication with shareholders
The support of key stakeholder groups- groups with both a high level of power and a high degree of interest in an organisation- such as the workforce and providers of finance-is likely to be very critical. Stakeholder analysis should be carried out so that various stakeholder groups are well informed and managed properly.

iv. Attention to target markets
A clear focus on appropriate target market segments is essential; indeed, a lack of such a focus is a common cause of decline. The organisation must become customer-oriented and ensure that it has good flows of marketing information.

v. Concentration on effort
Resources should be concentrated on the best opportunities to create value. Products and market segments currently being served must be reviewed to eliminate any distractions and poor performers. Outsourcing for internal activities may likely be considered.

vi. Financial restructuring
Financial restructuring is mot likely. In worst case scenarios this may mean trading out of insolvency. Even where the business may be solvent, capital restructuring may be required, both to provide cash for investment and to reduce cash outflows in the shorter term.

vii. Prioritisation
The eventual success of a turnaround strategy depends in part on management's ability to prioritize necessary activities.

(b) Risk management

Discuss the Political and financial risks that affect business.

i. **Political Risk**: This is the risk that political action will affect the position and value of the company. It is connected with Country Risk-the risk associated with, or holding assets in a particular country. Nationalization, sanctions, civil war, and political instability- all these can have impact on business.

ii. **Financial Risk:** a business can be affected by changes in the interest rates, economic climate, gearing, bad debt, risk, liquidity, insolvency. The fundamental risk relating investment appraisal is that incorrect decisions are made:
   - Investments are made when they should not have been, or are not made when they should have been
   - When choosing between two investments, the wrong investment is chosen.

CA ZAMBIA PROGRAMME EXAMINATIONS

CA ADVISORY PROFESSIONAL IN ACCOUNTANCY

CA 3.1: ADVANCED FINANCIAL REPORTING

MONDAY 13 JUNE 2022

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)

The following consolidated financial statements relate to Mubanga Plc Group for the year to 31 May 2022.

Consolidated Statement of Profit or loss for the year ended 31 May 2022

	K'000
Revenue	2 360
Cost of sales	(884)
Gross profit	1, 476
Other income	40
Distribution cost	(666)
Administrative cost	(530)
Finance cost	(90)
share of associate loss	(120)
Profit before tax	110
Taxation	(44)
Profit for the period	66
Other comprehensive income	
Net actuarial gain	8
Total comprehensive Income	74
Profit for the period attributable to:	
Equity holders of parent	52.8
Non-controlling interest	13.2
	66.00
Total comprehensive income attributable to:	
Equity holders of parent	60.80
Non-controlling interest	13.20
	74

	2022	2021
	K'000	**K'000**
Assets		
Non-current		
Property, plant and equipment	1,600	1,400
Goodwill	176	180
Investment in associate	284	300
Deferred tax	-	20
	2,060	1,900
Current		
Inventory	200	172
Trade Receivables	280	292
Cash & cash equivalents	-	26
	480	490
Total Assets	**2,540**	**2,390**

Consolidated Statement of Financial Position as at 31 May

Equity and liabilities		
Equity		
Equity shares of K0.50 each	660	440
Share premium	132	32
Retained earnings	(18)	(48)
	774	424
Non- controlling interests	254	232
Total Equity	**1,028**	**656**
Liabilities		
Non-current		
Employee benefits	448	596
Deferred Tax	34	-
20% Loan Notes	464	680
	946	1,276
Current		
Trade payables	260	268
Taxation	58	94
Finance cost payable	160	96
Bank overdraft	88	-

	566	458
Total Liabilities	**1,512**	**1, 734**
Total equity and liabilities	**2, 540**	**2, 390**

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.

The following information is relevant:

(1) Depreciation charge for the year amounted to K136,000. This was charged to cost of sales. Further, profit on disposal of equipment was taken to other income while loss on disposal of plant was charged to administrative cost.

(2) On 31 May 2022, Mubanga Plc acquired 80% of the equity shares of Musonda Plc for a cash consideration of K252,000. The fair value of net assets of Musonda Plc at acquisition was K28,000. This is summarised below:

	K'000
Property, plant and equipment	27.20
Trade receivables	3.40
Bank	2.40
Trade payables	(4.00)
Taxation	(1.00)
	28.00

There was no disposal of subsidiary during the year to 31 May 2022.

(3) It is Mubanga Plc's group policy to value non – controlling interests using proportion of net assets method.

(4) Consolidated goodwill and investment in associate were both impaired during the year to 31 May 2022, with the exception of goodwill in Chama Plc in.

(5) Mubanga Plc acquired 10% additional equity shares in Chama Plc for a cash consideration of K28,000 on 31 May 2022. This increased its shareholding to 80%. Mubanga Plc acquired 70% of the equity shares in Chama Plc on 1 June 2019 for a consideration of K178,000. The fair value of the net assets of Chama Plc was K260,000 and K220,000 on 31 May 2022 and 1 June 2019 respectively. Goodwill in Chama Plc had not been impaired since its acquisition. The movement on equity arising from this transaction was taken to share premium.

(6) Mubanga Plc acquired 25% of equity shares in Kombe Plc on 1 November 2021 for a cash consideration of K144,000. Mubanga Plc has significant influence in Kombe Plc.

Mubanga Plc received total dividends of K16,000 from all of its associated companies for the year to 31 May 2022. No investments in associated companies were disposed off during the year.

(7) On 30 March 2022, Mubanga Plc disposed of equipment with a carrying value of K76,000 for K116,000 cash. On 1 April 2022, Mubanga Plc disposed off a piece of plant for K12,000 cash. This had a carrying value of K14,000.

(8) Mubanga Plc introduced a defined benefit plan on 1 June 2019. During the year to 31 May 2022, it paid pension contributions of K200,000 . No pension benefits were paid out during the year. Net pension expenses were charged to administrative costs. Net actuarial gains were taken to share premium.

(9) The 20% loan note was issued on 1 June 2020. It was correctly classified as 'financial liability through profit or loss'. All changes in fair value are taken to administrative expenses. There was no acquisition nor disposal of any financial liability classified as 'through profit or loss' during the year.

(10) Mubanga Plc issued equity shares for cash on 31 December 2021. Further, Mubanga Plc, its subsidiaries and associated companies paid dividends on 1 December 2021.

Required:

(a) Discuss how the ethics of corporate social responsibility are difficult to reconcile with shareholder expectations. (4 marks)

(b) Prepare a consolidated statement of cash flows of Mubanga Plc Group using the indirect method, for the year ending 31 May 2022 in accordance with the requirements of IAS 7 'Statement of cash flows'. (36 marks)

[Total: 40 Marks]

SECTION B

Answer ANY Three (3) questions in this section.

QUESTION TWO

Kapunda Plc (Kapunda) is a manufacturing entity with operations spread throughout Zambia. The Directors of Kapunda seek advice on the accounting treatment of a number of transactions including their deferred tax effects in preparing financial statements for the year to 31 December 2022.

Transaction 1- Employee Pension Plan

Kapunda operates an employee pension sheme to provide post retirement benefits to its employees. According to the pension scheme agreement, Kapunda periodically contributes 10% of the employees basic salary as employer pension contributions to a separate pension fund. Employees also contribute 10% of their basic salaries. Upon retirement, employees are entitled to a lump sum pension payment computed as final annual salary multiplied by 2% for each year of service up to a maximum of 35 years, in addition to a monthly pension payment which is computed as a third of the monthly salary at the time of retirement. The following details relate to the pension:

	K'm
Fair Value of plan assets at 31 December 2021	50
Accrued Pension benefits at 31 December 2021	65
Fair Value of plan assets at 31 December 2022	58
Accrued Pension benefits at 31 December 2022	69
Total cash contributions paid to the pension fund in year to 31 December 2022	10
Pension benefits paid during the year to 31 December 2022	15

Additional pension earned by plan members for the services rendered during the year to 31 December 2022 amounted to K5.5 million. Yields to maturity on high class corporate bonds with the same term to maturity as Kapunda's pension plan liabilities were 10% and 8% at 31 December 2021 and at 31 December 2022 respectively.

For tax purposes, tax relief for the cost of providing employee pension is obtained when contributions are paid. (10 marks)

Transaction 2 – Directors Bonus Scheme

On 1 October 2020, Kapunda entered an arrangement with its 10 directors in which each director was promised a cash bonus equal to the market price at the time of settlement of 100,000 Kapunda Plc equity shares upon remaining in employment with Kapunda Plc over a 3 year period commencing 1 January 2021. Kapunda Plc had initially expected that 4 Directors would leave before the end of the three (3) year period. During the year to 31 December 2021, two (2) Directors left their employment with Kapunda and as at 31 December 2021 it was estimated that no more directors would leave over the remaining 2 years. No director has left during the year to 31 December 2022 though it is estimated as at 31 December 2022 that one (1) Director will leave over the last one (1) year. Each Kapunda Plc equity share has been trading at the following fair values to date:

Date	Fair value (K)
1 October 2020	10.00
1 January 2021	12.10
31 December 2021	11.95
31 December 2022	13.20

(10 marks)

For tax purposes, the cost of cash bonuses is only tax deductible in the period when the bonus is paid.

Kapunda Plc's directors are also concerned about the deferred tax implications of the above transactions in the financial statements. Kapunda Plc is liable to income tax at 35%.

Required:

Explain to the directors of Kapunda Plc how the above transactions must be accounted for in the financial statements of Kapunda Plc for the year to 31 December 2022 including the deferred tax implications in accordance with IFRS.

[Total: 20 Marks]

QUESTION THREE

(a) Bonimotor Ltd is an international company with a presence in Zambia providing spare parts for the automotive industry. It operates in many different jurisdictions with different currencies. During 2022, Bonimotor experienced financial difficulties partly due to the COVID-19 third wave pandemic marked by a decline in revenue, a reorganisation and restructuring of the business and as a result reported a loss for the year. An impairment test of goodwill was performed, but no impairment was recognised. Bonimotor applied one discount rate for all cash flows for all cash-generating units (CGUs), regardless of the currency in which the cash flows would be generated. The discount rate used was the weighted average cost of capital (WACC), and Bonimotor used the yield on 10-year GRZ bond as the risk-free rate in this calculation.

Furthermore, Bonimotor built its model using a forecast denominated in the parent company's functional currency. Bonimotor felt that any other approach would require a level of detail that was unrealistic and impracticable. Bonimotor argued that the different CGUs represented different risk profiles in the short term. Still, there was no basis for claiming that their risk profiles were different over a longer business cycle.

Bonimotor has tested for the impairment of its non-current assets. It was decided that a building located overseas was impaired due to flooding in the area. The building was acquired on 1 April 2022 at 25 million Zimbabwean Dollar when the exchange rate was 2 Zimbabwean Dollar to the Zambian Kwacha. The building is carried at cost. On 31 March 2023, the building's recoverable amount was deemed

17.5 million Zimbabwean Dollar. The exchange rate at 31 March 2023 was 2.5 Zimbabwean Dollar to the Zambian Kwacha. Buildings are depreciated over 25 years. The tax base and carrying amounts of the non-current assets before the impairment write-down were identical. The impairment of the non-current assets is not allowable for tax purposes. Bonimotor has not made any impairment or deferred tax adjustment for the above. Bonimotor expects to make profits for the foreseeable future and assume the tax rate is 25%. No other deferred tax effects must be taken into account other than on the above non-current assets.

Required:

(i) Evaluate the acceptability of the above accounting practices under *IAS 36: Impairment of Assets*. (5 marks)

Recommend the accounting treatment of the above transaction to the directors of Bonimotor for the year ended 31 March 2023, including financial statements extracts in accordance with relevant International Financial Reporting Standards. (5 marks)

(b) Basilio Ltd acquired all the equity shares in Bernasio Ltd on 1 January 2022 for a consideration of K1,250 million. The carrying amount and fair value of the identifiable net assets at acquisition were K1,230 million. On 31 December 2024, Basilio Ltd was in the process of selling its entire shareholding in Bernasio Ltd, and so it was decided that Bernasio Ltd should be treated as a disposal group held for sale in accordance with *IFRS 5: Non-current Assets Held for Sale and Discontinued Operations* at that date. The carrying amounts of Bernasio Ltd's net assets before classification as held for sale at 31 December 2024 in the individual statement of financial position are as follows:

	K'million
Property, plant and equipment	836
Intangibles (excluding goodwill)	428
Current assets (at recoverable amount)	584
Non-current liabilities	(322)
Current liabilities	(254)
	1,272

The group has a policy of revaluing its property, plant and equipment in accordance with *IAS 16: Property, Plant and Equipment*. There have been no revaluations or any other gains or losses included within Bernasio Ltd's different components of equity since the date of acquisition as the carrying amount was deemed to be a close enough approximation to its fair value. However, on 31 December 2024, property with a carrying amount of K330 million was considered to have a fair value of K340 million. No adjustment has yet been made for this fair value. The total fair value less costs to sell off the disposal group at 31 December was estimated to be K1,220 million. There have been no previous impairments to the goodwill of Bernasio Ltd.

Required:

Recommend to the directors of Basilio Ltd how the above transaction should be accounted for in the consolidated financial statements as at 31 December 2024 including financial statement extracts in accordance with relevant International Financial Reporting Standards. (10 marks)

[Total: 20 Marks]

QUESTION FOUR

Mwininkhonde Plc is a trading entity specialised in purchasing heavy equipment for resale to its commercial customers and light equipment for resale to do-it-yourself (DIY) customers. The directors of Mwininkhonde Plc seek advice on how they must account for the following transactions in preparing financial statements for the year to 31 December 2022:

Transaction 1 - Forward Currency Contract

On 1 October 2021, Mwininkhonde entered an agreement in which it contracted to buy \$100,000 from a bank in six months' time at a forward rate of K17/\$. The agreement was a hedge against a potential depreciation of Kwacha as the company planned to import an item of plant at a cost of \$100,000 in future, the date of settling the currency purchase agreement. The spot exchange rate on 1 October 2021 was K17/\$. Mwininkhonde Plc acquired the plant on 31 March 2022, at a cost of \$100,000 using the proceeds from settlement of the currency purchase agreement. The spot exchange rate on 31 March 2022 was K18/\$ whilst on 31 December 2021, it was K17.3/\$. The plant is depreciated over a useful life of five (5) years straight line basis with a nil residual value. The Directors have evaluated the transaction for reporting purposes and have correctly concluded that it constitutes a cash flow hedge of a highly probable future transaction in accordance with IFRS 9 Financial Instruments. (8 marks)

Transaction 2 – Sale of equipment on extended credit terms

Mwininkhonde Plc sold and delivered equipment to a customer on 1 January 2022 for a total price of K2.1 million payable in 3 equal instalments at 12 month intervals of K700,000, with the first one being on 1 January 2022 (the last two being due on 31 December 2022 and 31 December 2023). The instalments due during the year to 31 December 2022 have been received on their respective due dates. In addition, Mwininkhonde Plc will service the equipment at no extra cost to the customer over the two (2) years following the sale, on 31 December each year. Mwininkhonde Plc would normally charge K50,000 each time the equipment is serviced. The applicable interest rate in financing Mwininkhonde Plc's trading operations is 10%. (4 marks)

Transaction 3 – Issue of loan Notes

On 1 January 2022, Mwininkhonde Plc issued five million K10, 8% loan notes at a premium of 5%. The notes have an original term to maturity of three (3) years and are redeemable on maturity at par. Transaction costs incurred by Mwininkhonde Plc on 1 January 2022 amounted to K100,000. The specific market interest rate on the notes (the interest rate that reflects Mwininkhonde's credit rating) was 6.16% on 1 January 2022 whilst the general market interest rate for this type of instrument was 8% on the same date. Mwininkhonde issued the notes to finance the cost of investments which have been classified as Fair Value Though Profit or Loss (FVTPL) assets. Consequently, in rectifying a potential measurement mismatch between those assets and the loan notes, Mwininkhonde Plc has correctly designated the loan notes as a FVTPL liability in accordance with IFRS 9 Financial Instruments. On 31 December 2022, specific market interest rate was 7.2% whilst the general market interest rate was 9%. (8 marks)

Required:

Explain to the directors of Mwininkhonde Plc how the above transactions must be accounted for in the financial statements of Mwininkhonde Plc for the year to 31 December 2022 in accordance with IFRS.

[Total: 20 Marks]

QUESTION FIVE

Shop Left Ltd operates supermarket chains across Zambia and the first supermarket was opened in Kawambwa. The firm has been in commercial operation for more than two (2) decades, growing its operations through an effective supply chain and financial management. However, in the last few years, keen competition and worsening general economic performance have steadied the consistent growths experienced over the years, resulting in the entity disposing off part of its operations. Below are the financial statements of Shop Left Ltd:

Income statement for the year ended 31 December 2020 (with comparatives)

	2020			2019		
	Continuing operations	Discontinued operations	Total	Continuing operations	Discontinued operations	Total
	K000	K000	K000	K000	K000	K000
Revenue	37,400	5,650	43,050	31,350	7,440	38,790
Cost of sales	(32,190)	(4,830)	(37,020)	(26,030)	(6,390)	(32,420)
Gross profit	5,210	820	6,030	5,320	1,050	6,370
Distribution costs	(1,302)	(425)	(1,727)	(1,160)	(502)	(1,662)
Administrative expenses	(2,225)	(657)	(2,882)	(1,330)	(460)	(1,790)
Interest payable	(340)	(12)	(352)	(284)	(31)	(315)
Profit/(loss) before tax	1,343	(274)	1,069	2,546	57	2,603
Tax (expense) /credit	(826)	50	(776)	(1,210)	(45)	(1255)
Profit for the period	**517**	**(224)**	**293**	**1,336**	**12**	**1,348**

Statement of financial position as at 31 December 2020 (with comparatives)

	2020	**2019**
	K000	**K000**
Non-current assets	11,775	14,080
Current assets:		
Inventories	4,986	5,445
Other current assets	4,044	6,525
Total assets	**20,805**	**26,050**

Share capital & reserves	8,896	8,798
Non-current liabilities:		
Loan note	5,800	9,100
Current liabilities	6,109	8,152
Total equity and liabilities	**20,805**	**26,050**

Additional information

(i) No additional equity shares were issued and no dividends were paid in 2020.

(ii) a class meeting of key shareholders and Loan holders held on 30 June 2020, a decision was taken to sell the entire operations of one of the firm's major retail shops as a response to teething operational difficulties that started in the early part of the current period. Operations, however, continued until 30 September 2020, when the sale transaction finally closed and proceeds received. Results from these operations for the current period are separately shown in the above income statement. Loss on sale of the operations amounting to K217,000 has been included within administrative expenses.

(iii) Shop left Ltd gave all employees a salary increment of 11% effective January 2020.

(iv) On 31 December 2020, there was litigation and claim amounting to K2.05 million against the company by a supplier whose contract was terminated as part of the closure process. Its legal counsel has advised the company that it has a good defence against the claim. Accordingly, no provision has been made in respect of the potential liability in these financial statements.

(v) The following ratios have been computed based on the 2019 financial statements:

Gross profit margin	16.42%
Profit (before interest and tax) margin	6.71%
Return on equity	15.32%
Return on capital employed	16.30%
Inventory turnover	5.95
Current ratio	1.47
Assets turnover	2.17
Debt/debt+equity ratio	50.84%

Required:

Write a report to the Board of Directors analysing the financial performance and position of Shop Left Ltd, drawing their attention to the effects (or potential effects) of the discontinued operations and the contingencies on overall performance.

[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

CA3.1 SUGGESTED SOLUTIONS

SOLUTION ONE – (COMPULSORY)

(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)

Mubanga Group
Consolidated Statement of Cashflow for the year ended 31 May 2022

	K'000	K'000
Cash flow from operating activities		
Profit before tax **Add back:**		110.00
Share of associate loss		120.00
Finance cost expense		90.00
Depreciation		136.00
Net pension expense **W9**		60.00
Loss on disposal of plant (12 -14)		2.00
Profit on disposal of equipment (116 -76)		(40.00)

Decrease in fair value of loan note (680 - 464)		(216.00)
Goodwill impairment **W2**		233.60
Increase in inventory (200 - 172)		(28.00)
Decrease in trade receivables (280 -292 - 3.4)		15.40
Decrease in trade payables (260 - 268 - 4)		(12.00)
Cash generated from operations		471
Pension contribution paid		(200.00)
Taxation paid **W4**		(27.00)
Interest paid **W10**		(26.00)
Net cash inflow from operating activities		**218.00**
Cash flow from investing activities		
Purchase of Musonda Plc (252 - 2.4)	(249.60)	
Purchase of shares in Chama Plc	(28.00)	
Purchase of shares in Kombe Plc	(144.00)	
Purchase of PPE **W1**	(398.80)	
Proceeds from disposal of PPE (116+12)	128.00	
Dividends received from associates	40.00	
Net cash outflow from investing activities		**(652.40)**
Cashflow from financing activities		
Proceeds from issue of shares **W6**	314.00	
Cash received from NCI **W8**	29.20	
Other dividends paid **W7**	(22.80)	
Net cashinflow from financing activities		**320.40**
Decrease in cash & cash equivalents		**(114.00)**
Opening cash & cash equivalents		26.00
Closing cash & cash equivalents		(88.00)

WORKINGS

W1 Property, plant & equipment

	K'000
Opening balance	1,400.00
Depreciation charge	(136.00)
New subsidiary	27.20
Disposals (76+14)	(90.00)
Acquisition (bal. fig.)	**398.80**
Closing balance	1,600.00

W2 Goodwill

	K'000
Opening balance	180.00

New subsidiary 252 – (80% x 28)	229.60
Impairment (bal fig.)	**(233.60)**
Closing balance	176.00

W3 Investment in associate

	K'000
Opening balance	300.00
Acquisition	144.00
Share of loss	(120.00)
Disposal	-
Dividends received	(40.00)
Closing balance	284.00

W4 Taxation

	K'000
Opening balance (94 - 20)	74.00
Profit or loss	44.00
New subsidiary	1
Cash paid (bal. fig)	**(27.00)**
Closing balance (58+34)	92.00

W5 Movement on Equity - 10% shareholding

	K'000
NCI at 31 May 2022 before disposal (30% x 2600)	78
Decrease in NCI 10/30 x 78	26
Consideration paid	28
Negative movement on equity	**(2)**

W6 Issue of shares

	K'000
Opening balance (440 + 32)	472.00
Net actuarial gain	8.00
Shares issued for cash (bal. fig)	**314.00**
Movement on equity **W5**	**(2.00)**
Closing balance (660 + 132)	792.00

W7 Retained Earnings

	K'000
Opening balance	(48.00)
Profit or loss	52.80
Dividends paid (Bal. fig)	**(22.80)**
Closing balance	(18.00)

W8 Non - Controlling Interest

	K'000
Opening balance	232.00
New subsidiary 20% x 28	5.60
Profit or loss	13.20
Decrease in NCI **W5**	(26.00)
Cash received (Bal. fig)	**29.20**
Closing balance	254.00

W9 Employee Benefits

	K'000
Opening balance	596.00
Net actuarial gain	(8.00)
Net pension expense (Bal. fig)	**60.00**
Contribution paid	(200.00)
Closing balance	448.00

W10 Interest Payable

	K'000
Opening balance	96.00
Profit or loss	90.00
Cash paid (Bal.fig)	**(26.00)**
Closing balance	160.00

SOLUTION TWO

Transaction 1

In accordance with IAS 19 Employee Benefits, the pension plan appears to be a defined benefit plan as the employer defines the eventual benefits upon retirement before hand regardless of how much contributions will be made to the fund. Kapunda seems to have a continuing obligation to meet the promised pension per benefit formula. The following amounts will therefore be reported in the FS for the year to 31.12.2022:

a) Net Pension liability to report as a non current liability in SFP at 31.12.2022:

	K'm
Plan liabilities at 31.12.2022	69
Plan assets at 31.12.2022	(58)
Net pension liability at 31.12.2022	11

b) Pension cost to report in SPLOCI

			K'm
Net plan liability at 1.1.2022	(65-50)		15
Changes in y/e 31.12.22 other than pension cost			
- Cash contribution paid			(10)
			5
Total pension cost for the year	(balance)		6
Net plan liability at 31.12.2022			11
Reporting the total pension cost:			
Total pension cost as above			6
Amount to report in P/L:			
- Current service cost		5.5	
- Net interest	15X10%	1.5	
			(7)
Remeasurement component to report in OCI (actuarial gain)			(1) gain

c) Deferred tax implications of the pension plan amounts:

Accounting base amounts must be the Net pension asset or liability reported in the SFP. The tax base amount must be nil as tax relief is only recognised on cash basis, when the contributions are paid. The following are therefore the deferred tax effects for the year to 31 December 2022:

Date (31.12)	Accounting base K'm	Tax base K'm	Temporary difference K'm	Deferred tax liability/(asset) K'm

2022	11	0	11 tax deductible	11X35% = (3.85)
2021	15	0	15 tax deductible	15X35% = (5.25)

Net decrease in the deferred tax asset for the period		1.4
Deferred tax expense on the actuarial gain to in OCI	35%X1	(0.49)
Deferred tax expense to report in P/L		1.05

Transaction 2

The bonus arrangement is a cash settled share based transaction in accordance with IFRS 2 Share Based Payments. The total estimated cost of the bonus must be spread over the 3 year performance period on a straight line basis. A liability must be reported in the SFP equivalent to the cumulative expense recognised in P/L to date. The following amounts are applicable:

a) Share based payment (SBP) liabilities and expenses

		K'm
SBP liability at to report at 31.12.2022	(10-2-0-1) X 100,000 X13.2 x2/3	6.16
Less SBP liability at 31.12.2021	(10-2-0)X100,000X11.95 x 1/3	(3.19)
SBP expense for the year to 31.12.2022 (credit to P/L)		(2.97)

b) Deferred tax implications of the SBP bonus

The accounting base is the SBP liability reported in the SFP. The tax base amount must be nil as tax relief is only recognised on cash basis, when the bonus is paid. The following are therefore the deferred tax effects for the year to 31 December 2022:

Date (31.12)	Accounting base K'm	Tax base K'm	Temporary difference K'm	Deferred tax liability/(asset) K'm
2022	6.16	0	6.16 tax deductible	6.16 X35% = (2.16)
2021	3.19	0	3.19 tax deductible	3.19X35% = (1.12)

Deferred tax credit to report in P/L	1.04

SOLUTION THREE

(a)

i)

The discount rate used by Bonimotor Ltd has not been calculated in accordance with the requirements of IAS 36 *Impairment of Assets*. According to IAS 36, the future cash flows are estimated in the currency in which they will be generated and then discounted using a discount rate appropriate for that currency. IAS 36 requires the present value to be translated using the spot exchange rate at the date of the value in use calculation.

Furthermore, the currency in which the estimated cash flows are denominated affects many of the inputs to the WACC calculation, including the risk-free interest rate.
Bonimotor Ltd has used the 10-year government bond rate for its jurisdiction as the risk-free rate in the calculation of the discount rate. As government bond rates differ between countries due to different expectations about future inflation, value in use could be calculated incorrectly due to the disparity between the expected inflation reflected in the estimated cash flows and the risk-free rate.

According to IAS 36, the discount rate should reflect the risks specific to the asset. Accordingly, one discount rate for all the CGUs does not represent the risk profile of each CGU. The discount rate generally should be determined using the WACC of the CGU or of the company of which the CGU is currently part. Using a company's WACC for all CGUs is appropriate only if the specific risks associated with the specific CGUs do not diverge materially from the remainder of the group. In the case of Bonimotor Ltd, this is not apparent.

ii) A number of IASs are required to answer this question, which include the knowledge of ***IAS 16, IAS 36, IAS 12 and IAS 21***

- Carrying amount of building at 31 March 2023:
    - 25/2 x 24/25 = K12 million
- Recoverable amount of building at 31 March 2023
    - 17.5 million Zimbabwean Dollar/2.5 = K7 million.
- Impairment loss to profit or loss = K5 million (K12 million – K7 million)

The tax base and carrying amount of the non-current assets are the same before the impairment charge. After the impairment charge, there will be a difference of K 5 million. This will create a deferred tax asset of K5 million x 25%, = K1·25 million.

As Bonimotor Ltd expects to make profits for the foreseeable future, this can be recognised in the financial statements.

Statement of profit or loss for the year ended 31/3/2023 extract

	K million
Impairment of building	(5)
Depreciation of building 12.5 /25 yrs	(0.5)

Statement of financial position extracts as at 31/3/2023

Non-current assets:		
Deferred tax assets		1.25
Building	(12 – 5)	7

(b) **Bernasio Ltd**

- Goodwill in Bernasio Ltd would originally be calculated as K20 million (K1,250 million – K1,230 million). The net assets in Bernasio Ltd are now K1,292 million at 31st December 2024 (K1,272 million per question and K20 million goodwill).
- Since the group has a revaluation policy under IAS 16 *Property, Plant and Equipment*, the group must revalue the property plant and equipment of Bernasio Ltd to fair value of K340 million on classification as held for sale. A gain of K10 million (K340 million – K330 million) would be recorded within other components of equity.
- The net assets of Bernasio Ltd would now have a carrying amount of K1,302 million including K846 million for property, plant and equipment. On classification as held for sale, Bernasio Ltd must be measured at the lower of carrying amount and fair value less costs to sell. An impairment arises of K82 million (K1,302 million – K1,220 million).
- This will first be allocated to the goodwill of K20 million. The remaining impairment of K62 million is allocated to non-current assets to which the measurement requirements of IFRS5 *Non-current Assets Held for Sale and Discontinued Operations* apply. No impairment will therefore be allocated to the current assets of Bernasio Ltd.

Calculations

The remaining impairment loss of K62 million should be allocated to property, plant and equipment and other intangible assets in proportion to their respective carrying amounts as follows:
Property, plant and equipment K62 million x (K846m/ (K846 million + K428 million)) = K41 million Other intangible assets K 62 million x (K428 million/(K846 million + K428 million)) = K21 million.

Alternatively

The table below summarises the allocation of the impairment:

	Carrying amount Allocated Carrying amount before reclassified impairment after allocation of as held for sale	**Allocated impairment**	**Carrying amount after allocation of impairment loss**
	K million	K million	K million
Goodwill	20	(20)	Nil
Property, plant and equipment	846	(41)	805
Other intangible assets	428	(21)	407

Current assets	584	nil	584
Non-current liabilities	(322)	nil	(322)
Current liabilities	(254)	nil	(254)
Total	**1,302**	**(82)**	**1,220**

The assets and the liabilities of the disposal group should be separately presented within the current assets and current liabilities of the consolidated financial statements. K1,796 million (K805 million + K407 million + K584 million) or (K836 + K10 + K428 – K62 + K584) will be included within current assets and K576 million (K322 million + K254 million) within current liabilities.

Statement of financial position as at (extract)

	K million
Current assets:	
Current assets -held for sale (805+407+584)	1,796
Equity and Liability	
OCI – revaluation gain (340 – 330)	10
Current Liabilities:	
Current liabilities – held for sale (322 + 254)	576

Statement of profit or loss for the year ended 31/12/2024

	K million
Impairment losses	(82)

SOLUTION FOUR

Transaction 1

In accordance with IFRS 9, where a cash flow hedge results in recognition of a non monetory item, the remeasurement gains and losses on the hedging instrument that are within the effective part of the hedge must initially be reported in OCI (items to be reclassified in P/L) and reclassified upon recognition of the non monetory item by setting off the accumulated gain in OCI against the initial carrying amount of the non monetory item.

The forward currency contract (FCC) is a derivative instrument and will therefore be classified as FVTPL item and measured normally at FV each reporting date. However, only gains and losses outside the effective part of the hedge will be immediately reported in P/L.

The following amounts will be reported in the FS for the year to 31.12.2022:

a) FCC

	K'm
FCC asset b/d 1.1.2022 (17.3-17)X100000	0.03
Remeasurement gain to report in OCI for y/e 31.12.2022 (balance)	0.07
FCC asset at 31.3.2022 (18.-17)X100000	0.1

b) Plant and equipment

	K'm
Purchase cost 31.3.2022 \$100000X18	1.8
Less reclassification of accumulated gain on FCC 100000X(18-17)	(0.1)
Initial carrying amount of the plant on 31.3.2022	1.7
Depreciation charge for the y/e 31.12.2022 17/5X9/12	(0.3)
Carrying amount of the plant on 31.12.2022	1.4

Transaction 2

Revenue from the sale and servicing of the equipment must be recognised in accordance with IFRS 15 Revenue From Contracts with customers. The standard requires that revenue must only be recognised upon meeting the performance obligations. In this case, there are two performance obligations, the delivery of the equipment and the subsequent servicing. Revenue attributable to delivery of the equipment must be recognised on 1.1.2022 whilst that for each service on the date of the service (31.12.2022 and 31.12.2023). The total amount receivable must therefore be split and attributed each performance obligation. Further, amounts receivable after performance obligations are met must be discounted. It can be assumed that the consideration for each service is from the instalment due on the date of the service, in which case there is no need to discount the revenue for servicing.
The following amounts are applicable in preparing FS for the year to 31.12.2022:

	K'm
Revenue to recognise on 1.1.2022 (for equipment delivery)	
(0.7 +[(0.7-0.05)X1.09^-1] +[(0.7-0.05)X1.09^-2])	1.83
Revenue from servicing on 31.12.2022	0.05
Total revenue to recognise in the year to 31.12.2022	1.88

Finance income amounts previously discounted on 1.1.2022 9%X([(0.7-0.05)X1.09^-1] +[(0.7-0.05)X1.09^-2])		0.11
Total income recognised to date at 31.12.2022		1.99
Less cash reeived to date at 31.12.2022	0.7X2	(1.4)
Receivable at 31.12.2022		0.59

Transaction 3

An instrument classified as FVTPL in accordance with IFRS 9 Financial Instruments will initially be measured at FV excluding transaction costs.
Transaction costs are expensed in P/L for the period the contract is entered.

Subsequently, the instrument will be remeasured to FV each reporting date with gains and losses primarily reported in P/L. However, for non derivative liabilities designated as FVTPL, any remeasurement gains or losses arising from changes in the credit worthiness of the reporting entity must be reported in OCI.

The following are applicable for the year to 31.12.2022:

a) In the SFP at 31.12.2022, the loan notes are reported at FV computed as PV of future liability cash flows discounted at the entity's current specific market interest rate as follows:

		K'm
Future interest	8%X10X5[(1.072^-1)+(1.072^-2)]	7.21
Principal	10X5X(1.072^-2)	43.51
FV to report as carrying amount in SFP at 31.12.2022		50.72

b) Amounts to report in the SPLOCI for the y/e 31.12.2022:

		K'm
In P/L:		
Transaction costs		(0.1)
Finance cost	6.16%X[5XK10X1.05]	(3.23)
Remeasurement gain (Working)		0.76
		(2.57)
In OCI		
Remeasurement gain (1.01-0.77)		024

Working – Remeasurement gain/loss on the FVTPL liability

		K'm
FV at 1.1.2022	[5XK10X1.05]	52.5
Finance costs y/e 31.12.2022	52.5X6.16%	3.23
Less cash paid 31.12.2022	8%X5X10	(4)
Carrying amount at 31.12.2022 before remeasurement		51.73
Total remeasurement gain	(balance)	(1.01)

FV to report at 31.12.2022 as computed above	50.72
Gain/loss to report in P/L:	
Carrying amount before remeasurement	51.73
Gain to report in P/L (balance)	(0.76)
Expected FV at 31.12.2022 without change in credit rating (W)	50.97

Working - Expected FV at 31.12.2022 without change in credit rating

Expected specific interest rate without change in credit rating 9/8X6.16 =	6.93%

Expected Fair value at 31.12.2022

		K'm
Future interest	8%X10X5[(1.0693^-1)+(1.0693^-2)]	7.24
Principal	10X5X(1.0693^-2)	43.73
Expected FV at 31.12.2022		50.97

SOLUTION FIVE

Report

To: Board of Directors of Shop LeftPlc

From: Accountant

Date: Date of Exam

Subject: Analysis of the financial performance and position of Shop Left Plc

Following the discussion we had on the above subject matter, this report is submitted for your perusal. The report looks at profitability, working capital management and gearing of the company for the year ended 31 December 2020, as against its comparative period. This report should be read with the attached appendix.

Profitability

There has been a fractional improvement in revenue in 2020 over 2019. This steady rise in revenue resulted largely due to discontinuation of the retail shop. The sold shop contributed 13.12% of the total revenue generated in 2020 against 19.18% in 2019. The company could however not keep its operational costs in line with the revenue changes as all the profitability measures have dropped in 2020. Management did poorly in controlling both direct trading costs and overheads as gross profit margin as well as net profit margin has fallen. A separate analysis carried out on margins between continuing and discontinued operations reveals that while the stopped operations may have significantly contributed to the poor operating margins especially because of the disposal loss recorded this part of the entity operated on better gross margins than the rest of the company. Hence, the company is likely not become any better after the sale of the operations if cost controls are not significantly tightened for the remaining operations.

The low margins have had hugely negative impact on returns made for providers of capital in 2020. Both ROCE and return on equity have slipped considerably even though the company has seen some noticeable improvements in net asset and inventory turnovers. Asset turnover shows that the firm turned its resources roughly three times into sales this year as against little over two times in 2019. Thus, the decline in profitability can be clearly attributed to high operating cost levels.

Working capital management

Overall, working capital has been effectively managed by Shop Left Plc. With current ratio of 1.48 in 2020, Shop Left Plc's current assets provide a good cover for its short-term obligations. And this ratio is slightly up from 1.47 it had back in 2019. Current ratio measures how well a firm is positioned to apply current assets to pay off current liabilities when they mature. The current ratio of 1.48 implies that the company maintains K1.48 of current assets to pay every K1 of current debt owed. As a cushion, Shop Left achieves a good inventory turnover rate and records a clear improvement over last year. This should reduce any fear of liquidity concerns. On inventory turnover of 7.42 (as against 5.95 in 2019), the company is able to empty its warehouse 7.5 times on average within 2020, as against approximately 6 times back in 2019. The strong liquidity situation is further helped by Shop Left Plc being a retail firm which makes it more likely that it would convert resources into liquid assets at an accelerated rate. However, were the contingent liability to crystallize any time soon, it would have a damaging effect on liquidity by bringing it down below 2019's level.

Gearing

This measures the extent to which the firm finances its operations with funds provided by external parties. Under this section, investors and lenders determine how much risk the firm exposes them to. The proportion of debts in the total long term capital has seen a decline, as shown by its capital gearing ratio. While little more than half of the total resources in 2019 was provided by lenders, around six percent of total funds came from within for 2020. The reduction in debt used implies that the firm is facing lower financial risk now, and the company is looking healthy. But if profitability concerns are not overturned sooner than later, keeping even minimal level of gearing may be unsustainable.

Conclusion

The analysis above has revealed that Shop LeftPlc' profitability has worsened and operational costs seem out of control. However, liquidity, efficiency and gearing levels do not raise any concerns. Management are therefore entreated to institute investigation into unearthing how best it can put costs under check and consolidate its strong position.

I am available to provide any further clarification, if so needed. Thank you

(Signed)

Accountant

Appendix

Ratios	**Formula**	**2020**	**2019 (given)**
Gross profit margin	Gross profit/sales x 100	6,030 x 100 / 43,050 = 14.01%	16.42%
Profit before Interest and tax margin		(1,069+352) / 43,050	

	PBIT/sales x 100 Sales	= 3.30%	7.52%
Return on equity	PAT/equity x 100	293 x 100 8,896 = 3.29%	15.32%
ROCE	PBIT/CE x 100	(1,069+352) x 100 (8,896+5,800) =9.67%	16.30%
Inventory turnover	Cost of sales Inventory	37,020 4,986 = 7.42	5.95
Current ratio	Current asset Current liabilities	(4,986+4,044) 6,109 =1.48	1.47
Assets turnover	Sales Capital employed	43,050 14,696 =2.93	2.17
Gearing Ratio	Long-term loan x 100 (Long-term loan + Equity)	5,800 x 100 (5,800+8,896) = 39.47%	50.84%

Separate analyses

Ratios	**2020**		**2019**	
	Continuing operations	**Discontinued operations**	**Continuing operations**	**Discontinued operations**
Revenue share	37,400 x 100 43,050 = 86.88%	5,650 x 100 43,050 =13.12%	31,350 x 100 38,790 = 80.82%	7,440 x 100 38,790 =19.18%

Gross profit margin	5,210 x 100 37,400 = 13.93%	820 x 100 5,650 =14.51%	5,320 x 100 31,350 = 16.97%	1,050 x 100 7,440 =14.11%
Profit/(loss) before Interest and tax margin	1,683 x 100 37,400 = 4.5%	(262) x 100 5,650 =(4.6%)	2,830 x 100 31,350 = 9.02%	88 x 100 7,440 =1.18%

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

CA ADVISORY PROFESSIONAL IN ACCOUNTANCY

CA 3.2: ADVANCED AUDIT AND ASSURANCE

THURSDAY 16 JUNE 2022

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

You are an Audit Manager responsible for the financial statement audit for Chimuka Technologies Ltd and you are planning the final audit of the financial statements for the year ending 31 March 2022. Your firm was appointed external auditor for Chimuka Technologies Ltd on 1 June 2021 and the Managing Partner of your firm is very happy with the audit fee charged because Chimuka Technologies Ltd now contributes a significant amount of the total firm's income.

The company operates through ten (10) divisions spread throughout the Republic of Zambia. However, during the interim audit, most of the Audit Trainees on the assignment expressed ignorance regarding the nature of an attestation engagement and a direct engagement, and wanted to know whether the financial statement audit is an attestation engagement or a direct engagement. The divisions are considered as profit centers and any transfers between them are charged at variable cost.

Chimuka Technologies Ltd is a supplier of hardware and software. It also conducts tailor-made Information Technology (IT) training to clients. Chimuka Technologies Ltd uses a lot of fuel to effectively monitor client systems and attend to emergencies. The recent removal of subsidies on fuel has led to increases in fuel prices.

During the final part of the year, Chimuka Technologies Ltd entered into a three (3) year lease agreement for most of the office furniture and equipment. This followed an evaluation which was carried out by the Management Accountant regarding the lease or buy decision.

The Government has made significant changes to the tax legislation applying to companies such as Chimuka Technologies Ltd. These are meant to ensure the sector contributes a reasonable amount to the public purse. According to the Minister of Finance and National Planning these changes are long overdue. The Finance Director for Chimuka Technologies Ltd has recognized a general provision of K2.5 million in the financial statements for the year ended 31 March 2022 to address the effects of the tax changes on the company.

The statement of financial position as at 31 March 2022 shows no movement in the deferred tax liability balance. The Finance Director stated that there were no temporary differences during the year. The Finance Director asked your firm to value the pension benefits for the employees so that the financial statements could be finalized. The experts who performed the actuarial valuations last year have relocated to Canada.

Chimuka Technologies Ltd has been offering various Information Technology (IT) services to your firm and the company wants this to continue. Chimuka Technologies Ltd has qualified and experienced Information Technology (IT) personnel who give clients value for their money. Your firm currently owes Chimuka Technologies Ltd K200,000 for various information technology (IT) services. A review of the correspondence file indicates that Chimuka Technologies Ltd has been considering taking legal action to recover the debt owed by your firm. The Managing Partner is proposing a set off against the audit fees to avoid any reputational risk.

The Audit Senior has heard about the need to exercise professional skepticism in respect of the financial statement audit for Chimuka Technologies Ltd, and wants you to give more guidance.

Required:

(a) Discuss the nature of an attestation engagement and a direct engagement and advice the Audit Trainees whether the financial statement audit is an attestation engagement or a direct engagement. (6 marks)

(b) Evaluate eight (8) audit risks and recommend appropriate audit responses for each identified audit risk, using the information given in the scenario. (16 marks)

(c) Using the information in the scenario:

(i) Identify and explain four (4) ethical threats. (6 marks)

(ii) Suggest suitable safeguards for each ethical threat. (4 marks)

(d) Suggest, giving justification for each, two (2) audit procedures which your firm should undertake in respect of the general provision. (4 marks)

(e) Advise the Audit Senior regarding four (4) key areas which will require appropriate levels of professional skepticism in respect of the financial statement audit for Chimuka Technologies Ltd. (4 marks)

[Total: 40 Marks]

SECTION B

There are FOUR (4) questions in this section.

Attempt any THREE (3) questions in this section.

QUESTION TWO

(a) You are an Audit Manager in Chushi & Associates, a firm of chartered accountants. Chushi & Associates are the auditors of the financial statements of Silver Ltd and you are the Audit Manager for this client.

Silver Ltd is a company in the agricultural industry and its main line of business is in the rearing of dairy animals. The company owns two (2) breeds of dairy animals and owns a large number of animals at its two (2) farms. Silver Ltd is the main supplier of milk to a local dairy company which has strict quality control systems to ensure that only milk meeting its quality standards is purchased.

The inventory of Silver Ltd at the year-end comprises the dairy animals and milk awaiting delivery to the dairy company. Milk is kept in special tanks in batches depending on when it was produced. Milk that does not meet the quality standard is valued at a lower cost and is packed and sold to local retailers by Silver Ltd under its brand name.

Silver Ltd uses the services of Mint Consultants in determining the value of the dairy animals at the period end. The Production Manager of Silver Ltd is also in charge of quality control. He is responsible for the quality of the milk produced and at the period end, he determines the volumes of milk that meets the quality control requirements of its main customer and that which does not meet the quality control standard.

Required:

(i) Distinguish an auditor expert from a management expert. (2 marks)

(ii) Evaluate the need for the services of Mint Consultants in the audit of the financial statements of Silver Ltd, stating the impact on the audit report of the use of the work of Mint Consultants. (4 marks)

(iii) Suggest four (4) factors that should be considered before deciding to use the services of Mint Consultants in the audit of the financial statements of Silver Ltd. (4 marks)

(b) You are a chartered accountant and member of the Audit Committee of Kilimanjaro Plc. The audit for the financial statements of Kilimanjaro Plc is almost complete and the draft audit report has been submitted to the company by the external auditors.

You are planning to attend a meeting of the Audit Committee at which the draft audit report will be reviewed before being submitted to the Board of Directors.

The following has been extracted from the draft audit report:

To: The Board of Directors of Kilimanjaro Plc.

Opinion:
In our opinion, except for the effects of the matter described in the Key Audit Matters paragraph of our report, the accompanying financial statements give a true and fair view as at 31 December 2021.

Key Audit Matters:
The Company's inventory in the financial statements of K2.5 million has not been stated at the lower of cost and net realizable value but has been stated solely at cost which constitutes a departure from IFRSs. The amount involved is considered material to the financial statements.

Other information:
Management is responsible for the other information contained in the financial statements. We have no responsibility with regards to the other information and as such our opinion does not include the other information.

Required:

(i) Explain the need for the draft audit report to be discussed by the Audit Committee and the Board of Directors before being finalized and signed by the auditors. (2 marks)

(ii) Evaluate the extracts from the draft audit report and comment as appropriate. (8 marks)

[Total: 20 Marks]

QUESTION THREE

You work for Kabibi Accountants, a small firm of chartered accountants. You were recently promoted to the position of Senior Manager and you have been given additional responsibility of reviewing all client relationships.

You are currently reviewing the relationship with one of your long standing clients, Chambeshi Ltd. Chambeshi Ltd is an owner-managed company and the Engagement Partner for the audit of Chambeshi Ltd has informed you that the previous week, he had a heated argument with the owner of Chambeshi Ltd at the golf club. The relationship between him and the owner has therefore broken. The audit of the financial statements for Chambeshi Ltd is about to commence.

The Quality Control Partner for Kabibi Accountants is carrying out a post-issuance review for a client involved in mining. He has requested you to review the sufficiency and appropriateness of the audit evidence obtained for each of the three (3) matters described below:

Matter one
The payroll is outsourced to a service organization which processes all of the company's salary expenses. The audit team traced the payroll expenses recognized in the financial statements back to year-end reports issued by the service organizations.

Matter two
When auditing the company's capital expenditure, the audit team selected a material transaction to test and found that key internal controls over capital expenditure were not operating effectively. The audit team noted details of the internal control deficiencies and updated the systems notes on the permanent audit file to reflect the deficiencies.

Matter three
Due to the planned disposal of one (1) of the company's factory sites, the property and associated assets was classified as held for sale in the financial statements. The audit team checked whether reclassification was in line with the guidance given in IFRS 5 *Non-Current Assets held for Sale and Discontinued Operations.* All computations were checked for arithmetical accuracy.

Required:

(a) Explain four (4) main reasons why companies change their auditors. (8 marks)

(b) Advise the Engagement Partner on whether Kabibi Accountants should continue as external auditors for Chambeshi Ltd. (3 marks)

(c) Explain the sufficiency and appropriateness of the audit evidence obtained in each of the three (3) matters described in the scenario. (9 marks)

[Total: 20 Marks]

QUESTION FOUR

You are an Audit Senior in Kudu Accountants, a firm of chartered accountants. Kudu Accountants has three (3) partners and five (5) managers. The Engagement Partner for the audit of Joma Ltd delegated to you the planning work for the audit of the financial statements for the year ended 31 March 2022.

The following information was given to you by the Director of Finance of Joma Ltd:

1. Joma Ltd's principal activity is the manufacture and sale of quicklime, hydrated lime, and other lime products. The company's plant was constructed in 1920 and operations started the following year. The plant has a capacity to produce more than 1,000 tons of high grade lime products. However, the demand has been negatively affected by the restrictions imposed by the government due to the COVID-19 pandemic.

2. The company sources its raw materials from its quarry which was bought when the plant was constructed. The heavy duty vehicles used in the transportation of the raw materials are imported from Europe. Regular maintenance is carried out by a local engineering company which is expensive. Foreign maintenance providers are relatively cheaper but to protect the local industries, the country's regulations do not allow the use of foreign contractors. Most of the spares have to be imported.

The Engagement Partner responsible for the audit of the financial statements for Orange Ltd for the year ended 31 March 2022 has requested you to assist finalize the financial statement audit. The Audit Senior previously assigned to this audit resigned without giving notice. The only issue outstanding which needs to be addressed is the case of the fire which occurred on 12 April 2022. The issue has been appropriately disclosed in financial statements under note 16.

Required:

(a) Explain why audit planning is normally considered as a series of activities instead of as a single event. (3 marks)

(b) Write a report to the Engagement Partner in which you discuss the business risks in Joma Ltd. (12 marks)

(c) Using the information in the scenario in respect of Orange Ltd, draft a suitable paragraph which should be included in the auditor's report concerning the fire. You should assume the audit opinion will be unmodified. (5 marks)

[Total: 20 Marks]

QUESTION FIVE

You are an Audit Manager in Chilubi Chartered Accountants. You are responsible for the audit of the financial statements for Lion Ltd for the year ended 30 June 2021.

Lion Ltd operates in the construction industry. The company created over six hundred (600) permanent jobs for the local community. There is currently strong global demand for cement.

Charles, Pinkie and Bibi own 40%, 35% and 25% of the ordinary shares of Lion Ltd respectively. Michael, the husband to Pinkie supplies cement and other building materials to Lion Ltd. Charles' mother, Rosette is the Procurement Director for Lion Ltd.

The Chief Executive Officer (CEO) is from Zimbabwe and has over twenty (20) years' experience in the construction industry. He has managed to stabilize the profitability and liquidity of Lion Ltd. His friend, Francis, a chartered accountant provides taxation services to Lion Ltd. Francis' wife is the Secretary to the Human Resources Director (HRD).

On 1 October 2020, Lion Ltd received a government grant of K10 million towards the purchase of new plant for minimizing emissions from the company operations. The plant has a gross cost of K50 million. It is being depreciated over an estimated economic useful life of twenty five (25) years. Charles owns 60% of the ordinary shares in a company which supplied and installed the plant.

Required:

(a) State the audit objectives in respect of related parties in an audit of financial statements. (6 marks)

(b) State four (4) reasons why an audit cannot be expected to detect all material related party transactions. (4 marks)

(c) Using the information given in the scenario, identify and explain the possible related party transactions. (6 marks)

(d) Recommend four (4) audit procedures that must be conducted when auditing the Government grant. (4 marks)

[Total: 20 Marks]

END OF PAPER

CA 3.2 SUGGESTED SOLUTIONS

SOLUTION ONE

(a) **Attestation engagement and direct engagement**

ISAE 3000 (Revised) *Assurance Engagements other than Audits or Reviews of Historical Financial Information* gives detailed guidance in this area. It defines the two (2) engagements as follows:

- Attestation engagement is an assurance engagement in which a party other than the practitioner measures or evaluates the underlying subject matter against the criteria. A party other than the practitioner also often presents the resulting subject matter information in a report or statement. In some cases, however, the subject matter information may be presented by the practitioner in the assurance report. In an attestation engagement, the practitioner's conclusion addresses whether the subject matter information is free from material misstatement.
- Direct engagement is an assurance engagement in which the practitioner measures or evaluates the underlying subject matter against the applicable criteria and the practitioner presents the resulting subject matter information as part of, or accompanying, the assurance report. In a direct engagement, the practitioner's conclusion addresses the reported outcome of the measurement or evaluation of the underlying subject matter against the criteria.

Broadly speaking, an attestation engagement is one in which the client prepares the information and the practitioner gives assurance on it. The auditor's report on the financial statements would be an example of this, except that auditor's reports are not within the scope of the ISAE.

(b) **Audit risks and audit responses**

Audit risks	Explanation	Audit responses
(1) New audit client	This gives rise to detection risk, as the firm does not have experience with the client, making it more difficult for the audit team to detect material misstatements. In addition, there is a risk that opening balances and comparative information may not be correct.	The audit team shall obtain a thorough understanding of the business of the company and perform specific audit procedures on the opening balances. There will also be need to undertake quality control review.
(2) Related party transactions	The company operates through ten (10) divisions spread throughout the Zambia and there could be a risk that related party transactions are not adequately disclosed.	The audit team shall discuss with management the work carried out to identify and collate related party transactions. It will also be important to obtain written representations confirming

		that disclosures are in line with the requirements of IAS 24 *Related Party Disclosures.*
(3) The divisions are considered as profit centers	The treatment of divisions as profit centers creates an inherent risk of management bias as Divisional Managers may feel under pressure to return favorable results.	The audit team should assess the related internal controls over performance measurement for possible management bias. More attention should be paid to areas that require management judgement.
(4) Increase in prices of fuel	This will erode the margins and could impact on going concern of the company.	The audit team shall make enquiries of management regarding the impact of the increase in prices of fuel and be alert for any indications of going concern problems.
(5) Lease arrangement	There is a risk that the valuation of the right of use asset and the related liabilities could wrong.	Review the lease agreement and ensure valuations are in line with the guidance given in IFRS 16 *Leases.*
(6) Significant changes to the tax legislation	This could result in the company being liable to penalties for not adhering with the regulations. Provisions may be misstated in the financial statements.	The audit team should be alert and look out for any evidence of non-compliance with the new laws. The auditors may also obtain necessary representations from management that there has been compliance.
(7) General provision of K2.5 million	There is a risk that the general provision does not meet the conditions for a provision specified in IAS 37 *Provisions, Contingent Liabilities and Contingent Assets.* Hence, the accounting treatment could be considered incorrect.	The audit team shall make enquiry of management what the provision represents and if management confirms that there is no specific liability, then management will be requested to reverse it.
(8) No movement in the deferred tax liability balance	There is a risk that deferred tax could be misstated. The Finance Director is an interested party and hence his statement must be subjected to appropriate audit tests.	Review the financial statements and tax computations for evidence of taxable temporary difference. In addition, the audit team have to check whether the deferred tax has been accounted for correctly in accordance with IAS 12 *Income Taxes.*

(c) **Ethical threats and safeguards**

Ethical threats	Explanations	Safeguards
(1) The Managing Partner is very happy with the audit fee charged. This could mean the audit fees could be relatively high.	This can create a self-interest or intimidation threat. The audit firm will want to impress Chimuka Technologies Ltd so as to protect this lucrative relationship. It is also possible that the audit fees could represent more than 15% of total, which is generally considered as a sign of dependence on a single client. This can seriously impair objectivity.	Safeguards in these situations might include: • Taking steps to reduce the dependency on the client • Obtaining external/internal quality control reviews • Having a professional accountant review the work.
(2) The Finance Director has asked the firm to value the pension benefits for the employees.	Actuarial valuations involves making of a number of assumptions, the application of appropriate methodologies and techniques, and this could be highly subjective. The firm could be faced with a self-review threat as it will be almost impossible to question the firm's own work. The valuations are likely to be material.	The firm should not perform the valuations since the self-review threat could be significant.
(3) Chimuka Technologies Ltd has been offering various Information Technology (IT) services to your firm and the company wants this to continue.	Independence and objectivity could be impaired due to this relationship. The firm may want to impress Chimuka Technologies Ltd by not being too critical.	The close business relationship is inappropriate and should be discontinued.
(4) Chimuka Technologies Ltd had been considering legal action to recover the debt owed by the firm.	This can create an intimidation threat and the firm may be under pressure to produce an unmodified audit report.	The Managing Partner should urgently source for the funds and liquidate the debt as the threat to independence is too significant. The auditor should seek legal advice on how to deal with this matter.

(d) **Audit procedures and justification – general provision.**

(i) **Audit procedure:**
Obtain details of the make-up of the general provisions if it relates to more than one item. Cast the schedule and agree the balance to the relevant general ledger account.
Justification of audit procedure:
In order to test for arithmetical accuracy as well as completeness of the amount.

(ii) **Audit procedure**
Review board minutes of the meeting approving the general provision and discuss the general provision with the Finance Director.

Justification of audit procedure
To determine whether Chimuka Technologies Ltd has any specific present obligation (liability) as guided by IAS 37 *Provisions, Contingent Liabilities and Contingent Assets*.

(iii) **Audit procedure**
Check whether any payments have been made after the year-end in respect of the item.

Justification of audit procedure
This is meant to confirm the accuracy the amount of the provision made.

(iv) **Audit procedure:**
Obtain written representations from management acknowledging its responsibility for determining the figure of provisions and also to confirm the reasonableness of the amount provided for.

Justification of the audit procedure:
Part of obtaining sufficient appropriate evidence in the absence of other methods of confirming the amount.

(e) **Key areas which will require appropriate levels of professional scepticism in respect of the financial statement audit for Chimuka Technologies Ltd**

- Fraud – e.g. do the entity's systems provide opportunities for fraud?
- Accounting estimates e.g. are assumptions reasonable?
- Going concern – e.g. are management's plans really feasible?
- Related party relationships and transactions e.g. transactions outside the normal course of business – misappropriation of assets?
- Laws and regulations e.g. where non-compliance may call into question going concern.
- During the risk assessment in identifying audit risks that could impact the design of further audit work that requires to be done.

SOLUTION TWO

(a) (i) **Meaning of an expert**:

An expert in the context of auditing is one who has special skills and competences in areas other than auditing and accounting.

Distinction between management and auditor expert:

A **management expert** is one appointed by management who helps management in determining a figure contained in the financial statements. For example, an actuary engaged by management to determine the sufficiency of the pension for employees.

An **auditor expert** – This is one engaged by the auditor to carry out work that the auditor does not have expertise in. For example, valuing inventory for agricultural products.

(ii) **Need for use the services of an expert:**

Silver Ltd is in the agricultural industry and at the end of the year it has to value its closing inventory and work in progress. The inventory values in such an industry are likely to be material to the financial statements.

The auditors do not have the skills and competences to be able to value the closing inventory correctly as required by IFRSs. For this reason the auditors will require the use of experts who will do this for them. In this case Mint Consultants may be engaged to value the closing inventory. The auditor will then compare the valuation as determined by Mint Consultants with the valuation in the financial statements determined by management.

Impact of the work of the expert on the auditor's report:

The work of Mint Consultants will only have an impact in as far as the auditors are gathering evidence and concluding on the amounts of inventory.

Once the auditor concludes and reaches an opinion, the work of Mint Consultants will have no impact on the audit report and reliance on the work of the expert will not be mentioned in the report unless required by national regulations and laws.

(iii) **Matters to consider before using Mint Consultants:**

The following will be considered when deciding whether to use the services of Mint Consultants in valuing the inventory of Silver Ltd:

- Consideration of the qualifications that staff going to perform the work have in the relevant field.
- Consideration of whether Mint Consultants have staff with relevant experience to carry out the work.
- Any reference of work carried out by Mint Consultants on other clients.
- Membership of staff of Mint Consultants to relevant professional bodies if any.

- Any association of Mint Consultants or key staff with Silver Ltd that may impact on their independence and objectivity.

(b) (i) **Need for discussing draft report with the Audit Committee:**

ISA 260 (Revised) *Communication with those charged with governance* gives guidance in the area of communication between the auditors and the audit client.

The communication is between the auditors and Those Charged with Governance. The audit committee is a committee of the board and are representing the Board of Directors.

The standard requires that the auditors should communicate significant findings to Those charged with Governance which includes the circumstances that affect the form and content of the auditor's report. By doing so, any misunderstandings will be resolved before the auditor's report is finalized. The client may not agree with the suggested opinion and will have an opportunity to make comments and further explanations where necessary.

(ii) **Evaluation of the extracts from the draft auditor's report:**

- The report is addressed to *Those charged with governance* which is incorrect. The audit report should be addressed to the shareholders who appoint them and to whom they are supposed to report.
- The suggested draft opinion suggests that the opinion has been modified by way of a qualified opinion. The heading of the paragraph should be *'Qualified opinion'* and not Opinion as is the case.
- Suggesting that the basis for the opinion is contained in the Key Audit Matters paragraph is incorrect. The basis for modifying the audit opinion should be contained in a separate paragraph headed *'Basis for qualified opinion'* positions below the opinion paragraph.
- As explained above, the content of the Key Audit Matters paragraph is inappropriately included here. Even if this may be considered a significant matter, it should be contained in the basis for qualified opinion.

  If there are no other Key Audit Matters to report on, since this is a listed company the auditors should simply state that there are no key audit matters to report on.
- The statement in the Other information paragraph that the auditors have no responsibility with regards to other information contained in the financial statements is incorrect. In accordance with ISA 720 *The auditor's responsibility in relation to other information in documents containing audited financial statements,* the auditors have to perform specific procedures on the other information.

SOLUTION THREE

(a) **Reasons why companies change auditors**

1. Audit fee – the audit fee can be a very sensitive issue. Audit is required by statute for many companies. If the directors perceive that the audit has very little intrinsic value and therefore considers it as a necessary evil, they will seek to obtain it for as little money as they can. Hence, the fees may be perceived as too high, resulting in the change of auditors.
2. Size of the company – client may experience rapid growth to the point where the audit is no longer practicable for the audit firm or client retrenches or restructures in such a way that it no longer needs a statutory audit. In the first instance, the auditor may no longer be able to provide the audit for several reasons:
    - Insufficient resources
    - Staff
    - Time
    - Fee level issue
3. The auditor does not seek re-election – another reason for changing auditors is that the auditor chooses not to stand for re-election. You should be familiar with many of the reasons behind this:
    - There could be ethical reasons behind the auditor choosing not to be re-appointed.
    - The auditor might have to resign for reasons of competition between clients.
    - The auditor might disagree with the client over accounting policies
    - The auditor might not want to reduce his audit fee.
4. Audit rotation – the partners in a firm may sometimes conclude that the firm as a whole has been associated for too long with a client and divest the audit.
5. Personality – for many small owner-managed companies, audit is almost a personal service. The relationship between such a client and its auditor may be based on personality, and if relationship break down, it may be necessary for the audit relationship to discontinue.
   Personality may not be such an issue for bigger entities and audit firms where the audit engagement partner could be transferred if required, while the audit stayed within the firm.

(b) **Advice on whether Kabibi Accountants should continue as external statutory auditors for Chambeshi Ltd**

Kabibi Accountants is a small firm of chartered accountants and it may not have many partners. It is important to note that for many small owner-managed companies, like Chambeshi Ltd, audit is almost a personal service. The relationship between such a client and its auditor may be strongly based on personality, and if relationship breaks down, it may be necessary for the audit relationship to discontinue.

It is therefore advisable that Kabibi Accountants should seriously consider withdrawing from this engagement.

(c) **Sufficiency and appropriateness of the audit evidence obtained**

Matter one

The audit evidence obtained was not sufficient and appropriate. The audit team should have obtained the year-end reports directly from the service organisation. In addition, the audit team should have requested for a type 2 report from the auditors for the service organisation. This would have confirmed the operating effectiveness of the controls at the service organisation.

Matter two

The audit evidence was not sufficient and appropriate. The audit team should have performed further appropriate tests such as reviewing relevant board minutes, agreeing the expenditure to purchase invoices and to the cash book and bank statements.

In this case the auditors should perform more substantive procedures and not place any reliance on internal controls having concluded that the internal controls were not effective.

Matter three

The audit evidence was sufficient and appropriate. The audit team used an appropriate accounting standard (IFRS 5) to structure their audit work. The computations were also checked for arithmetical accuracy.

SOLUTION FOUR

(a) **Audit Planning**

ISA 300 *Planning an Audit of Financial Statements* tends to conceive of audit planning as a series of activities rather than as a single event: the planning is not just something written out at the start of the audit which is then stuck to rigidly, but is an activity that goes on throughout the audit process. For example, audit procedures need to be performed with their planned objectives in mind, and it may be necessary to revise the audit plan during the course of the audit if significant new information or events come to light.

(b) **REPORT**

To: Engagement Partner

From: Audit Senior

Date: XX/XX/XXXX

Subject: Business risks in Joma Ltd

Introduction

This report discusses the business risks in Joma Ltd. I have used the information given to me by the Director of Finance for Joma Ltd.

Business risks

The following are the risks I have identified:

1. Joma Ltd's principal activity is the manufacture and sale of quicklime, hydrated lime, and other lime products – This type of business is inherently risky and is highly regulated. It is possible that the operating licence can be cancelled for non-compliance with laws and regulations.
2. The company's plant was constructed in 1920 – The plant is based on very old technology which is likely to be inefficient. The company may be failing to compete effectively which may result in going concern problems for the company.
3. Demand has been negatively affected by the restrictions imposed by the government due to the COVID-19 pandemic – this will eventually result in reduced profitability and liquidity.
4. Quarry – The quarry was opened a long time ago and it is possible that the limestone could finish soon. Mining is dealing with a wasting asset which eventually will run out.
5. The heavy duty vehicles used in the transportation of the raw materials are imported from Europe. This could prove to be very expensive, especially if the exchange rate deteriorates.
6. Regular maintenance is carried out by a local engineering company which is expensive – This may continue to have a negative impact on the company's cash flows which is bad for operations.

7. Most of the spares have to be imported – This could prove to be very expensive, especially if the exchange rate deteriorates. The going concern status of the company may be questionable.

Conclusion

I will be available for a discussion of the risks identified with you at a time that is convenient to you.

I trust that the above meets your requirements.

Audit Senior

(c) **Emphasis of matter paragraph**

ISA 706 *Emphasis of Matter paragraph* gives detailed guidance in this area. It states that an Emphasis of Matter paragraph is a paragraph included in the auditor's report that refers to a matter appropriately presented or disclosed in the financial statements that, in the auditor's judgement, is of such importance that it is fundamental to users' understanding of the financial statements.

Hence, an Emphasis of Matter paragraph will be suitable. The draft Emphasis of Matter paragraph is as follows:

"Emphasis of matter paragraph

We draw attention to Note 16 of the financial statements, which describes the effects of a fire in the Company. Our opinion is not modified in respect of this matter".

SOLUTION FIVE

(a) **Objectives in respect of related parties**

According to ISA 550 *Related Parties,* the objectives of the auditor are:

- Irrespective of whether the applicable financial reporting framework establishes related party requirements, to obtain an understanding of related party relationships and transactions sufficient to be able:
- To recognise fraud risk factors, if any, arising from related party relationships and transactions that are relevant to the identification and assessment of the risks of material misstatement due to fraud, and
- To conclude, based on the audit evidence obtained, whether the financial statements, insofar as they are affected by those relationships and transactions:
  - ✓ Achieve fair presentation (for fair presentation frameworks); or
  - ✓ Are not misleading (for compliance frameworks)
  - In addition, where the applicable financial reporting framework establishes related party requirements, to obtain sufficient appropriate audit evidence about whether related party relationships and transactions have been appropriately identified, accounted for and disclosed in the financial statements in accordance with the framework.

(b) **Why an audit cannot be expected to detect all material related party transactions**

- Related party transactions have taken place without charge
- Related party transactions are not self-evident to the auditors
- Transactions are with a party that the auditors could not reasonably be expected to know is a related party
- Active steps have been taken by management to conceal either the full terms of a transaction, or that a transaction is, in substance, with a related party
- The corporate structure is complex.

(c) **Possible related party transactions.**

Using the information in the scenario, the following may be considered as related party transactions:

- Supply of cement and other building materials – The supplier, Michael, is the husband to one of the major shareholders, Pinkie, who is able to exercise significant influence over Lion Ltd through her 35% shareholding.
- Supply and installation of plant – Charles controls the company which supplied and installed the plant through his 60% shareholding. Charles also owns 40% of the shareholding of Lion Ltd and has the ability to exercise significant influence over Lion Ltd.

(d) **Recommended audit procedures for the government grant**

- Obtain documentation relating to the grant and confirm that it should be classified as capital grant instead of revenue grant

- Agree the value of the grant to relevant documentation such a copy of the application form sent by Lion Ltd
- Agree receipt of the grant to bank statements
- Review any conditions attached to the grant and for evidence of any non-compliance.
- Ensure that the accounting treatment is in accordance with IAS 20 *Accounting for Government Grants and Disclosure of Government Assistance.*

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATION

CA ADVISORY PROFESIONA IN ACCOUNTANCY

CA 3.4: ADVANCED TAXATION

THURSDAY 16 JUNE 2022

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

INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading and planning time. Use it to study the examination paper carefully so that you understand what to do in each question. DO NOT write in your answer booklet during this TIME.
2. This paper is divided into TWO (2) sections:

   Section A: ONE Compulsory Question.
   Section B: FOUR (4) Optional Questions. Attempt any THREE (3) questions from Section B.
3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name **MUST** not appear anywhere on your answer booklet.
4. Do NOT write in pencil (except for graphs and diagrams).
5. **Cell phone**s are **NOT** allowed in the examination room.
6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.
7. All workings must be done in the answer booklet.
8. Present legible and tidy work.
9. Graph paper (if required) is provided at the end of the answer booklet.
10. A Taxation table is provided from page 2 to page 6 of the question paper.

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

TAXATION TABLE

Income Tax

Standard personal income tax rates

Income band	Taxable amount	Rate
K1 to K54,000	first K54,000	0%
K54,001 to K57,600	next K3,600	25%
K57,601 to K82,800	next K25,200	30%
Over K82,800		37.5%

Income from farming for individuals

K1 to K54,000	first K54,000	0%
Over K54,000		10%

Company income tax rates

On income from manufacturing and other	30%
On income from farming	10%
On income from mineral processing	30%
On income from mining operations	30%

Income from farming for individuals

K1 to K54,000	first K54,000	0%
Over K54,000		10%

Company Income Tax rates

On income from manufacturing and other	30%
On income from farming	10%
On income of Banks and other Financial Institutions	30%
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 –	Standard wear and tear allowance	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%

Rental Income Tax

Annual Rental Income	
K800,000 or below	4%
Above K800,000	12.5%

Presumptive tax for transporters

Seating capacity	**Tax per annum**	**Tax per quarter**
	K	K
Less than 12 passengers and taxis	1,080	270
From 12 to 17 passengers	2,160	540
From 18 to 21 passengers	4,320	1,080
From 22 to 35 passengers	6,480	1,620
From 36 to 49 passengers	8,640	2,160
From 50 to 63 passengers	10,800	2,700
From 64 passengers and over	12,960	3,240

Property transfer tax

Rate of tax on realised value of land, land and buildings and shares	5%

Rate on realised value of intellectual property	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 mineral processing licence or an interest in the mineral processing licence;	10%

Value Added Tax

Registration threshold	K800,000
Standard Value Added Tax Rate (on VAT exclusive turnover)	16%

Customs and Excise duties on used motor vehicles

	Aged 2 to 5 years		Aged 5 years and over	
Motor vehicles for the transport of ten or more persons, including the driver	**Customs duty K**	**Excise duty K**	**Customs duty K**	**Excise duty K**
Sitting capacity of 10 but not exceeding 14 persons including the driver	17,778	22,223	8,889	11,112
Sitting capacity exceeding 14 but not exceeding 32 persons	38,924	0	13,840	0
Sitting capacity of 33 but not exceeding 44 persons	86,497	0	19,462	0
Sitting capacity exceeding 44 persons	108,121	0	43,248	0

	Aged 2 to 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	18,049	23,463	13,357	17,598

exceeding 3000 cc				
Cylinder capacity exceeding 3000 cc but not exceeding 2500 cc	22,561	29,329	18,049	23,463
SUVs				
Cylinder capacity not exceeding 2500 cc	21,057	27,374	9,024	11,732
Cylinder capacity exceeding 2500 cc but not exceeding 3000 cc	24,065	31,284	13,357	17,598
Cylinder capacity exceeding 3000 cc	28,577	37,150	18,049	23,463
	Aged 2 to 5 years		**Aged 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	30,697	13,302	24,119	10,452
Double cabs GVW exceeding 3.0 tonnes but not exceeding 5.0 tonnes, **with spark ignition internal combustion piston engine**	33,766	14,632	26,531	11,497
Panel Vans				
GVW not exceeding 1.0 tonne	13,353	5,786	7,630	3,061
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	13,907	10,662	6,413	4,916
GVW exceeding 2.0 tonnes but not exceeding 5.0 tonnes	15,453	11,847	7,726	5,923
GVW exceeding 5.0 tonnes but not exceeding 10.0 tonnes	24,724	18,955	9,272	7,108
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	19,462	0
GVW exceeding 20 tonnes, **with spark ignition internal combustion piston engine**	37,086	28,432	13,907	10,662

Surtax

On all motor vehicles aged more than five (5) years from year of manufacture K2,000

Customs and Excise on New Motor vehicles

Duty rates on:

1. Motor cars and other motor vehicles (including station wagons) principally designed for the transport of less than ten persons, including the driver:

Customs Duty:

Percentage of Value for Duty Purposes	30%
Minimum Specific Customs Duty	K6,000

Excise Duty:

Percentage of Value for Duty Purposes for Excise Duty Purposes	
Cylinder capacity of 1500 cc and less	20%
Cylinder Capacity of more than 1500 cc	30%

2. Pick-ups and trucks/lorries with gross weight not exceeding 20 tones:

Customs Duty

Percentage of Value for Duty Purposes	15%
Minimum specific Customs Duty	K6,000

Excise Duty:

Percentage of Value for Duty Purposes for Excise Duty Purposes	10%

3. Buses/coaches for the transport of more than ten persons

Customs Duty:

Percentage of Value for Duty Purposes	15%
Minimum Specific Customs Duty	K6,000

Excise Duty:

Percentage of Value for Duty Purposes for Excise Duty Purposes	
Seating Capacity of 16 persons and less	25%
Seating Capacity of 16 persons and more	0%

4. **Trucks/lorries with gross weight exceeding 20 tonnes**

Customs Duty:

Percentage of Value for Duty Purposes	15%

Excise Duty:

Percentage of Value for Duty Purposes for Excise Duty Purposes	0%

SECTION A

This Question is compulsory and MUST be attempted

<u>QUESTION ONE</u> (C0MPULSORY)

Background

TMC Mining Corporation Zambia Ltd, is a Zambian resident subsidiary of TMC International, a foreign based Multinational Mining company. TMC is engaged in mining operations of base metals and industrial minerals. The group financial statements are prepared in United States Dollars.

Chief Executive Officer

The Chief Executive Officer of TMC Mining Ltd is Chaze Luhana, who is resident and ordinary resident in Zambia. Chaze has shareholdings of 5% in both TMC Mining Corporation Zambia Ltd and TMC International. In the year ended 31 December 2022, Chaze earned gross emoluments of K840,000. Chaze paid income tax of K289,592 under the Pay As You Earn system. She also paid NAPSA contributions of K14,662. In addition to the director's emoluments, Chaze received net dividends of K40,300 from TMC International and dividends of K25,500 from TMC Mining Corporation Zambia Ltd. Chaze also holds shares in a Zambian resident private company, from which she received gross dividends of K30,000 (Withholding tax had been paid at source).

Chaze holds a fixed deposit account, with a bank in the foreign country in which TMC International is resident and owns commercial property in the same foreign country that has been let out to tenants in that country.

In December 2022, fixed deposit interest of K18,600 and rental income of K144,000 were credited to her Zambian account in respect of the above investments. The dividends were net of withholding tax at the rate of 38% deducted in the foreign country, whilst the fixed deposit interest and the rental income were net of withholding tax at the rate of 20% deducted in the same foreign country. There is no double taxation convention between Zambian and the foreign country in which TMC International operates. Any double taxation relief is given by means of unilateral relief.

Financial Results for TMC Mining Corporation

The following summarised statement of profit or loss for the year ended 31 December 2022, has been extracted from the financial statements of TMC and all amounts are expressed in Zambian Kwacha.

	Note	K' 000
Sales revenue	(1)	920,000
Cost of sales		(423,000)
Gross profit		497,000
Operating expenses	(2)	(137,252)
Finance cost		(110,000)
Investment income	(4)	17,125
Profit before tax		266,873
Income tax expense	(5)	(51,000)
Profit for the year		215,873

Additional information:

Note 1: Sales revenue

This comprises sales of cobalt for the year amounting to K140,000,000 being the norm value of the mineral for mineral royalty tax purposes, sales of industrial minerals for the year amounting to K150,000,000 being the gross value of mineral for mineral royalty tax purposes. The remaining balance of the sales represents the norm value of copper sold during the year based on London Metal Exchange cash price which ranged from $7,600 to $8,100 per metric tonne throughout the tax year 2022.

Mineral royalty tax paid by the company during the year which was computed correctly and paid on the relevant due dates has not been included in the above statement of profit or loss.

Note 2: Operating expenses

Included in operating expenses are depreciation charges of K8,500,000 amortisation of intangible assets of K3,500,000, advertising expenses of K241,500, fines for breaching labour laws of K252,000, salaries and wages of K26,400,000, expenses incurred on the entertaining the board of directors of K191,000, employees subscriptions to the local fitness gym of K78,000, operating lease rentals of K850,000 for tipper trucks and K1,200,000 incurred on the construction of a police post in the mine township. The balance represents miscellaneous allowable operating expenses.

Note 3: Investment income

Investment income represents fair value gains on investment property held by the company.

Note 4: Provisional Income Tax

The figure for the income tax expense in the statement of profit or loss shown above represents the provisional income tax paid by the company in the tax year 2022.

Note 5: Imported Mining Equipment

At 1 January 2022, the company held the following capital assets which were imported from foreign suppliers and paid for in US dollars a year ago. The original costs of the assets on the date of purchase translated into Zambian Kwacha were as shown below:

Asset	Cost
Drilling equipment	K3,400,000
Mining implements	K6,500,000

Note 6: Locally acquired implements, plant and machinery

At 1 January 2022, the company held the following assets which were acquired from local Zambian suppliers and paid for in Zambian Kwacha:

Asset	ITV b/f	Original Cost
	K	
Office equipment	350,000	700,000
Pool cars (2,000cc)	240,000	400,000

During the year ended the 31 December 2022, the company constructed a new smelting plant at a cost of K25,000,000. The company also acquired tipper trucks with a cost of K12,500,000 under an operating lease agreement paying lease rentals of K850,000 shown in the statement of profit or loss above.

Note 7: Unrelieved Tax loss brought forward

The company has had the following results from its mining operations in the past two years:

Year ended 31 December	*2020*	*2021*
	K	K
Sales revenue	35,500,000	18,500,000
Tax adjusted Mining profit/(loss)	(21,000,000)	8,400,000

Note 8: Indexation formula and other information

The indexation formula for capital allowances and mining losses, where applicable, is given below:

$$1+\frac{(R_2-R_1)}{R_1}$$

The following Zambian Kwacha per US Dollar (ZMW/US$) average BOZ mid-exchange rates should be used where applicable:

Accounting Period	*Average BOZ Mid-Exchange rate*
	ZMW/ US$
Y/e 31 December 2020	K17.50
Y/e 31 December 2021	K18.00
Y/e 31 December 2022	K18.90

Required:

(a) Show how the loss incurred in the year ending 31 December 2020 will be relieved in the the tax year 2021 and determine the amount of the loss remaining unrelieved at 31 December 2021. (4 marks)

(b) Compute the following amounts for the tax year 2022:

(i) The capital allowances claimable on the foreign acquired assets. (4 marks)

(ii) The total capital allowances on locally acquired assets and other qualifying mining expenditure. (4 marks)

(c) Calculate the final tax adjusted mining profit and the final company income tax payable by the company for the tax year 2022. (16 marks)

(d) Calculate the income tax payable by Chaze Luhana for the tax year 2022. (12 marks)

[Total: 40 Marks]

SECTION B

There are FOUR (4) questions in this section.

Attempt any THREE (3) questions in this section.

QUESTION TWO

The following statement of profit or loss relates to Hezon Bank Plc for the year ended 31 December 2022.

HEZON BANK PLC STATEMENT OF PROFIT OR LOSS FOR THE YEAR ENDED 31 DECEMBER 2022

	K'000	K'000
Interest income from:		
Loans and overdrafts	91,200	
Banks and financial institutions	2,250	
Securities	3,600	
Total interest income		97,050
Interest expense on:		
Deposits	30,300	
Paid to banks and financial institutions	19,800	
Subordinate debt	6,900	
Total interest expense		(57,000)
Net interest income		40,050
Provision for loan losses (Note 1)		(1,965)
Net interest income after provision for loan losses		38,085
Non-interest income:		
Management fees (net)	510	
Rental income (Note 2)	26,300	
Fair value gains (Note 3)	690	
Fees from foreign exchange transactions	31,078	
Net trading gains (Note 4)	336	
Total non-interest income		58,914
Net interest and other income		96,999
Non-interest expenses		
Depreciation of property, plant and equipment (note 5)	12,900	
Employee costs (note 6)	21,319	
General expenses (all allowable)	25,224	
Total non-interest expenses		(59,443)
Income before taxes		37,556
Taxation (Note 9)		(3,825)
Net income after taxation		33,731

The following information additional information is available:

(1) Provision for loan losses comprises a decrease in general provision of loan losses amounting to K150,000, increase in specific provision of loan losses of K1,650,000, loan losses previously written-off recovered during the year amounting to K285,000 and loan losses written-off amounting to K750,000.

(2) Rental income was generated from a suite of office buildings constructed by the bank five (5) years ago at a cost of K80,000,000. The buildings are used by the bank specifically for commercial letting purposes to earn rental income. The rental income is received evenly over the year. The amount shown in the statement of profit or loss above is the net amount after deducting expenses incurred wholly and exclusively in relation to the letting and was determined as follows:

	K'000	K'000
Gross rental income		36,600
Less		
Advertising for tenants	80	
Insurance of the property	600	
Depreciation of the property	4,000	
Other property letting expenses	5,620	
		(10,300)
Net rental income		26,300

(3) Fair value gains arose from equity instruments measured at fair value through profit or loss, under the relevant International Financial Reporting Standards.

(4) The net trading gains comprise realized foreign exchange gains of K1,035,000 and unrealized foreign exchange losses of K699,000.

(5) Depreciation of property plant and equipment in the statement of profit above, relates to assets used to carry on banking operations and does not include depreciation on the office buildings let out for commercial purposes referred to in note (2) above.

(6) Employees costs comprised the following:

	K,000
Employee's salaries	14,919
Gratuity expense (Note 7)	1,200
Defined benefit expense (note 8)	5,200
	21,319

(7) The gratuity expense recognized within employee costs above represents the annual charge for the current year in respect of gratuity paid to employees on three-year fixed term contracts which expired on 31 December 2022. The total amount of gratuity paid on 31 December 2022 in respect of these contract was K3,600,000.

(8) The defined benefit expense reordered within employee cost above, comprises the current service cost of K4,800,000, and the net interest cost of K400,000. Pension benefits amounting to K8,400,000 were paid during the year to 31 December 2022.

(9) The figure for taxation in the income statement represents the provisional company income tax paid by the company in respect of the charge year 2022.

(10) The total withholding tax deducted at source from interest income during the charge year 2022 amounted to K4,368,000.

(11) At 1 January 2022, the only assets held by the bank qualifying for capital allowances included office equipment with an income tax value of K1,500,000 (having an original cost of K6,000,000) and buildings for its branch network with an income tax value of K19,200,000 (and having an original cost of K24,000,000).

During the year, the company constructed new central administrative buildings at a cost of K15,000,000 and installed new Automated Teller Machines (ATMs) for its branch network at a cost of K10,500,000 during the year ended 31 December 2022.

Required:

(a) Advise the directors of Hezon Bank plc of the tax treatment of the rental income received by the bank in the tax year 2022. (4 marks)

(b) Calculate the company income tax payable by Hezon Bank Plc for the tax year 2022. (16 marks)

[Total: 20 Marks]

QUESTION THREE

George, who died on 30 November 2022, left the following assets:

	K
Shares in Zimbe Plc	620,000
Guest House in Sesheke	2,110,000
Personal Chattels	42,000
Cash	7,800

Prior to the date of death, he received the following income:

	K
Salary up to the time of death (before deducting PAYE of K28,600)	110,000
School children allowance (per month)	4.500
Royalties received	17,000
Dividends from a Zambian non-mining company	30,000
Tax adjusted profit from trading activities	282,900

George left a will specifying that his estate was to be split in the ratio 6:4:3:2 amongst his four (4) children, Peter, John, Able and Norma respectively. George was a divorcee.

The executor has informed the children that income tax will have to be deducted from the estate before making any distributions to the beneficiaries. However, the children perceive the income tax on the chargeable estate for deceased persons as too high and unfair. They argue that their father was tax compliant throughout his life and taxing his estate could be considered as double taxation. They want the executor to declare low values and hide some assets.

Required:

(a) Explain the ethical implications of the executor declaring low values and hiding some assets. (2 marks)

(b) Compute the income tax payable by George for the tax year 2022. (7 marks)

(c) Calculate the tax payable on the estate left by George and the inheritance due to the four (4) children. (8 marks)

(d) Explain the person who is responsible for payment of taxes in (b) and (c), and state the date by which an assessment for George must be made. (3 marks)

[Total: 20 Marks]

QUESTION FOUR

Mambwe and Chilambwe are the sole owners of MCB Ltd a Value Added Tax registered company which imports construction materials from China and Dubai and sells them on the Zambian market. Mambwe owns 85% of the ordinary shares of MCB Ltd, whilst Chilambwe owns the remaining 15%. Mambwe is a full-time working director of MCB Ltd, whilst Chilambwe does not participate in the running of the company either as a director or as an employee.

Mambwe and Chilambwe are seeking tax advice in relation to the following matters:

(1) Chilambwe wishes to draw an interest free loan of K800,000 to finance the construction of his own private house. Until the construction of the house is completed, the company will pay accommodation rentals on behalf of Chilambwe which are expected to amount to K78,000 in the tax year 2022.

Chilambwe wishes to know whether there will be any tax implications both for himself individually and the company of drawing this loan and payment of his accommodation rentals. He further wishes to know whether there will be any tax implications if the loan once drawn, is subsequently written off by the company in the future.

(2) Mambwe wishes to draw construction material valued at K180,000 under a credit facility which will enable him pay for the goods in eighteen months' time.

(3) Both Mambwe and Chilambwe do not have any form of insurance. They are considering arranging for insurance cover to protect themselves and their families from any potential loss of income that may occur through ill health or death.

Required:

(a) Provide advice to Chilambwe on each of the following matters:

(i) The tax implications for both himself and the company that will arise from the provision of the interest free loan of K800,000 and payment of his accommodation rentals of K78,000. (6 marks)

(ii) The tax implications that will arise if the loan of K800,000 once drawn is subsequently repaid by Chilambwe either partly on in full at some time in the future. (2 marks)

(iii) The tax implications that will arise if the company was to write off the whole loan of K800,000 or part of the loan at some time in the future after it has been drawn by Chilambwe. (2 marks)

(b) Advise Mambwe of the tax implications for both himself and the company of drawing goods worth K180,000 under a credit facility. (2 marks)

(c) Describe the nature of each of the following personal financial protection products and advise Mambwe and Chilambwe of the personal tax implication arising from the use of each product:

(i) Whole of life insurance (2 marks)
(ii) Term life assurance (2 marks)
(iii) Family income benefit (2 marks)
(iv) Permanent health insurance (2 marks)

[Total: 20 Marks]

QUESTION FIVE

For the purposes of this question, you should assume that today's date is 20 December 2021

You are employed in Tax practice. You have been provided with the following information relating to James Chungu, who is seeking tax advice from your firm.

James Chungu has been in business for many years running a retail business as a sole trader under the name Chungu Enterprises. The annual turnover of the business has always exceeded K800,000. He has always prepared accounts to 31 December each year. He has always involved his daughter Chansa, in running the business, as an employee.

Chungu wishes to incorporate their business and start running it as a private limited company, known as JayCo Limited from 1 September 2022. The share capital of the company will be held by Chungu and Chansa with Chungu holding 95% of the ordinary share capital and Chansa holding the remaining 5%. Chungu and Chansa will run the company as full-time working directors, preparing accounts to 31 December each year. All assets held by the business at 31 August 2022, will all be transferred to JayCo Limited. The results of the business in the tax year 2022, before and after incorporation are expected to be as follows:

8-month Period to 31 August 2022

Chungu has estimated the net profit as per accounts before deducting payments to Chungu and Chansa and any NAPSA contributions for the period from 1 January 2022 to 31 August 2022, to be K1,150,000. All the other expenses that will be incurred and deducted in arriving at the net profit figure of K1,150,000 are allowable expenses for taxation purposes. Chungu is entitled to an annual salary of K252,000, and additionally draws a motoring allowance of K10,000 per month. Chansa's annual salary is K216,000 and he additionally draws a monthly motoring allowance of K4,000.

The income tax values of assets held by business qualifying for capital allowances at 1 January 2022, their original costs and their respective expected market values at 31 August 2022, are as follows:

	Income Tax Values at 1 January 2022	Original costs	Market values at 31 August 2022
	K		K
Shop buildings	540,000	600,000	900,000
Shop fittings	37,500	150,000	25,000
Toyota Fortuner car	368,000	460,000	300,000
Mitsubishi Canter Van	165,000	220,000	190,000

Chungu has always used the Toyota Fortuner Car (which has a cylinder capacity of 2600cc) 60% for private purposes. The Mitsubishi Canter van (1,600cc) is used in the business as a delivery van, but Chansa has always used the van 30% for private purposes.

4-month Period ended 31 December 2022

The net profit as per accounts for the JayCo Ltd for the four months to 31 December 2022, are expected to be K780,000. This net profit figure is before any withdrawals of profits by Chungu and Chansa and NAPSA contributions.

After incorporating their business on 1 September 2022, Chungu and Chansa will maintain their entitlement to annual salaries of K252,000 and K216,000 respectively. Chungu and Chansa will additionally continue drawing monthly motoring allowances of K10,000 and K4,000 respectively. Chungu will continue using the business Toyota Fortuner Car 60% for private purposes and Chansa will continue using the Mitsubishi Canter delivery van 30% for private purposes.

NAPSA contributions payable should be taken to be 5% of the relevant income per annum and the earnings ceiling for the purposes of NAPSA contributions should be taken to be K293,232 per annum.

Required:

Advice Chungu and Chansa on how income generated from the business will be assessed to income tax in the tax year 2022. Your answer should include:

(a) An explanation of the basis of assessment for the profits which will be generated from business in the eight (8) months to 31 August 2022, together with a computation of the final taxable profits for this period. (8 marks)

(b) An explanation of the basis of assessment for the profits which will be generated by business for the four (4) month period after incorporation, together with a computation of the final company income tax payable by the company for the tax year 2022. (8 marks)

(c) A computation of the final income tax payable by Chungu and Chansa in the tax year 2022. (4 marks)

[Total: 20 Marks]

END OF PAPER

CA 3.4 SUGGESTED SOLUTIONS

SOLUTION ONE

(a) COMPUTATION OF LOSS RELIEF

	2021
	K
Tax adjusted Mining profit/(loss)	8,400,000
Loss Relief (W)	(4,200,000)
Taxable mining profits	4,200,000

Loss Relief for 2021	
[(1+(18.00-17.50) x 21,000,000]	21,600,000
Loss Relief for 2021	
(K8,400,000 x 50%)	(4,200,000)
Unrelieved loss c/f	17,400,000

The loss to be relieved is restricted to 50% of the taxable profits.

(b) (i) COMPUTATION OF CAPITAL ALLOWANCES ON IMPORTED MINING IMPLEMENTS,
PLANT AND MACHINERY

	K
Drilling equipment	
Indexed capital allowance	
(K3.4m x 20%) = K680,000 x [1 + (18.90 –18.00)/18.00]	714,000
Mining implements	
Wear & tear allowance	
(K6.5m x 20%) = K1,300,000 [1 + (18.90 -18-00)/18.00]	1,365,000
	2,079,000

(ii) COMPUTATION OF CAPITAL ALLOWANCES ON LOCAL IMPLEMENTS, PLANT AND MACHINERY

	K' 000
Police post	
Wear and tear allowance	
(K1,200,000 x 20%)	240,000
Office equipment	
Wear and tear allowance	
(K700,000 x 25%)	175,000
Pool cars	
Wear & tear allowance	
(K400,000 x 20%)	80,000
Smelting plant	
Wear & tear allowance	
(K25m x 20%)	5,000,000
	5,495,000

(c) COMPUTATION OF TAXABLE MINING PROFITS

	K'000	K'000
Net profit as per accounts		266,873
Add:		
Depreciation	8,500	
Amortisation of intangible assets	3,500	
Fines for breach of labour laws	252	
Construction of police post	1,200	
		13,452
		280,325
Less:		
Fair value gains	17,125	
Mineral royalty	72,250	
Capital allowances (K5,495 +2,079)	7,574	
		(96,949)
Taxable mining profit before interest adjustment		183,376
Add: Disallowed interest (W2)		18,387
Final taxable mining profit before loss relief		201,763
Less loss relief (W3)		(18,270)
Final taxable mining profit		183,493
Company income tax on mining profits		
(K183,493 x 30%)		55,048
Provisional income tax		(51,000)
Income tax payable		4,048

WORKINGS

(1) COMPUTATION OF MINERAL ROYALTY TAX PAID FOR THE TAX YEAR 2022

	K'000
Cobalt	
(K140,000,000 x 8%)	11,200
Industrial Minerals	
(K150,000,000 x 5%)	7,500
Copper	
(K920m-K140m-K150m) x 8.5%	53,550
Total	72,250

(2) COMPUTATION OF DISALLOWED INTEREST

COMPUTATION OF TAXABLE INCOME AND TAX EBITDA

	K'000
Taxable profit	183,376
Finance cost	110,000
Depreciation	8,500
Amortisation	3,500

Tax EBITDA	305,376
Finance cost	110,000
Allowable interest	
(30% x K305,376)	(91,613)
Disallowed interest	18,387

(3) LOSS RELIEF FOR THE TAX YEAR 2022

Loss Relief for 2022	
[(1+(18.90-18.00)/18.00) x K17,400]	18,270
Loss Relief for 2022	18,270
Unrelieved loss c/f	0
Profit available for loss relief	
(50% x K201,763)	100,882

Therefore, the whole loss will be relieved

(d) CHAZE

PERSONAL INCOME TAX COMPUTATION FOR THE TAX YEAR 2022

	K	K
Gross emoluments		840,000
Foreign income		
Dividends		
(K40,300 x 100/62)	65,000	
Fixed deposit interest		
(18,600 x100/80)	23,250	
		88,250
Taxable income		928,250
Income Tax		
On first K82,800		8,460
On excess (K928,250 -K82,800) x 37.5%		317,044
Income tax liability		325,504
PAYE		
Less DTR on		(289,592)
Dividend income (W1)	22,385	
Fixed deposit interest (W2)	4,650	
		(27,035)
Income tax payable		8,877

WORKINGS

(1) Total amount of Zambian tax charge

Income Tax	325,504
WHT on Zambian dividends (K30,000 x 15%)	4,500
	330,004

(2) Total assessable income

Income chargeable to income tax	928,250
Zambian dividends	30,000
	958,250

(3) Double taxation relief on the dividends from foreign sources:

This will be the lower of:

(i) The foreign tax paid on the dividends:

K65,000 x 38% = K24,700; and

(ii) The Zambian Tax Charge attributed to the dividends computed as:

$$\left(\frac{K65,000}{K958,250}\right) x\ K330,004$$

=K22,385

DTR will therefore be K22,385 being the lower amount.

(4) Double taxation relief on fixed deposit interest from foreign sources:

This will be the lower of:

(i) The foreign tax paid on the fixed deposit interest:

K23,250 x 20% = K4,650; and

(ii) The Zambian Tax Charge computed as:

$$\left(\frac{K23,250}{K958,250}\right) x\ K330,004$$

=K8,007

DTR will therefore be K4,650 being the lower amount.

SOLUTION TWO

(a) Tax treatment of rental income

The rental income will be assessed as a separate source of income from the banking operations and the amount of the rental included in the statement of profit or loss of the bank will therefore be deducted when computing the taxable income of the company for the year.

Rental income received by both individuals and companies, is chargeable to Turnover Tax at the rate of 4% if the rental income is K800,000 per annum or less. Where the rental income for an individual or a company exceeds K800,000 per annum, then it is subjected to tax at the rate of 12.5% per month.

Since the gross annual rental income rental income received by Hezon Bank is above K800,000, Hezon bank is required to pay rental income tax at the rate of 12.5% of the gross monthly rental income.

The expenses incurred wholly and exclusively for the purposes which includes advertising for tenants, insurance of the property, depreciation of the property and other property letting expenses will all not be allowable from gross rentals, for the purposes of assessing turnover tax on rental income.

Turnover tax on rental income is paid on a monthly basis on the 14th day following the end of the month in which the rentals income was received. The amount of the monthly rental income tax payable by the bank is therefore:

K36,600,000/12 x 12.5% =K381,250

(b) COMPUTATION OF TAXABLE INCOME

	K'000	K'000
Income before taxes		37,556
Add		
Unrealised forex losses	699	
Depreciation	12,900	
Defined benefit expense	5,200	
Gratuity expense	1,200	
		19,999
		57,555
Less		
Management fees	510	
Decrease in general provision for losses	150	
Rental income	26,300	
Fair value gains on equity instruments	690	
Gratuity paid	3,600	
Pension benefits paid	8,400	
Capital allowances (W)	4,905	

	(44,555)
	13,000
Management fees (510 x 100/85)	600
Final taxable income	13,600

Company income tax	
(K13,600,000 x 30%)	4,080
less tax already paid:	
WHT on interest income	(4,368)
WHT on management fees	
(K600,000 x 15%)	(90)
Provisional income tax	(3,825)
Company income tax payable	(4,203)

COMPUTATION OF CAPITAL ALLOWANCES

	K'000
Office equipment	
Wear & tear allowance	
(K6,000,000 x 25%)	1,500
Branch network buildings	
Wear & tear allowance	
(K24,000,000 x 2%)	480
Administration offices	
Wear & tear allowance	
(K15,000,000 x 2%)	300
Automated Teller Machines	
Wear & tear allowance	
(K10,500,000 x 25%)	2,625
	4,905

SOLUTION THREE

(a) **Implications of the executor declaring low values and hiding some assets**

This will be considered as tax evasion. Tax evasion refers to the use of illegal means to avoid or reduce tax liabilities.

It is a serious criminal offence and may also qualify as a money laundering activity.

It is important to acknowledge that tax evasion arises when taxes are perceived to be too high or unfair on taxpayers. However, tax evasion may be punishable by fines and/or imprisonment.

(b) **George**

Compute the income tax payable for the tax year 2022

	K
Salary up to the time of death	110,000.00
School children allowance (4.500 X 11)	49.50
Royalties received (17,000 X 100/85)	20,000.00
Business profits	282,900.00
Taxable income	412.849.50
Income tax	
First K82,800	8,460
Excess (K412,949.50 – K82,800) x 37.5%	123,806
Income tax liability	132,266
Less tax already paid	
PAYE	(28,600)
WHT on the royalties (K20,000 X 15%)	(3,000)
Income tax payable	100,666

(c) **Calculation of tax payable on the estate left by George and the inheritance due to the four children**

	K
Shares in Zimbe Plc	620,000
Sesheke Guest House	2,110,000
Personal Chattels	42,000
Cash	7,800
Chargeable estate	2,779,800
Tax payable: K2,779,800 X 30%	K833,940
Chargeable estate	2,779,800
Less tax payable	(833,940)
Net estate after tax	1,945,860

Net estate distribution to the children:

Peter (6/15 X K1,945,860)	778,344
John (4/15 X K1,945,860)	518,896
Able (3/15 X K1,945,860)	389,172
Norma (2/15 X K1,945,860)	259,448
Total	1,945,860

(d) **Responsibility for payment of taxes and due date for assessment**

The taxes due will be paid by George's executor as the taxpaying agent. The taxpaying agent is assessed in their own name on the income of the deceased person and has the same duties, responsibilities and liabilities as if that income were received by them beneficially.

An assessment may only be made on a deceased individual in the three (3) years from end of the charge year in which the individual died. This prevents delays in winding up estates, because the tax due on the assessment on the deceased individual will be paid from the assets of the estate.

As a result, the assessment on George must be made by 31 December 2025.

SOLUTION FOUR

(a) TAX IMPLICATIONS OF BENEFITS PROVIDED TO Chilambwe:

(i) **Provision of interest free loan**

Chilambwe holds more than 5% of the ordinary shares of the company, (his shareholding being 15%) and is therefore an effective share holder of the company. MCB will be deemed to have made a loan amounting to K800,000 to an effective shareholder.

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:

K800,000 x 37.5/62.5 = K480,000;

There will be no tax implications for Chilambwe

Payment of accommodation rental

Payment of the accommodation rental will also be deemed to be a loan made by MCB Ltd to an effective shareholder. 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.

The amount of the loan will be taken to be equal to the the cost to MCB Ltd of providing the benefit to Chilambwe, which is the amount of the rentals paid by the company of K78,000. 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:

K78,000 x 37.5/62.5 = K46,800

(ii) Tax implications of repayment of the loan

If Chilambwe repays the whole loan, income tax will be refunded to MCB Ltd if the company makes a repayment claim.

If Chilambwe only repays part of the loan any excess tax relating to the repaid part of the loan may be refunded to MCB Ltd if it makes a repayment claim.

(iii) Tax implications of the writing off the loan

If the whole loan of K800,000 or part thereof is written off by the MCB Ltd the amount written off will treated as part of the effective shareholder's taxable income.

Any tax relating to the amount written off can be applied to reduce the tax due from Chilambwe the effective shareholder in respect of the written off loan.

(b) **Purchase of construction material on credit**

MCB Ltd will be deemed to have made a loan to an effective shareholder of the company given that Mambwe holds more than 5% of the ordinary shares of the company, (his shareholding being 85%).

The amount of the loan will be deemed to be equal to the extent of the credit facilities provided, which is K180,000, 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.

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:

K180,000 x 37.5/62.5 = K108,000

There will be no Tax implications for Mambwe.

(c) Personal financial protection products

(i) Whole of life assurance

A whole life assurance policy pays out the sum assured as a lump sum on the death of the life or lives assured to the grantee whenever the death occurs.

The policy may be written on single or joint lives and on first death or last survivor basis. A single life insurance policy covers one person only and pays out the chosen amount of cover if that person dies during the length of the policy.

Joint life insurance policy covers two lives. It means that the person taking out the policy can be covered along with their spouse under one contract. A joint life cover will insure both the spouses on the same terms and conditions. This type of policy may be used on a last survivor basis to provide funds to meet the taxation liability of the deceased's estate.

Tax Implications

The taxation implications are that there is no tax relief on the premiums (the premiums are not allowable when computing taxable income) for an individual and the policy proceeds are tax free.

(ii) Term life assurance

Term insurance provides protection for the life (s) assured for a given or specified period of time known as the policy term. The policy only pays out the lump sum death benefit where the life/lives assured die within the policy term.

The policy can be written on a decreasing sum assured basis and used to redeem a repayment mortgage or other loan which would otherwise be outstanding on the deceased's death. Decreasing sum assured basis means that any benefit to paid reduces over time.

Tax Implications
The taxation implications are that there is no tax relief on the premiums (the premiums are not allowable when computing taxable income) for an individual and the policy proceeds are tax free.

(iii) Family Income Benefit
Policies run for a set period of time known as "the term. This policy pays out where the life/lives assured die within the policy term.

The **benefits are paid as instalments** of capital over the remaining policy term and not as a lump sum. For example, if a 20-year policy is taken out and the individual dies five years into this, then the policy will pay out a regular income for the remaining 15 years. Such a policy might be used where there is a need to keep premiums low or where budgeting for lump sum proceeds would present a problem

Tax Implications
The taxation implications are that for an individual, there is no tax relief on the premiums (the premiums are not allowable when computing taxable income) for an individual and the policy proceeds are tax free.

(iv) **Permanent Health Insurance**
This provides for income replacement which is payable in the event of the person's inability to perform own, suited or any occupation or activities of daily living following the expiration or predetermined deferral period due to illness or disability. 50% -75%

It is usually written to retirement age and payable until retirement or until full or partial recovery. The premiums and benefits payable can be indexed.
Tax implications:
The premiums do not receive any tax relief when paid personally and the benefits are not taxable.

SOLUTION FIVE

(a) On incorporation the old business ran as sole trader will be deemed to have ceased trading and new company JayCo deemed to have commenced trading on date of incorporation.

Chungu will be assessed as sole trader on the income generated by the business in the eight months which will be classified as business profit, whilst the income he will draw in the last four months as a director in JayCo Limited after incorporation of the business will be classified as employment income. This income will be aggregated and then subjected to the personal income tax rates.

The income earned by Chansa before and after incorporation will be assessed on her as employment income.

Basis of assessment for profits in the first eight months

Cessation rules will be applied to determine the tax year in which the final taxable profits, made in the first eight months will be assessed.

Since the last accounting period of operating as a sole trader is less than 12 months, the profits made in the eight-month period will be assessed in the tax year following the one in which the profits of the second last accounting period of running the business as sole trader were assessed, that is the tax year 2022.

Assets qualifying for capital allowances will be deemed to have been disposed of at their market values and therefore balancing allowances or charges will arise when computing final taxable profits for the first 8 months

COMPUTATION OF FINAL TAXABLE PROFITS

	K
Taxable profit as per question	1,150,000
Add Net Balancing charge (W1)	45,300
	1,195,300
Less	
Chansa's salary (K216,000 x 8/12)	(144,000)
Chansa's motoring allowance	
(K4,000 x 8)	(32,000)
Employer's NAPSA contributions	
(K144,000 +32,000) x 5%	(8,800)
	1,010,500

WORKINGS

COMPUTATION OF CAPITAL ALLOWANCES

	K	K
Shop buildings		
ITV b/f	540,000	
Market value (restricted to cost)	(600,000)	
Balancing charge	(60,000)	(60,000)
Shop fittings		
ITV b/f	37,500	

Market value	25,000	
Balancing allowance	12,500	12,500
Toyota fortuner		
ITV b/f	368,000	
Market value	(300,000)	
Balancing allowance	68,000	X 40% = 27,200
Mitsubish Van		
ITV b/f	165,000	
Market value	(190,000)	
Balancing charge	(25,000)	(25,000)
		(45,300)

(b) **Basis of assessment for profits made by JayCo**

Commencement rules would be applied in determining the tax year in which the final taxable profits made by JayCo Limited in the 4 months to 31 December 2022, will be taxed.

Since the first accounting period of trading as a private limited company is made up of less 12 months, the normal rules will apply. Specifically the current year basis of assessment will apply as the accounting date falls between 1 April and 31 December inclusive. The profits will be taxed in the tax year 2022.

On incorporation Jayco will be deemed to have purchased the assets qualifying for capital allowances at their market values from the sole proprietorship and therefore capital allowances will be computed using the market values of the assets on the date of incorporation when computing the final taxable profits of JayCo Ltd.

COMPUTATION OF FINAL COMPANY INCOME TAX PAYABLE BY KCB LIMITED

		K
Profit as per question		780,000
Personal to holder motor car benefit		30,000
		810,000
Less:		
Salaries		
Chungu's salary		
(K252,000 x 4/12)	84,000	
Chansa's salary		
(K216,000 x 4/12)	72,000	
		(156,000)
Motoring allowances for:		
Chungu (K10,000 x 4)	40,000	
Chansa (K4,000 x 4)	16,000	
		(56,000)
Employer's NAPSA contributions for:		
Chungu restricted (K293,292 x 5%) x 4/12)	4,888	
Chansa (K72,000 + 16,000) x 5%	4,400	
Capital allowances (W)		(9,288)

	(131,750)
Final taxable profits	456,962
Company income tax K456,962 x 30%	137,089

WORKING COMPUTATION OF CAPITAL ALLOWANCES

	K
Shop Buildings	
Wear & tear allowance	
K900,000 X 2%	18,000
Shop Fittings	
Wear and tear allowance	
(K25,000 x 25%)	6,250
Toyota Fortuner	
Wear and tear allowance	
(K300,000 x 20%)	60,000
Mitsubishi Van	
Wear and tear allowance	
(K190,000 x 25%)	47,500
Total	131,750

(c) PERSONAL INCOME TAX COMPUTATIONS FOR THE TAX YEAR 2022 FOR

	Chungu	Chansa
	K	K
Business Profits (a)	1,010,500	-
Employment income		
Directors salaries	84,000	216,000
Motoring allowances	40,000	48,000
Total income	1,134,500	264,000
Income Tax		
On first K82,800	8,460	8,460
On excess K1,051,700/K181,200 x 37.5%	394,388	67,950
	402,848	76,410

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

CA ADVISORY PROFESSIONAL IN ACCOUNTANCY

CA 3.5: ADVANCED MANAGEMENT ACCOUNTING

TUESDAY 14 JUNE 2022

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)

Sangalala Engineering Ltd (SEL), a large divisionalised company, is in the business of manufacturing medical surgery equipment. The company is being managed by one of its founders, John Sanga.

Mr Sanga recently attended a major international exhibition on Computer Aided Design (CAD) in Cape Town, South Africa. He learnt about improvements in product quality and profitability achieved by companies which have switched to this new technology. In particular, one exhibitor said the UK competitors use CAD equipment extensively. Mr Sanga is so worried about his company's future thathe commissioned a report from the South African consultant, CAD-CAM Ltd, a vendor of CAD equipment, as to the appropriateness of utilizing CAD for all his manufacturing operations.

The report, which has recently been prepared, suggests that the following costs and benefits will accrue to SE Plc as a result of investing in an appropriate CAD system:

- Costs of implementing CAD
    - (i) Capital equipment costs will be K20 million. The equipment will have an estimated life of five (5) years, after which time its disposal value will be K5 million.
    - (ii) Proper use of the equipment will require substantial re-training of current employees. As result of the necessary changes in the production process, and the time spent on retraining, SE Plc will lose production (and sales) in its first two years of implementation. The lost production (and sales) will cost the company K5 million per annum.
    - (iii) The annual costs of writing software and maintaining the computer equipment will be K2 million.
- Benefits of implementing CAD
    - (i) The use of CAD will enhance the quality of SE Plc's products. This will lead to less reworking of products, and a consequent reduction in warranty costs. The annual cost savings are expected to be K6 million per annum.
    - (ii) The CAD equipment will use less floor space than the existing machinery. As a result one existing factory will no longer be needed. It is estimated that the factory can be let at an annual rental of K1million.
    - (iii) Better planning and flow of work will result in an immediate reduction in the existing levels of working capital from K6.5million to K4million.

    All investments in SE Plc are required to generate a positive net present value at a cost of capital of 14% and to show an accounting rate of return in the first year of at least 12%. You may assume that all cash flows arise at the end of the year, except for those relating to the equipment and re-training costs, and the reduction in working capital. It is SE Plc's intention to capitalize re-training costs for management accounting purposes especially considering that they are substantial and also to encourage investment in the CAD. The Zambia Revenue Authority (ZRA) exempts CAD investment profits from tax payments.

Required:

(a) Determine whether SE Plc should invest in the CAD technology on the basis of its existing investment criteria. Make any reasonable assumptions you deem necessary especially the timing of cash flows. (10marks)

(b) Discuss six (6) possible reasons as to why SE Plc currently requires its long-term investments to meet both the net present value and the accounting rate of return criteria. (6 marks)

(c) Discuss the additional factors SE Plc should consider when deciding whether to switch to the CAD technology. Discuss up to four (4) additional factors.
(your answer should include a discussion of the specific problems that arise in evaluating investments in advanced manufacturing technologies (such as CAD)) and an explanation of why the financial appraisal might incorrectly reject such investments). (7 marks)

(d) SE Plc is considering the use of alternative performance measures apart from ARR (ROI) to evaluate divisional managers.
Mr Sanga has read an article in a prominent magazine, the Fortune Magazine, describing the apparent success that many companies had derived from using the Economic value added (EVA) to motivate and evaluate corporate and divisional managers. EVA, being a specific type of residual income, has impressed the CEO as an alternative measure of performance.

Required:

(i) Explain how EVA can be used by SE Plc to measure divisional performance. (3 marks)

(ii) Discuss three (3) advantages and three(3) disadvantages of the EVA method. (6 marks)

(e) SE Plc lacks fully developed management information (MIS) system that can integrate data from various sources and provide information necessary for management decisions making. This explains why the company is relying on consultants to provide reports for decision making. The CEO has therefore, requested for setting up of a MIS. He is not sure of the benefits of the MIS and what it should do. It should be borne in mind that the company is divisionalised. There is a Board of Directors, Managers for each of the divisions and operational Managers.

Required:

Explain the benefits of the MIS and how the MIS will be able to assist the various groups of interested users in SE Plc and the part management accounting will play in this. (8marks)

[Total:40 Marks]

SECTION B

Attempt any THREE (3) questions in this section.

QUESTION TWO

Tanaka Excellence Limited (TEL) was founded in 2007 by TendaiNyamayidega who is the current Chief Executive Officer of the company. TEL is a small haulage company which has witnessed steady growth throughout the years. It has expanded from initially owning a single heavy goods vehicle to an operation of 50 heavy goods vehicles. A quarter of the current fleet of vehicles was acquired in the last financial year, replacing older units which were becoming too expensive to maintain. TEL has employed 30 full-time driverswith a varying number of part-time drivers. The part-time staff work as and when they are required.

The company's premises are within an influent residential area. A number of government officials reside in this area. TEL offers a 24-hour service to its clients. It also runs a garage where both major and minor motor vehicle repairs are carried out. In most cases these repairs are accompanied with noise. There have been objections raised by local residents and administrative officials to the disturbance, and the local newspaper has at various times reported on this criticism.

Recently, the company started offering training in forklift trucks and has proved to be a successful diversification as there is a regular stream of customers. This training takes place mostly in TEL's own garage facilities.

Last year, the CEO entered negotiations to lease some land in an industrial economic zone, which would more than satisfactorily accommodate all the vehicles. This land shall be able to accommodate a repair and maintenance facility which would be adequate for the needs of the fleet. The CEO has suggested that part of the land could be used for storage of trailers for local companies. TEL has since taken occupancy of the land following a lease agreement. The company has erected a large security fence and a small portable cabin placed on site. Water, sewerage and electricity utility services have been supplied and negotiations are taking place for the installation of a large diesel tank adequate to service other vehicles besides those of TEL.

The company's performance has been ill spoken of by the CEO. Three years ago, itapplied a policy of paying all invoices immediately on receiving them. As receivables were frequently taking over and above the credit period allowed, the company suffered a cash flow shortage, which resulted in a large bank overdraft.

The newly recruited management accountant, Lucy Moyo has introduced some basic financial accounting procedures into the company. In addition to exercising some control on the company's expenditure, Lucy has reduced the receivables' collection period to about half its former level.

Payables are now paid when the invoices fall due rather than immediately upon their receipt. Such control had been lacking prior to the arrival the Management Accountant atTEL. The Bank Manager has praised the Management Accountant for her efforts and informed the CEOthat in his opinion the control measures now introduced have saved the business from liquidation. As a consequence of the improvement in financial control, the bank is willing to fund additional loans for the development of the new land. In making its decision, the bank required TEL to supply its statutory financial statements and a cash flow forecast for the development.

The Management Accountant has emphasised on the need to provide information which will be useful for strategic management purposes. Her own background and experience have been focused on the provision of accounting service, but she is enthusiastic about the challenge of obtaining and presenting strategic management accounting information.

The haulage contract work industry is highly competitive.Most of the participants in this industry operate on a low-margin basis and smaller companies often sub-contract from large-scale hauliers.

TEL carries haulage for a variety of customers as well as undertaking some sub-contracting. Much of the haulage work the company carries out is seasonal. Approximately 65% of its turnover is derived from Kwekwe Limited, a local company that manufactures soft furnishings such as cushions and pillows.

Following the recent appointment of a new Transport Manager, Kwekwe Ltd has begun to employ other hauliers besides TEL. Over the last two (2) months, the haulage work TEL has received from Kwekwe Ltd has reduced by about a third.

Required:

(a) Using the SWOT model assess the strategic position of TEL, separating the internal and external factors to which the company is exposed.(12 marks)

(b) Advise the CEOon the strategic management accounting information of a financial and non-financial nature which should be provided to assist future decision making and cost control. (8 marks)

[Total:20 Marks]

QUESTION THREE

Shoppies Distributors Ltd (SDL) is a business that runs a chain of highstreets stores selling a wide range of products including household goods countrywide. SDL has always traded profitably due to targeting the niche market for high value, branded products. The company usually opens its stores in urban and high street towns. SDL's revenues and profits have been static for several years and the directors are under pressure from investors to find ways of increasing shareholder returns.

The market for household goods is a saturated one with consumers focusing on low cost quality items. The Sales Director at one of the management meetingstated that SDL could start selling goods online. None of SDL's competitors have a significant online presence and the company itself only has a basic website that lists locations of its stores and contact details.

The Managing Director was uncertain about this approach as he was aware that SDL had problems implementing information systems in the past. Most recently, the company attempted to implement an online inventory system, which would have allowed stores to check inventory levels in other stores within a short distance following response to a number of customer requests. However, the system was abandoned due to increasing costs and problems with the software, which was written in house by SDL's small Information Technology (IT) department.

The Sales Director feels that the problems with the earlier projects were caused by a lack of control over the project. SDL Plc has never employed an IT Director and the Sales Director has therefore recommended that if SDL decides to expand into online retailing, this role will need to be filled so that IT is considered as a strategic function.

Required:

(a) Distinguish between the different levels of information system strategy with examples in SDL Plc. (6 marks)

(b) Discuss the problems that SDL Plc could encounter when launching the online stores. (8 marks)

(c) Discuss the need for IT to be a strategic unit within SDL Plc. (6 marks)

[Total 20 Marks]

QUESTION FOUR

Trade Bosses Ltd (TBL) was founded in 2010. TBL manufactures a variety of products including food stuffs, beverages and detergents. Recently, the company entered into two long contracts tomanufacture a variety of own-label sweets for the two (2) largestsupermarket chains in Zambia. TBL makes several different flavours of the samebasic product. The company has been using cost leadership as its strategy in order to win thesupermarkets' business. It has been noted that the sales of TBL have not been stable in the past four years. This has been attributed to the state of the general economy and competitive forces.

The Chief Executive Officer (CEO), Salome Musalale, commonly known as 'iron lady' believes that in order to actualise the strategy it is better to be autocratic. Salome has been worried with the performance TBL and is in a hurry to turn around the business. The majority of employees have been at TBL since its establishment and like the straightforward nature of their work.

TBL has contracted you as a performance expert. The CEOhas asked you to look at the budgeting process at TBL. Currently, the budget is set at the start of the year and performance is measuredagainst this. The management discusses the budget assumptions with the relevant operational managers before being set. These operational managers have always complained that the budget process is very time-consuming and do not see much value in the results. In fact a number of them are concerned that they are made to explain variances that are not their fault.Salome wants to know yourviews on whether this way of budgeting is appropriate and whether the managers'complaints are justified. She is satisfied that there is no dysfunctional behaviour at TBL which may lead to budgetary slack or excessive spending and that all managers are working inthe best interests of the company. She is also looking forward to introducing beyond budgeting. She wants you to explain what are the benefits and problems ofbudgeting at TBL before considering replacing it.

Required:

(a) Evaluate the budgeting system at TBL. (8 marks)

(b) Evaluate the proposal to move to a beyond budgeting method of control at TBL, giving a recommendation on whether to proceed. (12 marks)

[Total 20 Marks]

QUESTION FIVE

The AB group, which has a divisional structure, manufactures a range of products. Divisions A and B are two of its divisions. Division A produces an intermediate product which it sells on the external market and also to Division B. Division A has a maximum capacity of 4,000kg per quarter. However, at the moment it can only sell 2,000kg on the external market and 1,200kg to Division B.

In the budget for the year, a transfer price of K400 per kg was agreed in accordance with the industry market price. But in the second quarter of the year, competitive rivalry caused the price to drop to K360 per kg. The manager of Division B has argued that the transfer price should be the same as the market price of K360 and not K400.

Division B makes 200 units of its finished product from every kg of the intermediate product which it sells on the open market for K4.00 per unit. If the market price was to be reduced to K3.5 per unit, Division B would sell a further 160,000 units.

The cost structure data is as follows:

	Division A	Division B
Variable cost per kg	K140	K120
Fixed costs per quarter	K400,000	K160,000

Required:

(a) Outline and discuss the main objectives of a transfer pricing system. (6 marks)

(b) Compute the projected profit or loss for the second quarter for Divisions A, B and the AB group based on the transfer prices of K400 per kg and K360 per kg when operating at:

(i) 80% capacity.
(ii) 100% capacity. The extra capacity will be used to supply Division B.

(10 marks)

(c) Comment on the results obtained in (b) above and the effect of the change on the transfer prices. (4marks)

[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

CA3.5 SUGGESTED SOLUTIONS

SOLUTION ONE

(a) NPV(K'000)

Years :	0	1	2	3	4	5
Capital Equipment	(20,000)					
Scrap value						5,000
Retraining costs	(5,000)	(5,000)				
Software maintenance		(2,000)	(2,000)	(2,000)	(2,000)	(2,000)
Annual cost savings		6,000	6,000	6,000	6,000	6,000
Rental income		1,000	1,000	1,000	1,000	1,000
Working capital reduction	2,500					
Net Cashflow	(22,500)	0	5,000	5,000	5,000	10,000
DF@14%	1.000	0.877	0.769	0.675	0.592	0.519
PV	(22,500)	0	3,845	3,375	2,960	5,190
NPV						**(7,130)**

Accounting Rate of Return(ARR)

$$ARR = \frac{\text{Average Profits}}{\text{Average investment}} \times 100\%$$

$$= \frac{0}{27.5m} \times 100\%$$

$$= \mathbf{0\%}$$

Advice:

The NPV is negative and, therefore, on financial grounds the investment in the CAD should not be accepted.

The ARR is zero (0%). The investment should be rejected because SE Plc's policy is to accept projects with a hurdle rate of 12% in the first year.

The conclusion is that the CAD investment has failed both investment criteria and should be rejected.

Workings

W.1: Year 1 incremental profit

	K'000
– Annual cost savings	**6,000**
– Retraining costs(K10m/5years)	**(2,000)**
– Rental income	**1,000**
– Software development and maintenance	**(2,000)**
– Depreciation (K20m-K5m)/5years	**(3,000)**
Incremental profits	**0**

W.2: Year 1 Incremental investment

	K'000
– Capital investment	**20,000**
– Capitalised Retraining costs	**10,000**
– Reduction in working capital	**(2,500)**
	27,500

ASSUMPTIONS

- It is assumed that the ARR is calculated on the opening written down value.

- by inference to the question, it is assumed that training costs were incurred at the **beginning** of years 1 and 2, i.e, at time zero and time one.

(b) Possible reasons as to why SE Plc currently requires its long-term investments to meet both the net present value and the accounting rate of return criteria include:

i) The DCF method takes into account the time value of money whereas the ARR does not. So SE PLc decided to use NPV method alongside the ARR.

ii) One justification for the use of the NPV method is that in perfect capital markets a positive NPV reflects the increase in the market value of the company(like SE Plc)from the acceptance of the project.

iii) The DCF method uses cash flows and, therefore, preferred in this case because shareholders' dividends are paid in cash. The ARR uses accounting profits which are affected by accounting conventions and non-cash flows such as depreciation provisions and provision for irrecoverable debts.

iv) The DCF method is complex and difficult to understand whereas the ARR is less complex and easier to understand.

v) The positive NPV from a new project shown by the DCF method shows the maximum amount of dividends that can be distributed without affecting the wealth of the shareholders. So in this regard the DCF method will be useful.

vi) DCF cash flows (over, say, 15 to 20 years) may be difficult to estimate and project but figures for the ARR can be easily obtained from past accounting reports.

vii) An explanation of the impact of market imperfections on the NPV rule. For NPV to represent the increase in shareholders' value resulting from acceptance of an investment, it is necessary for investors to be aware of the project's existence and also the projected future cash flows.

viii) In imperfect markets shareholders lack information regarding projected future cash flows. Consequently, they may use short-run reported profits and ROI as indication of potential future cash flows. In such circumstances changes in reported profits will affect share prices. Hence SE Plc's management have reacted to the CAD investment situation by considering the impact of a project's acceptance on the reported ROI/ARR.

ix) In practice there is widespread use of ROI /ARR.

x) Shareholders and financial analysts tend to monitor short-run profits and ROI/ARR and use these measures as an input that determine their estimates of future share prices. It is, therefore, not surprising that SE Plc considered the implications of its investment decision on reported short-run profits and ROI/ARR.

(c) The additional factors SE Plc should consider when deciding whether to switch to the CAD technology are as follows:

i) It is claimed that many of the benefits from investing in AMTs are difficult to quantify and tend not to be included in the analysis (e. g. improved product quality).

ii) It is also claimed that inflation is incorrectly dealt with and that excessive discount rates are applied which overcompensate for risk

iii) A further reason that has been cited why companies like SE Plc under invest in AMTs is that they fail to properly evaluate the relevant alternatives. There is a danger that the investment will be compared incorrectly against an alternative that assumes a continuation of the current market share, selling prices and costs – in other words, the status quo. However, the status quo is unlikely to apply, since competitors are also likely to invest in the new technology. In this situation the investment should be compared with the alternative of not investing, based on assuming a situation of declining cash flow.

iv) SE Plc has not incorporated taxation into the analysis. This is very vital as it is a future cash outflow.

v) SE Plc has discounted project cash flows at the company's normal cost of capital of 14%. This rate is only justified if the risk of the project is equivalent to the average risk of the firm's existing assets.

(d) (i) How EVA can be used by SE plc to measure divisional performance.

EVA (like RI) gives an absolute measure, rather than a percentage value of performance, and if EVA is positive it indicates SE plc that is generating a return greater than that required by the providers of finance. In this case, a return in excess of 14%. In other words, a positive EVA indicates that an organization is creating wealth for the shareholders.

Consequently, directors of SE plc should be encouraged to either:

- Invest in divisions where the returns from those divisions exceed the cost of capital; or

- Close down divisions, or harvest assets, where the return is less than the cost of capital. In turn, the proceeds from any sales can either be reinvested in other divisions, or returned to shareholders as dividends.

(d) (ii) Advantages and disadvantages of the EVA method.

The advantages of EVA include the following:

- Real wealth for shareholders. Maximisation of EVA will create real wealth for the shareholders. Maximising the present value of future cash flows will help maximize shareholders' wealth.
- Less distortion by accounting policies. The adjustments within the calculation of EVA mean that the measure is based on figures that are closer to cash flows than accounting profits.
- Consistent with NPV. EVA is consistent with the idea of NPV, showing the return on projects in excess of the cost of financing them. Any projects which would generate a positive NPV will also increase EVA.
- An absolute value. The EVA measure is an absolute value, which is easily understood by non – financial managers.
- Treatment of certain costs as investment thereby encouraging expenditure. If management are assessed using performance measures based on traditional policies, they may be unwilling to invest in areas such as advertising or research and development because the costs incurred by those activities will reduce the current year's accounting profit. EVA recongnises such costs as investment for the future and thus they do not immediately reduce the EVA in the year of expenditure. This will reduce the temptation to short – termism (which may occur under ROCE or ROI).

The disadvantages of EVA include the following:

- Dependency on historical data. EVA is based on historical accounts, which may be of limited use as a guide to the future. In practice, the influences of accounting policies on the starting profit figure may not be completely negated by the adjustments made to it in the EVA model.

- Number of adjustments needed to measure EVA. Making the necessary adjustments can be problematic, as sometimes a large number of adjustments are required to accounting profit in order to calculate NOPAT.

- Comparison of like with like. EVA is an absolute measure, so larger companies in size may have larger EVA figures than smaller companies, simply because they are bigger, not because they are performing better. Allowance for relative size must be made when comparing the relative performance of companies. In this respect, ROI (which shows a percentage measure) may be better for comparing performance between companies of different size.
- Difficulty in estimating WACC. Many organisations use models such as the capital asset pricing model for estimating WACC. However, this is not a universally accepted method of determining the cost of equity.

(e)(i) Benefits of the MIS

The objective of management accounting and management accounting systems is to provide information for managers to use for planning, control and performance measurement. The focus here is on how information should be used to appraise divisional performance. The MIS :

- Provides information to those managers who need it
- Helps managers make decisions based on the information provided
- Enables managers to make better decisions due to the fuller information produced
- Will lead to the saving of costs and improvement in profits
- Hold both quantitative and qualitative information and so provides managers with all the relevant information they need to make decisions

(e)(ii) How MIS will assist the various groups of interested users in SE plc

The management information system will be reporting to three sets of managers for three different purposes: strategic planning, management control and operational control. Therefore the system will provide:

- Directors with information for strategic planning decisions
- Divisonal managers with information for management purposes
- Operations managers with information for operational day – to – day control.

The part management accounting information will play in such system will be to provide the numerical information and analysis to complement the qualitative information available from the management information system. Without the quantitative information, qualitative information will not provide all the information that will be necessary for a decision. Similarly, quantitative information will need to be complemented by qualitative so that full details are available on which to base decisions.

SOLUTION TWO

(a) Tanaka Excellence Ltd has the following strengths and weaknesses, which can be considered to be internal.

Strengths

- TEL is an established business with an experienced management team.
- Tendai Nyamayidega, the managing director appears to be a highly motivated entrepreneur.
- The company acquired a lease on a new site that has quite a lot of potential.
- The company has diversified into forklift truck driver training which reduces dependence on road haulage for income.

Weaknesses

There is a degree of gearing in the finances of the company. The company must maintain profitability and have a good cash flow to keep the bank happy.

TEL's existing site is too small, so it will have to re-locate to the new site that requires more capital and will disrupt business operations.

TEL currently does not have an effective management accounting system, which means its managers make decisions without having sufficient information.

The company is too dependent on Kwekwe Ltd, which accounts for 65% of its business.

TEL also has a number of external opportunities and threats including:

Opportunities

The enlarged premises will enable the company to attract new business and offer new services e.g. overnight trailer parking and a vehicle repair service.

TEL should be able to establish stronger links with existing customers, which should help to retain their business.

Threats

The most serious threat facing TEL is the loss of Kwekwe Ltd's custom. In the last two months one third of this business has already been lost.

There is a large number of competitors working on low profit margins and this forces prices down. There appears to be little prospect of TEL being able to increase its prices.

Local residents are opposing operations from the current site and the company is receiving bad publicity in the local press.

The company's management needs to exploit its strengths and opportunities and eliminate its weaknesses and threats when developing a strategy for the company.

(b) The following strategic management accounting information should be provided to assist future decision making and cost control:

Non-financial information

Environmental analysis. A good management accounting system will provide information about the external environment, particularly the future changes that are likely to occur and the impact on TEL. These can be classified under political, economic, social, technological, legal and ecological changes (PESTEL). The impact of each change on the company can then be evaluated.

Information about competitors can be very useful as it provides a benchmark against which TEL's performance can be compared.

Management accounting will provide information to forecast patterns and trends. This will be very useful when making decisions and setting objectives and targets e.g. market growth rates.

Management accounting can also provide information to evaluate risk when making business decisions e.g. using simulation and sensitivity analysis.

Financial information

Investment appraisal

Information can be provided to evaluate each capital investment project undertaken by TEL. This will be very useful when developing the new site.

Variance analysis

This is a very important management accounting control tool. The expected costs and revenues will be forecast and actual costs and revenues compared with them. Variances can then be identified and investigated to find their cause. This will establish some of TEL's strengths and weaknesses.

Customer account profitability

Costs incurred by TEL can be related to each customer and the profit generated by each customer calculated. This will be very important information used by TEL's managers to make decisions relating to each customer e.g. Kwekwe Ltd.

Quoting prices

Most of TEL's customers will be other organisations. They will expect a price to be agreed before awarding a contract to a supplier. Management accounting can supply the information for quoting competitive and realistic prices when negotiating with customers.

SOLUTION THREE

Part (a)

According to Earl, there are three levels of information systems strategy. These include;

Information systems (IS) strategy
In the scenario, SDL is under pressure to grow its returns to investors. This is an overriding business objective. IS strategy involves deciding on which systems, broadly, will enable SDL to achieve this objective. The SD's suggestion to expand into online retailing is an example of this.

Information management (IM) strategy
This looks at the roles of management and other members of staff within the overall IS strategy – in other words, who controls and uses the information systems.
For SDL, it will involve deciding on how existing staff will be used in the new IT system, such as who will be responsible for inventory data entry. It will also include the recruitment of an IT director to oversee the process.

Information technology (IT) strategy
This level looks at the practical application of the IS strategy. Given that SDL has decided to expand into online retail, IT strategy will specify the technological requirements of these new systems.
For SDL, this may include new hardware, such as computers and servers.
Inventory control and website design software will also be required. This will need to be written internally or purchased externally.

Part (b)
As with any major project, there will be problems that SDL will face with its proposed move into online retailing. These may include:

Setup and running costs
Investors in SDL are keen to see an increase in their returns. However, the cost of setting up and running an online retailing system may be significant.
SDL will need to determine whether the additional profit it can make by reaching new customers online will exceed these costs. Certainly in the short term the setup costs may well mean that shareholder returns fall. Any further investment in staff will also increase the IT costs to the company.

Lack of in–house IT resources
The business currently lacks an IT director to take control of the project. While the company may be able to hire someone quickly to fill this role, they will lack experience of SDL's business by the time the new project is started.
The current IT department is small. They may well lack the time or skills for a project of this magnitude. This indicates further investment will be required to hire additional staff or to buy the new systems from external software houses.
It should also be noted that an online retail system would require SDL to have precise information about its inventory levels. It currently does not have an automated inventory control system as this was abandoned.

Lack of customer interest
It is always possible that SDL's customers will not be interested in purchasing goods online. They may, for example, wish to try out furniture or physically see it for themselves rather than buying it online.
It is unclear from the scenario whether the Sales Director has undertaken any market research. This would be vital before making the decision about beginning online retailing, to avoid launching an expensive website that fails to attract customers.

Technophobia
Given the lack of IT currently in place at SDL, employees may not see the need for new IT systems and may resist being retrained.
In addition, the Managing Director has expressed concerns about the launch of a new IT system, given the problems SDL has faced in the past. A project of this scale will require management support in order to be successful.

Security concerns
As SDL will be processing transactions through its website, it will need to ensure that customers are protected from viruses and that their details are protected from hackers.

Part (c)
It is crucial that SDL has information systems represented at the strategic orboard level for several reasons:

Cost of IT/IS
Setting up an online retail store will involve high levels of expenditure for SDL.
There is the risk of costly mistakes if it is not carefully managed. This is evidenced by the failure of its inventory control system. Failure of such a major project could have a significant impact on the company's financial position.

Competitive advantage
The market SDL operates in is described as saturated. It will be difficult for SDL to increase its market share unless it finds a way to differentiate itself.
If the website is a success, it will give SDL a competitive advantage over its rivals and as such it should be part of SDL's strategic decision–making process.

Stakeholders
Expansion of SDL is of great interest to SDL's shareholders. As such it is crucial that the directors monitor its progress.
In addition, customers are currently unable to check the inventory of goods within SDL. They may be very interested in a system that would enable them to save unnecessary journeys into SDL's stores for goods that are not in inventory.

Fast–moving
Technology is a fast moving area and even if becomes a successful first mover in the market by selling online, competitors are likely to follow SDL into the online market.
As such, SDL's IT systems will need to be continually monitored and kept up to date to ensure it remains competitive.

SOLUTION FOUR

(a) **Budgeting system at TBL**

- Budgeting is a key control tool for management and of particular importance in controlling costs in businesses such as TBL which is seeking to be a cost leader. Budgets help to communicate and coordinate all the management activities within the company towards a single plan.
- The budget helps to attribute responsibility for performance.
- The participatory nature of the budget process will help to motivate managers to achieve budget figures which they themselves have helped to set. It is important for this purpose that the budget is achievable or else it is demotivating.
- Budgets assist the evaluation of performance by identifying variances and then point to areas for corrective action or future learning.

The following are some of the problems with budgeting at TBL:

- The time-consuming nature of the process which is unusual as the business is mature and stable and so budget-setting should not be a complex process. The exasperation of the managers probably results from the fact that they see little benefit coming from work involved in forecasting.
- The use of standard costs in budgeting could discourage a system of continuous improvements which would help a cost leader in making efficiency gains. However, TBL's senior management may view that it is unlikely that there will be a need to make such changes on a regular basis and that a review of the costs once a year is sufficient.

(b) **Beyond budgeting**

- Going beyond budgeting involves replacing the annual system of a centrally created budget with a more flexible system of targets.
- Performance measurement changes from monitoring variances from the budget towards measuring achievement of strategic goals, adding value and performance against suitable benchmarks.
- The system will use forecasts produced and revised more regularly than the annual budget by the line managers; it will devolve decision-making.
- The forecasts produced are often more important for cash flow monitoring rather than cost control.
- The targets are intended to guide rather than constrain the line managers, thus improving their motivation.
- The approach of going beyond budgeting is considered appropriate in industries where there are rapid changes in the business environment and where intangibles such as know-how are key to competitive advantage.

This approach at TBL would appear to be inappropriate for a number of reasons:

- There does not appear to be the need to more regularly revise the budgets. Indeed, the work generated in going beyond budgeting may increase the complaints about time-consuming exercises from the operational managers.
- The lower level managers would now need to prepare their own forecasts and would require training in this. They do not appear to have the appetite for such development.
- There is no indication that there are rapid changes in TBL's business and so the beyond budgeting approach would not appear to yield many benefits.
- There does not appear to be a need for great creativity at TBL; instead the focus is on cost control and so traditional budgeting will suit this well.

- The management style of an organisation which should go beyond budgeting is to allow power to be devolved to lower levels of management and this will not fit the culture of TBL.

Overall, then, there are insufficient benefits and many barriers to going beyond budgeting at TBL and it is not recommended.

SOLUTION FIVE

(a) The objectives of a good transfer pricing system are to :

i) **Facilitate divisional autonomy**. Divisional managers are able to make decisions without influence or directives from the head office.

ii) **Bring about a fair evaluation of divisional performance**. A good transfer price would enable each division to be evaluated on the basis of profit.

iii) **Motivate divisional managers to make good decisions**. A transfer pricing system removes sub-optimisation or dysfunctional decision making. It enables divisional managers to make decisions that are in the best interest of their divisions as well as the organization as a whole, and not just decisions which benefit their own divisions. This brings about goal congruence.

iv) **Record transfers or movements between divisions**. The transfer pricing system enables movements of goods and assets between various divisions within the organization.

v) **Reduce the overall tax burden in intercompany transfers**. In multinational enterprises, transfer pricing enables the overall tax liability for the group to be minimized. This is done through choosing appropriate countries in which manufacturing should occur as well as those countries in which selling should occur. Profits are, therefore, moved around the world with a view to minimizing the global tax liability.

vi) **Encourage a healthy interdivisional competitive spirit**.

(b) (i) 80% Capacity At TP of K400 Per Kg

	Div A				Div B			AB Group
	K'000	K'000			K'000	K'000		K'000
External sales 2,000 xK360		720		240,000xK4		960		1,680
Internal sales 1,200 x K400		480						
		1,200						
Variable Costs								
• transfer costs					480			
• own Costs(3,200xK140)	448			1,200xK120	144			(592)
• Fixed costs	400				160			(560)
Total Costs		(848)				(784)		(1,152)
Quarterly Profit/Loss		**352**				**176**		**528**

(b) (i)

80% Capacity At TP of K360 Per Kg

	Div A				Div B			AB Group
	K'000	K'000			K'000	K'000		K'000

External sales 2,000 xK360		720		240,000xK4		960		1,680
Internal sales 1,200 x K360		432						
		1,152						
Variable Costs								
• transfer costs					432			
• own Costs(3,200xK140)	448			1,200xK120	144			(592)
• Fixed costs	400				160			(560)
Total Costs		(848)				(736)		(1,152)
Quarterly Profit/Loss		**304**				**224**		**528**

(b) (ii)

100% Capacity At TP of K400 Per Kg

	Div A				Div B			AB Group
	K'000	K'000			K'000	K'000		K'000
External sales 2,000 xK360		720		400,000xK3.50		1,400		2,120
Internal sales 2,000 x K400		800						
		1,520						
Variable Costs								
• transfer costs					800			
• own Costs(4,000xK140)	560			2,000xK120	240			(800)
• Fixed costs	400				160			(560)
Total Costs		(960)				(1,200)		(1,360)
Quarterly Profit/Loss		**560**				**200**		**760**

(ii)100% Capacity At TP of K360 Per Kg

	Div A				Div B			AB Group
	K'000	K'000			K'000	K'000		K'000
External sales 2,000 xK360		720		400,000xK3.50		1,400		2,120
Internal sales 2,000 x K360		720						
		1,440						
Variable Costs								
• transfer costs					720			
• own	560			2,000xK120	240			(800)

Costs(4,000xK140)								
• Fixed costs	400				160			(560)
Total Costs		(960)				(1,120)		(1,360)
Quarterly Profit/Loss		**480**				**280**		**760**

(2.5 marks)

(c) At both capacity level cases and at both the K400 and K360 transfer prices(TP), Division A makes more profits than Division B. In fact, at 100% capacity and at the K400 TP, Division B only generates K200, 000 compared to K560, 000 made by Division A.

The change in TP's from K400 to K360 does not affect the profits made by the AB group. The group makes the same profits of K528, 000 at 80% capacity even when the price is reduced to K360 per kg. Similarly, at 100% capacity changing the price from K400 to K360 still generates profits of K760, 000 at both prices. However, at 100% capacity the group generates extra profits of K232, 000, i.e. K760, 000 less K528,000.

It is observed that Division B's profit is lower at 100% capacity at both TP's of K400 and K360. Since the 80% capacity gives Division B manager more profits, he/she would like to operate at this level whereas the AB group would like to operate at the 100% capacity level. This will not be good for the company as a whole. There is, therefore, lack of goal congruence.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

CA ADVISORY PROFESSIONAL IN ACCOUNTANCY

CA 3.6: ADVANCED FINANCIAL MANAGEMENT

FRIDAY 17 JUNE 2022

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.

<u>QUESTION ONE – (COMPULSORY)</u>

MAC Plc manufactures materials for road constructions. Recently, the company came up with a special material called NANA that all the road contractors need to construct roads in an efficient and effective manner. MAC Plc is the only company able to manufacture such a material and therefore, there is demand for NANA. Due to the scarcity of NANA, six companies have contracted MAC Plc to manufacture a tonne of NANA solely for each of them for the next three (3) years commencing on 1 June, 2022. A special equipment will be required for the production of NANA costing K9.5 million, and payable immediately. The expected net realisable value of the equipment after three (3) years is K2 million. The contract price is payable in two (2) equal instalments with first payable immediately, and the last one on 31 May 2024.

The following financial information relates to the resources required to produce NANA:

Description	**Quantity per tonne**	**Labour Hours per tonne**	**Current cost per tonne/hour(ZMW)**
Materials- AY Grade	1,500	-	1,000
- DB Grade	1,000	-	1,200
Labour- Skilled	-	3,100	355
- Unskilled	-	5,200	155
Allocated overheads per skilled labour hour			150

MAC Plc uses AY and DB grade to manufacture NANA and these materials must be purchased and paid for annually in advance. Replacement costs of AY and DB are expected to increase at an annual compound rate of 15 % and 14% respectively.

The skilled labour required for production of NANA is scarce and MAC Plc expects to undergo a shortage of skilled labour during the year to 31 May 2023. Therefore, acceptance of the contract would result in a net loss of contribution of K75 per hour from the other works as the "other work" does not require unskilled labour.

For the year to 31 May 2023 only, the company expects to have 15,000 surplus unskilled labour hours. The condition of service requires that MAC Plc pays employees half of their normal wages during the layoff period for which there is no work. All wage rates are expected to increase at an annual compound rate of 14%.

The allocated overhead costs compromise fixed overheads of K120 (including depreciation on equipment of K50) and variable overheads of K30. Both fixed and variable overheads are expected to increase by 11% annually. Working capital of K4 million will be required immediately and is expected to inflate in line with AY grade materials.

MAC Plc has a gearing level of 40% debt. The debt comprise of a 10% debenture with market price of K1,025 and repayable in four (4) years' time at a premium of 9%. The debenture was issued at a par value of K1,000. The return on the market is currently estimated as 14.6% and the risk-free rate as 7%. MAC Plc has an asset beta of 0.92. Corporate tax is payable at the rate of 30% per year.

Ignore the effect of taxation on all costs.

Required:

(a) As a Financial Consultant, write a report to the board of directors of MAC Plc advising them on the minimum price to undertake the contracts to manufacture NANA. All computations should form part of the appendix to the report. State clearly any assumptions. (32 marks)

(b) Discuss the reasons firms primarily use derivatives for hedging rather than speculation and the risks that arise from the use of derivatives. (8 marks)

[Total: 40 Marks]

SECTION B

There are FOUR (4) questions in this section.

Attempt any THREE (3) questions in this section.

QUESTION TWO

AMAKA Ltd is a private company that runs an online business platform which earns revenue by selling its own products, or by collecting a percentage of revenues from third-party products sold on the platform. The company also earns revenue from online advertising. About 70% of the revenue is earned from the domestic market and 30% from a regional foreign market.

The recent global pandemic, COVID-19 has caused global economic recession which has affected companies. However, AMAKA Ltd has been largely unaffected by the economic recession and has increased its sales volume and profits each year for the past three (3) years. The directors think this is because most businesses are doing their business online due to the pandemic restrictions. Inflation in the country is near zero at the present time and interest rates are expected to fall. Financial analysts project the future growth to be modest as the directors and shareholders do not wish to adopt strategies that they think might involve substantial increase in risks, such as expanding the business to other parts of the world. However, a group of the smaller shareholders differ with this strategy and would prefer higher growth even if it involves greater risk.

AMAKA Ltd sourced its finances from both equity (83%) and debt (17%) financial instruments. The debt is a combination of bonds secured on non-current assets and unsecured overdraft. The interest rate on the secured bonds is fixed at 15% and redeemable in six (6) years' time. The overdraft rate is currently 20% which is lower compared to the recent historic rate of around 28%. The company intends to secure additional bonds which will effectively increase the debt to 30%.The current primary objective of the company is the increase in dividends per year.

Required:

(a) Discuss the refinancing strategies of AMAKA Ltd in the context of the economic environment given in the scenario and how these might impact on the determination of corporate objectives. (14 marks)

(b) Evaluate the appropriateness of AMAKA Ltd's current primary objective. (6 marks)

[Total: 20 Marks]

QUESTION THREE

The Zambian Securities market has experienced very little transactions over the past twelve (12) months. In order to promote trade and activity on the Securities market, tax incentives, waiver of costs for quoting and listing, and compliance requirements have been reduced.

Dudu Plc is a company listed on the Securities Exchange, with 80 million K1 shares in issue and a market price of K12 per share. The Directors of Dudu Plc have been observing the performance of Mac Ltd, a quoted company with 5 million, K10 shares in issue with a market price of K90 per share. Mac Ltd has increased its market capitalization significantly over the past three (3) years and this attracted several investors including Dudu Plc. At the recent board meeting of Dudu Plc, the Directors agreed to make an offer for Mac Ltd of eight (8) Dudu Plc shares for every one (1) Mac Ltd share. Further, the Directors have ascertained that K120 million in synergistic benefits could be achieved from the merger. These benefits were calculated using the net present value technique, with risk incorporated in the model.

Required:

(a) Calculate the gain in wealth to the shareholders of Dudu Plc and Mac Ltd if the bid is accepted and explain your findings. (7 marks)

(b) Calculate the bid offer terms if all the gains are to accrue to the shareholders of Mac Ltd and the share price implied. (7 marks)

(c) Explain three (3) differences between a listed company and a quoted company. (6 marks)

[Total: 20 Marks]

QUESTION FOUR

ENG Plc is a manufacturing company which was established in the 1990s.The sole objective of the company is to increase earnings each year to enable its dividend payment to increase by 5% annually. The board of directors has convened a special board meeting to review two investment opportunities and decide on an appropriate minimum expected return to use in the evaluation of these investments. The board is also reviewing whether to run its treasury function as either a profit centre or cost centre. The Chief Financial Officer (CFO) has recommended that each of the two (2) investments being considered in a non-listed company will be financed by equity 65% and debt 35%. The CFO also strongly believes that the treasury function should be run as a profit centre. The following information relates to the two proposed investments:

Description	Equity Beta	Debt Beta	Debt Ratio
Investment A	1.27	0.29	1:4
Investment B	0.97	0	1:7

The market expected return rate of return is 20% and the risk-free rate is 8%. The corporate tax is 30% per year. Assume the debt that ENG Plc raises to finance the investments is risk-free.

Required:

(a) Calculate an appropriate minimum expected rate of return to be used in the evaluation of each of the proposed investments. (10 marks)

(b) Discuss the factors that should be considered by ENG Plc if the profit centre approach would be used to run the treasury function. (10 marks)

[Total: 20 Marks]

QUESTION FIVE

Kasaka Zambia Ltd is a medium sized business that is currently borrowing K1 million from the Neo Bank on a floating or variable interest rate basis at the BOZ Monetary Policy Rate (MPR) plus a 3% margin, which is market determined on a monthly basis. This makes their monthly interest payment volatile depending on the MPR. To manage this volatility, the company would like to arrange a fixed interest payment at the end of the month.

Rupik Bank Ltd has entered into an Interest rate Swap agreement with Kasaka Zambia Ltd, where the Bank pays the variable rate to Kasaka Zambia Ltd, and Kasaka Zambia Ltd pays Rupik Bank Ltd a fixed rate of 21% per annum paid monthly.

The table below shows the MPR for the last six (6) months:

Month (A)	MPR (%) (B)	Variable Interest Amount (K) (C)	Fixed Rate (%) (D)	Fixed Interest (K) (Amount) (E)	Net Settlement Amount (K) (F)
1	16		21		
2	18		21		
3	20		21		
4	19		21		
5	18		21		
6	17		21		

Required:

(a) Calculate the variable interest, fixed interest and net settlement amounts under columns (C), (E) and (F) in the table above. (10 marks)

(b) Explain the effectiveness of the company's strategy as an interest rate hedge, in relation to the prevailing Monetary Policy Rate, and interest rates. (6 marks)

(c) Explain four (4) differences between a foreign currency swap and an interest rate swap. (4 marks)

[Total: 20 Marks]

THE END OF PAPER

Formulae

Modigliani and Miller Proposition 2 (with tax)

$$k_e = k_e^i + (1-T)(k_e^i - k_d)\frac{V_d}{V_e}$$

Two asset portfolio

$$s_p = \sqrt{w_a^2 s_a^2 + w_b^2 s_b^2 + 2 w_a w_b r_{ab} s_a s_b}$$

The Capital Asset Pricing Model

$$E(r_i) = R_f + \beta_i (E(r_m) - R_f)$$

The asset beta formula

$$\beta_a = \left[\frac{V_e}{(V_e + V_d(1-T))}\beta_e\right] + \left[\frac{V_d(1-T)}{(V_e + V_d(1-T))}\beta_d\right]$$

The Growth Model

$$P_o = \frac{D_o(1+g)}{(r_e - g)}$$

Gordon's growth approximation

$$g = br_e$$

The weighted average cost of capital

$$WACC = \left[\frac{V_e}{V_e + V_d}\right]k_e + \left[\frac{V_d}{V_e + V_d}\right]k_d(1-T)$$

The Fisher formula

$$(1+i) = (1+r)(1+h)$$

Purchasing power parity and interest rate parity

$$S_1 = S_0 x \frac{(1+h_c)}{(1+h_b)} \qquad F_0 = S_0 x \frac{(1+i_c)}{(1+i_b)}$$

Modified Internal Rate of Return

$$MIRR = \left[\frac{PV_R}{PV_I}\right]^{\frac{1}{n}} \left(1 + r_e\right) - 1$$

The Black-Scholes option pricing model

$$c = P_a N(d_1) - P_e N(d_2) e^{-rt}$$

Where:

$$d_1 = \frac{\ln(P_a / P_e) + (r + 0.5s^2)t}{s\sqrt{t}}$$

$$d_2 = d_1 - s\sqrt{t}$$

The Put Call Parity relationship

$$p = c - P_a + P_e e^{-rt}$$

Present Value Table

Present value of 1 i.e. $(1 + r)^{-n}$

Where r = discount rate
n = number of periods until payment

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	0·980	0·961	0·943	0·925	0·907	0·890	0·873	0·857	0·842	0·826	2
3	0·971	0·942	0·915	0·889	0·864	0·840	0·816	0·794	0·772	0·751	3
4	0·961	0·924	0·888	0·855	0·823	0·792	0·763	0·735	0·708	0·683	4
5	0·951	0·906	0·863	0·822	0·784	0·747	0·713	0·681	0·650	0·621	5
6	0·942	0·888	0·837	0·790	0·746	0·705	0·666	0·630	0·596	0·564	6
7	0·933	0·871	0·813	0·760	0·711	0·665	0·623	0·583	0·547	0·513	7
8	0·923	0·853	0·789	0·731	0·677	0·627	0·582	0·540	0·502	0·467	8
9	0·941	0·837	0·766	0·703	0·645	0·592	0·544	0·500	0·460	0·424	9
10	0·905	0·820	0·744	0·676	0·614	0·558	0·508	0·463	0·422	0·386	10
11	0·896	0·804	0·722	0·650	0·585	0·527	0·475	0·429	0·388	0·305	11
12	0·887	0·788	0·701	0·625	0·557	0·497	0·444	0·397	0·356	0·319	12
13	0·879	0·773	0·681	0·601	0·530	0·469	0·415	0·368	0·326	0·290	13
14	0·870	0·758	0·661	0·577	0·505	0·442	0·388	0·340	0·299	0·263	14
15	0·861	0·743	0·642	0·555	0·481	0·417	0·362	0·315	0·275	0·239	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	0·812	0·797	0·783	0·769	0·756	0·743	0·731	0·718	0·706	0·694	2
3	0·731	0·712	0·693	0·675	0·658	0·641	0·624	0·609	0·593	0·579	3
4	0·659	0·636	0·613	0·592	0·572	0·552	0·534	0·516	0·499	0·482	4
5	0·593	0·567	0·543	0·519	0·497	0·476	0·456	0·437	0·419	0·402	5
6	0·535	0·507	0·480	0·456	0·432	0·410	0·390	0·370	0·352	0·335	6
7	0·482	0·452	0·425	0·400	0·376	0·354	0·333	0·314	0·296	0·279	7
8	0·434	0·404	0·376	0·351	0·327	0·305	0·285	0·266	0·249	0·233	8
9	0·391	0·361	0·333	0·308	0·284	0·263	0·243	0·225	0·209	0·194	9
10	0·352	0·322	0·295	0·270	0·247	0·227	0·208	0·191	0·176	0·162	10
11	0·317	0·287	0·261	0·237	0·215	0·195	0·178	0·162	0·148	0·135	11
12	0·286	0·257	0·231	0·208	0·187	0·168	0·152	0·137	0·124	0·112	12
13	0·258	0·229	0·204	0·182	0·163	0·145	0·130	0·116	0·104	0·093	13
14	0·232	0·205	0·181	0·160	0·141	0·125	0·111	0·099	0·088	0·078	14
15	0·209	0·183	0·160	0·140	0·123	0·108	0·095	0·084	0·074	0·065	15

Annuity Table

Present value of an annuity of 1 i.e. $\frac{1 - (1 + r)^{-n}}{r}$

Where r = discount rate
n = number of periods

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	1·970	1·942	1·913	1·886	1·859	1·833	1·808	1·783	1·759	1·736	2
3	2·941	2·884	2·829	2·775	2·723	2·673	2·624	2·577	2·531	2·487	3
4	3·902	3·808	3·717	3·630	3·546	3·465	3·387	3·312	3·240	3·170	4
5	4·853	4·713	4·580	4·452	4·329	4·212	4·100	3·993	3·890	3·791	5
6	5·795	5·601	5·417	5·242	5·076	4·917	4·767	4·623	4·486	4·355	6
7	6·728	6·472	6·230	6·002	5·786	5·582	5·389	5·206	5·033	4·868	7
8	7·652	7·325	7·020	6·733	6·463	6·210	5·971	5·747	5·535	5·335	8
9	8·566	8·162	7·786	7·435	7·108	6·802	6·515	6·247	5·995	5·759	9
10	9·471	8·983	8·530	8·111	7·722	7·360	7·024	6·710	6·418	6·145	10
11	10·37	9·787	9·253	8·760	8·306	7·887	7·499	7·139	6·805	6·495	11
12	11·26	10·58	9·954	9·385	8·863	8·384	7·943	7·536	7·161	6·814	12
13	12·13	11·35	10·63	9·986	9·394	8·853	8·358	7·904	7·487	7·103	13
14	13·00	12·11	11·30	10·56	9·899	9·295	8·745	8·244	7·786	7·367	14
15	13·87	12·85	11·94	11·12	10·38	9·712	9·108	8·559	8·061	7·606	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	1·713	1·690	1·668	1·647	1·626	1·605	1·585	1·566	1·547	1·528	2
3	2·444	2·402	2·361	2·322	2·283	2·246	2·210	2·174	2·140	2·106	3
4	3·102	3·037	2·974	2·914	2·855	2·798	2·743	2·690	2·639	2·589	4
5	3·696	3·605	3·517	3·433	3·352	3·274	3·199	3·127	3·058	2·991	5
6	4·231	4·111	3·998	3·889	3·784	3·685	3·589	3·498	3·410	3·326	6
7	4·712	4·564	4·423	4·288	4·160	4·039	3·922	3·812	3·706	3·605	7
8	5·146	4·968	4·799	4·639	4·487	4·344	4·207	4·078	3·954	3·837	8
9	5·537	5·328	5·132	4·946	4·772	4·607	4·451	4·303	4·163	4·031	9
10	5·889	5·650	5·426	5·216	5·019	4·833	4·659	4·494	4·339	4·192	10
11	6·207	5·938	5·687	5·453	5·234	5·029	4·836	4·656	4·486	4·327	11
12	6·492	6·194	5·918	5·660	5·421	5·197	4·988	4·793	4·611	4·439	12
13	6·750	6·424	6·122	5·842	5·583	5·342	5·118	4·910	4·715	4·533	13
14	6·982	6·628	6·302	6·002	5·724	5·468	5·229	5·008	4·802	4·611	14
15	7·191	6·811	6·462	6·142	5·847	5·575	5·324	5·092	4·876	4·675	15

Standard normal distribution table

	0·00	0·01	0·02	0·03	0·04	0·05	0·06	0·07	0·08	0·09
0·0	0·0000	0·0040	0·0080	0·0120	0·0160	0·0199	0·0239	0·0279	0·0319	0·0359
0·1	0·0398	0·0438	0·0478	0·0517	0·0557	0·0596	0·0636	0·0675	0·0714	0·0753
0·2	0·0793	0·0832	0·0871	0·0910	0·0948	0·0987	0·1026	0·1064	0·1103	0·1141
0·3	0·1179	0·1217	0·1255	0·1293	0·1331	0·1368	0·1406	0·1443	0·1480	0·1517
0·4	0·1554	0·1591	0·1628	0·1664	0·1700	0·1736	0·1772	0·1808	0·1844	0·1879
0·5	0·1915	0·1950	0·1985	0·2019	0·2054	0·2088	0·2123	0·2157	0·2190	0·2224
0·6	0·2257	0·2291	0·2324	0·2357	0·2389	0·2422	0·2454	0·2486	0·2517	0·2549
0·7	0·2580	0·2611	0·2642	0·2673	0·2704	0·2734	0·2764	0·2794	0·2823	0·2852
0·8	0·2881	0·2910	0·2939	0·2967	0·2995	0·3023	0·3051	0·3078	0·3106	0·3133
0·9	0·3159	0·3186	0·3212	0·3238	0·3264	0·3289	0·3315	0·3340	0·3365	0·3389
1·0	0·3413	0·3438	0·3461	0·3485	0·3508	0·3531	0·3554	0·3577	0·3599	0·3621
1·1	0·3643	0·3665	0·3686	0·3708	0·3729	0·3749	0·3770	0·3790	0·3810	0·3830
1·2	0·3849	0·3869	0·3888	0·3907	0·3925	0·3944	0·3962	0·3980	0·3997	0·4015
1·3	0·4032	0·4049	0·4066	0·4082	0·4099	0·4115	0·4131	0·4147	0·4162	0·4177
1·4	0·4192	0·4207	0·4222	0·4236	0·4251	0·4265	0·4279	0·4292	0·4306	0·4319
1·5	0·4332	0·4345	0·4357	0·4370	0·4382	0·4394	0·4406	0·4418	0·4429	0·4441
1·6	0·4452	0·4463	0·4474	0·4484	0·4495	0·4505	0·4515	0·4525	0·4535	0·4545
1·7	0·4554	0·4564	0·4573	0·4582	0·4591	0·4599	0·4608	0·4616	0·4625	0·4633
1·8	0·4641	0·4649	0·4656	0·4664	0·4671	0·4678	0·4686	0·4693	0·4699	0·4706
1·9	0·4713	0·4719	0·4726	0·4732	0·4738	0·4744	0·4750	0·4756	0·4761	0·4767
2·0	0·4772	0·4778	0·4783	0·4788	0·4793	0·4798	0·4803	0·4808	0·4812	0·4817
2·1	0·4821	0·4826	0·4830	0·4834	0·4838	0·4842	0·4846	0·4850	0·4854	0·4857
2·2	0·4861	0·4864	0·4868	0·4871	0·4875	0·4878	0·4881	0·4884	0·4887	0·4890
2·3	0·4893	0·4896	0·4898	0·4901	0·4904	0·4906	0·4909	0·4911	0·4913	0·4916
2·4	0·4918	0·4920	0·4922	0·4925	0·4927	0·4929	0·4931	0·4932	0·4934	0·4936
2·5	0·4938	0·4940	0·4941	0·4943	0·4945	0·4946	0·4948	0·4949	0·4951	0·4952
2·6	0·4953	0·4955	0·4956	0·4957	0·4959	0·4960	0·4961	0·4962	0·4963	0·4964
2·7	0·4965	0·4966	0·4967	0·4968	0·4969	0·4970	0·4971	0·4972	0·4973	0·4974
2·8	0·4974	0·4975	0·4976	0·4977	0·4977	0·4978	0·4979	0·4979	0·4980	0·4981
2·9	0·4981	0·4982	0·4982	0·4983	0·4984	0·4984	0·4985	0·4985	0·4986	0·4986
3·0	0·4987	0·4987	0·4987	0·4988	0·4988	0·4989	0·4989	0·4989	0·4990	0·4990

This table can be used to calculate $N(d)$, the cumulative normal distribution functions needed for the Black-Scholes model of option pricing. If $d_i > 0$, add 0·5 to the relevant number above. If $d_i < 0$, subtract the relevant number above from 0·5.

CA3.6 SUGGESTED SOLUTIONS

SOLUTION ONE

(a)

To: The Board of Directors of MAC Plc

From: Financial Consultant

<u>Subject: Minimum Contract Price</u>

Refer to the subject above.

Following our evaluation of the financial information provided regarding the contracts for NANA by six companies, we propose a minimum contract price of K101.99 million as per attached appendix.

Should you have any clarifications, please do not hesitate to contact the undersigned.

Yours Sincerely,

Financial Consultant

APPENDIX

MINIMUM CONTRACT PRICE FOR NANA

Date	01/06/2022	01/06/2023	01/06/2024	01/06/2025
Year	0	1	2	3
	K'm	K'm	K'm	K'm
Equipment	- 9.50	-	-	2.00
Material	- 16.20	- 18.56	- 21.26	-
Labour	-	- 13.31	- 16.68	- 19.01
Variable Overhead Costs	-	- 0.62	- 0.69	- 0.76
Working Capital	- 4.00	- 0.60	- 0.69	5.29
Net Cash Flows	- 29.70	- 33.08	- 39.32	- 12.48
Disc@14%	0.877	0.769	0.675	0.592
Present Value	- 26.05	- 25.44	- 26.54	- 7.39
Total PV of Costs	**- 85.42**			

x/2 + 0.675x/2 = 0.8375x

0.8375x=85.42

x=101.99

The minimum price is therefore K101.99 million

WORKINGS

1. MATERIAL

Year	2022	2023	2024	2025
Material- AY Grade	1,500	1500	1500	-
No. of tonnes	6	6	6	-
Cost per tonne	1,000	1150	1322.5	-
Cost	**9,000,000**	**10,350,000**	**11,902,500**	-

Year	2022	2023	2024	2025
Material- DB Grade	1,000	1000	1000	-
No. of tonnes	6	6	6	-
Cost per tonne	1,200	1368	1559.52	-
Cost	**7,200,000**	**8,208,000**	**9,357,120**	-
Total Cost	**16,200,000**	**18,558,000**	**21,259,620**	-

2. LABOUR

Year	2022	2023	2024	2025
Skilled hours	-	3,100	3,100	3,100
No. of tonnes	-	6	6	6
Cost per hour	-	404.70	461.36	525.95
Cost	**-**	**7,527,420**	**8,581,259**	**9,782,.635**

Year	2022	2023	2024	2025
Unskilled hours	-	5,200	5,200	5,200
No. of tonnes	-	6	6	6
Total hours	-	31,200	31,200	31,200
Less: Surplus	-	15,000	-	-

	-	16,200	31,200	31,200
Cost per hour	-	176.70	201.44	229.64
Sub-Total	-	2,862,540	6,284,928	7,164,768
Surplus labour (half rate)	-	1,325,250	-	-
Cost	**-**	**4,187,790**	**6,284,866**	**7,164,747**
Opportunity cost				
Total hours	-	18,600	18,600	18,600
cost per hour	-	85.50	97.47	111.12
Cost	**-**	**1,590,300**	**1,812,942**	**2,066,754**
Total Labour Cost	**-**	**13,305,510**	**16,632,166**	**19,017,170**

3. VARIABLE OVERHEAD COSTS

Skilled labour hours	-	18,600	18,600	18,600
Cost per hour	-	33.30	36.96	41.03
Total Cost	**-**	**619,380**	**687,456**	**763,158**

4. WORKING CAPITAL

Cost	4,000,000	4,600,000	5,290,000	6,083,500
Incremental	- 4,000,000	- 600,000	- 690,000	- 793,500

5. Cost of Capital

Cost of Equity

Ba= Be x Ve/Ve + Vd (1-t)

0.92=Be x 0.6/0.6+0.4(0.7)

Be= 1.35

Ke = 7% + 1.35(14.6%- 7%)

Ke = 17.26%

Cost of Debt

	Cashflow	dis@10%	PV	disc@5%	PV

Yr 0 - Market price	- 1,025	1	- (1,025.00)	1	- 1,025
YR 1 to 4- Interest (1-t)	70	3.17	221.9	3.546	248.22
YR 4- redemption @9%	1,090	0.683	744.47	0.823	897.07
NPV			**(58.63)**		**120.29**

IRR = 5%+120.29/120.29+58.63 (10%-5%)
IRR= 8.36%

WACC= (17.26% X 0.6) + (8.36%X0.4)
WACC= 13.7% round off to 14%

(b) **Hedging Vs Speculation**

Derivative instruments are used either for speculation or for hedging. Derivatives are used for speculation when they are used on their own and not in conjunction with the underlying instrument. For example a long position in a futures contract, is a bet that the price of the underlying will move in a certain direction by a certain date. Similarly the writer of a call option bets that the price will not move above a certain range over a period of time. In both cases the derivatives position can result in losses if the price does not move in the anticipated direction. When derivatives are used for hedging they are always used in combination with the underlying. The principle of hedging is that any profits or losses in the cash position will be offset by losses or profits in the derivatives position.

The empirical evidence on the use of derivatives by corporations shows that firms primarily use derivatives for hedging rather than speculation.

One unresolved issue is why companies need to hedge their risks since investors can themselves diversify away all risks by including the shares of the company in a portfolio. The main arguments for using derivatives for hedging are as follows:

i) Hedging reduces the risk imposed on the firm's managers, employees, suppliers and customers.
ii) Hedging can control the conflict of interest between bondholders and shareholders, thus reducing the agency costs of debt.
iii) The use of derivatives increases the value of a firm. Modigliani and Miller showed that firm value and financial policy decisions are unrelated in the absence of market imperfections. Models have been developed that show that hedging can increase the value of a firm if capital market imperfections exist. Thus the following additional justifications have been provided:
iv) Hedging lowers the probability of the firm encountering financial distress which in turn lowers the expected costs of financial distress and the cost of capital.
v) Hedging encourages investment by the firm. According to agency theory between shareholders and bondholders, the issuance of bonds which have higher priority than equity creates incentives for the firm's equity holders to under-invest. Hedging reduces the incentive to under-invest since hedging reduces uncertainty and the risk of loss. Because firms with more valuable growth opportunities and higher leverage

are more likely to be affected by the underinvestment problem, these firms are also more likely to hedge.

Risks from the use of derivatives

1) Valuation (model) risk

The most common risk for OTC derivative users is the risk of mispricing the derivatives position. Since OTC derivatives do not trade in liquid markets where they can always be bought or sold at the market price, valuation models need to be used. These models however are based on assumptions which may not be valid.

For example the Black-Scholes option valuation model assumes that markets have no frictions that the stock price is log normally distributed, that interest rates are fixed, the volatility of return is constant and that trading is possible all the time.

However, it is well known that these assumptions are at variance with reality. Interest rates are not constant and neither is the volatility. Demand and supply may have an impact on prices and there are certainly frictions in the market.

There are many examples of firms losing money due to valuation errors. For example, in January 2004, the National Australian Bank reported currency option losses in excess of $360 million Australian dollars (approximately $280 million in US dollars) that were attributed to rogue traders and risk management failures and involved incorrect valuations and misreporting. It is much harder to value more complicated derivatives.

2) Liquidity risk

Exchange-traded derivative products are highly liquid and a transaction can take place at the market price. The market value of a derivatives contract is thus realized when it is sold. In the case of OTC derivatives and especially where complex contracts are involved it is not always possible for these contracts to be sold, and their model-calculated value to be realised. The reasons for this are:

i) Uncertainty about the valuation model and the risks of the position
ii) In the case of complex contracts, there may be only a small number of counterparties who both want that particular set of risk characteristics and are confident that they understand what they are receiving

3) Reporting risk

OTC complex derivative positions especially with long maturities can be manipulated so that the true value and the true risks of the positions are not revealed. For example, Enron had a huge portfolio of derivatives, including many contracts with extremely long maturities, whose risks were not revealed before it collapsed.

SOLUTION TWO

(a)

1) Capital structure

The current situation is that AMAKA Ltd has a low gearing level of 17%. The debt is made up of 15% fixed-rate secured bonds and unsecured overdraft with a rate of 20%. Finance theory suggests that at least some of the capital structure should include debt. Debt is a cheaper form of finance than equity, given the tax shield provided by the interest payments and the lower returns that debt providers tend to expect.

2) Use of fixed-rate debt in current economic climate

In the current economic climate, inflation is near zero and interest rates are expected to fall and therefore, the use of fixed-rate debt as a form of financing is questionable for some or all of the following reasons:

(i) AMAKA Ltd is expecting no better than modest growth therefore fixed amounts of interest will have to be paid out of potentially falling profits. Returns to shareholders will decrease as a result. This will be in direct contravention of the corporate objective of increasing dividends.

(ii) When inflation is near zero, the real value of debt does not decrease, hence the benefits of debt finance are diminished.

(iii) If interest rates fall below the fixed rate attached to the bonds, AMAKA Ltd will be paying more in interest than is necessary (although it could be argued that this is one of the risks of taking on fixed-rate debt). This will effectively reduce the funds available for distribution as dividends, which again fails to meet the objective of increasing payments to shareholders.

3) Equity as a source of finance

With the corporate objective of increasing dividends each year being threatened by the pending change in the current debt structure, and AMAKA Ltd may consider the wisdom of raising additional equity. As profits are at best going to remain static (or actually fall), equity may be preferable given that there is no legal obligation to pay dividends. However one of the problems AMAKA Ltd has is that it is not listed on a stock exchange. Private entities tend to have more problems trying to raise equity – for example, how should shares be valued, should AMAKA Ltd apply for a public listing and by what means should equity be raised?

4) Foreign currency obligations

Other issues that the AMAKA Ltd might consider are how any foreign currency revenues might be exposed to exchange rate risk and how to hedge them. The entity may be affected by fluctuations in exchange rates, particularly if a reasonably long credit period is given. If AMAKA Ltd is losing money through exchange rate movements, it may wish to consider hedging instruments such as forward contracts or options.

5) Dividend policy and capital structure decisions

Given the economic conditions, current finance structure and the objective of increasing dividends, AMAKA Ltd will have to consider which combination of dividend policy and capital structure will be most beneficial to the shareholders (that is, will maximise the present value of their cash flows). Can the current fixed-rate bonds be repaid early and replaced with either lower fixed-rate bonds or variable rate loans? One issue that will have to be considered here is the possibility of early repayment penalties that must be set against the potential benefits of paying lower rates of interest.

The issue of return on investment will also have to be considered. If the entity negotiates lower interest rates, this may reduce its perceived risk, leading to a lower cost of capital and thus lower expected returns to shareholders. A compromise will have to be reached between the desire for high rates of return and the potential for lower interest payments.

(b)
Maximisation of shareholder wealth is the theoretically ideal corporate objective. However, most organisations now recognise that having this as their sole objective is unrealistic. Whilst there is still the philosophy that shareholders' wealth should be improved as much as possible, this is usually within the constraints of other objectives, such as legal obligations relating to the environment, ethical considerations and health and safety issues.

The objective of increasing dividends each year does not necessarily support the maximisation of shareholder wealth. If there are profitable investments available (e.g. expansion to other parts of the world) that would increase future wealth, then the entity should ideally be using its funds to finance such investments. By increasing dividends each year, the entity is restricting the funds available for profitable investments and thus its ability to improve shareholder wealth. Most organisations have a target pay-out ratio (dividends as a percentage of profit available to shareholders) which means that dividends will move in relation to fluctuations in profit. This makes more sense than a situation where dividends are increasing whilst profits are actually falling.

SOLUTION THREE

Part (a)

Gains to shareholders of Dudu Plcand Mac Ltd;

Current market value for Dudu (80m x K12) = K960 million

Current market value for Mac (5m x K90) = K450 million

Combined total number of shares; 80 million + (5 million x 8) = 120 million

Total combined value is K960 million + K450 million +K120 million = K1,530 million

Gains to shareholders of Dudu Plc; 80/120 x K1,530 = K1,020 – K960 = K60 million

Gains to shareholders of Mac Ltd; 40/120 x K1,530 = K510 –K450 = K60 million

The merger terms offered seem to have taken account that the share price of Dudu Plc is lower than Mac Ltd's share price. This means a share in Mac Ltd is worth more than a share in Dudu Olc. Therefore, the implied value placed on Mac by the share offer terms of 8 Dudu Plc shares for 1 Mac Ltd share is 8 x K12 = K96 per Mac Ltd share which in the combined value would be (K96 x 5 million)/40 million share = K12 per share, which is equal to the share price of Dudu Plc, therefore, the synergistic benefits are being shared equally.

Part (b)

If all the gains were to accrue to the shareholder of Mac Ltd, then the value of Dudu Plc implied in the combined value should be K960 million. This further implies that all the synergistic benefits will accrue to Mac Ltd with a value of K 570 million (K450 + K120), therefore;

(80/(80+x)) * K1,530 = K960

80 = 50.196 + 0.62745x

X = 47.5 million which represents the number of shares of Mac Ltd in the combined value. Therefore, Mac Ltd share would be 47.5/5 = 9.5 Dudu Plc shares for every 1 Mac Ltd share

The implied value on Mac shares would be 9.5 x K12 = K114 per Mack Ltd share representing a premium of about 26.6%.

Part (c)

If a company has 50 shareholders or more, it is deemed a public company and required to register its shares with the Securities Exchange Commission (SEC) – this is mandatory. Companies incorporated as public companies, but having less than 50 shareholders may seek registration with the SEC if they wish. The SEC may if necessary, deem a company publicly tradeable, and request it to be registered. As per the Act, all registered shares must trade on a recognised securities exchange. Therefore, registration directs companies to be traded on the Lusaka Securities Exchange (LuSE). And such companies trade on the unlisted tier of the LuSE referred to as the Quoted Tier or the second tier of the LuSE market.

The LuSE is a self-regulatory organization (SRO) and administers its own set of regulations termed the Listings Rules. Companies that satisfy the Listing Rules and meet the set criteria will be admitted to the Official List of the LuSE provided they have secured a registration with the SEC in the first instance. The Official List constitutes the top tier of the LuSE market and therefore represents all companies that are formally listed on the LuSE. Consequently, the LuSE operates a two-tier market structure (i.e. listed and quoted shares) arising from the fact that the securities market is designed as a central market by the Securities Act.

Therefore, quoting a company on the securities market signifies a strong intention to fully list that company on that securities market. However, there have been circumstances where a company directly lists without quoting.

SOLUTION FOUR

(a)

<u>INVESTMENT A</u>

Ungear Beta

$$\beta_a = \left[\frac{V_e}{(V_e + V_d(1-T))}\beta_e\right] + \left[\frac{V_d(1-T)}{(V_e + V_d(1-T))}\beta_d\right]$$

B_a = 0.27 x 0.8/0.8+0.2 (1-0.3) + 0.29 x 0.2(1-0.3)/0.8+0.2(1-0.3)
B_a = 1.08 +0.04 = 1.12

Re-gear Beta

1.12 = B_e x 0.65/0.65 + 0.35(1-0.3)
B_e = 1.54

Minimum expected return = 8% + 1.54 (20%-8%) = 26.48%

<u>INVESTMENT B</u>

Ungear Beta

$$\beta_a = \left[\frac{V_e}{(V_e + V_d(1-T))}\beta_e\right] + \left[\frac{V_d(1-T)}{(V_e + V_d(1-T))}\beta_d\right]$$

B_a = 0.97 x 0.875/0.875+0.125 (1-0.3)
B_a = 0.88

Re-gear Beta

0.88 = B_e x 0.65/0.65 + 0.35(1-0.3)
B_e = 1.21

Minimum expected return = 8% + 1.21 (20%-8%) = 22.52%

(b)

If a profit centre approach is being considered, the following issues should be addressed:

i) Competence of staff

Local managers may not have sufficient expertise in the area of treasury management to carry out speculative treasury operations competently. Mistakes in this specialised field may be costly. It may only be appropriate to operate a larger centralised treasury as a profit centre, and additional specialist staff demanding high salaries may need to be recruited.

ii) Controls

Adequate controls must be in place to prevent costly errors and overexposure to risks such as foreign exchange risks. It is possible to enter into a very large foreign exchange deal over the telephone.

iii) Information

A treasury team which trades in futures and options or in currencies is competing with other traders employed by major financial institutions who may have better knowledge of the market because of the large number of customers they deal with. In order to compete effectively, the team needs to have detailed and up-to-date market information.

iv) Attitudes to risk

The more aggressive approach to risk-taking which is characteristic of treasury professionals may be difficult to reconcile with the more measured approach to risk which may prevail within the board of directors. The recognition of treasury operations as profit making activities may not fit well with the main business operations of the company.

v) Internal charges

If the department is to be a true profit centre, then market prices should be charged for its services to other departments. It may be difficult to put realistic prices on some services, such as arrangement of finance or general financial advice.

vi) Performance evaluation

Even with a profit centre approach, it may be difficult to measure the success of a treasury team for the reason that successful treasury activities sometimes involve avoiding the incurring of costs, for example when a currency devalues. For example, a treasury team which hedges a future foreign currency receipt over a period when the domestic currency undergoes devaluation may avoid a substantial loss for the company.

SOLUTION FIVE

(a)

Month (A)	MPR (%) (B)	Variable Interest Amount (K) (C) [MPR+3% x K1m]/12	Fixed Rate (D)	Fixed Interest Amount (K) (E) [21% x K1m]/12	Net Settlement(K) (F) [E – C]
1	16	15,833	21%	17,500	(1,667)
2	18	17,500	21%	17,500	0
3	20	19,166	21%	17,500	1,666
4	19	18,333	21%	17,500	833
5	18	17,500	21%	17,500	0
6	17	16,667	21%	17,500	(833)

(b) It is an interest rate hedge because the variable rate Kasaka Zambia Ltd will receive will compensate the variable rate Kasaka Zambia Ltd will pay to Neo Bank, it borrowed variable from and will be left with only the fixed interest payment to Rupik. Settlement will be on a net basis. This takes off the uncertainty and volatility in monthly interest payment from Kasaka Zambia Ltd.

Effectiveness of the hedge depends on the Monetary Policy Rate and interest rate outlook. Kasaka Zambia Ltd breaks even, when the MPR is at 18%, a loss when an MPR below is obtaining and achieves a profit, when the MPR rises above 18%. The hedge is therefore effective in an increasing interest rate environment, since Kasaka Zambia Ltd is a borrower.

(c) A foreign currency swap is an agreement to exchange principal and interest payment in one currency for equivalent principal and interest payment in another currency. It is used usually to raise liquidity in one currency by utilizing the surplus liquidity in another currency without converting the currency to create exchange rate risk.

It can also be done for trading purposes. Each party is borrowing and paying interest on the currency it is short in liquidity by utilizing the liquidity surplus it has in the other currency.

An interest rate swap is an agreement between two parties to exchange interest payments on an agreed notional amount in the same currency for a specific maturity. It could be from floating to fixed or from fixed to floating. One party pays floating rate and receives fixed rate or vice versa. The floating rate is referenced to a market benchmark like LIBOR and changes from time to time based on the changes in the benchmark.

END OF SUGGESTED SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

CA ADVISORY PROFESSIONAL IN ACCOUNTANCY

CA 3.7: PUBLIC SECTOR AUDITS AND ASSURANCE

FRIDAY 17 JUNE 2022

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.

QUESTION ONE

You work for the Supreme Audit Institution (SAI) in your country as a Director in charge of audits of local authorities around the country.

As part of peer reviews, supported by the International Organization for Supreme Audit Institutions (INTOSAI), you have been assigned to carry out a review of the operations of the Supreme Audit Institution (SAI) of Madagascar.

The scope of the assignment requires that you make relevant recommendations for improvements where the Supreme Audit Institution (SAI) of Madagascar is not compliant with relevant standards.

A review of the procedures and policies that are used by the Madagascar Supreme Audit Institution (SAI) and interviews with selected staff revealed the following information:

1. There was a recent report in the public media that some members of staff within the SAI received bribes from those that they audit so that they drop any serious observations made. Three (3) members of staff of the SAI have been dismissed for being found guilty of taking bribes. All the three (3) were members of the Institute of Accountants of Madagascar.

2. There was general discontent amongst members of the public interviewed that so many financial scandals are in public domain and yet nothing seems to be done by Government.

3. The SAI is under the Ministry of Finance and it is generally understaffed. Most of the SAI staff previously worked as internal auditors in government and they are part of the audit teams that are assigned to audit the same institutions they worked for previously. This way the staff need less training before carrying out effective audits.

4. Parliament of the Republic of Madagascar has a parliamentary committee which is responsible for holding the custodians of public funds accountable on how they do this. This committee relies upon the annual reports of the Supreme Audit Institution (SAI).

5. It is common for ministries and government departments to provide lunch to SAI staff when being audited. There was a case where SAI staff were accommodated at a hotel by the local council that they were auditing for a period of one (1) month at no charge to them.

6. Interviews of selected staff in government ministries and the general public revealed high levels of lack of knowledge of the existence of the Supreme Audit Institution (SAI). Most people interviewed expressed surprise when told of the existence of the Supreme Audit Institution (SAI) and its role over the use of public funds.

7. There was a case circulating on social media of a staff member of the Supreme Audit Institution(SAI) involved in a scuffle with a junior member of staff of the entity he was auditing. This ended up in a fight which went viral on social media.

8. The activities of the Supreme Audit Institution (SAI) have not been subject to independent scrutiny since inception. Because of the nature of its work, the SAI activities are not published for public knowledge and scrutiny. The SAI rejected a request by INTOSAI that its activities should be subject to a peer review by other INTOSAI members.

9. There was an instance where the private media reported that a senior government official was involved in corrupt activities and that the SAI discovered this during a recent audit that it carried out. The audit referred to was in the final stage and the report had not been released. The media house reported that they were informed by a reliable source within the SAI.

10. The standard of working papers at the SAI is poor and most of the working papers reviewed showed that there is no independent review of work that has been performed. It was difficult to establish the basis for the opinions/conclusions reached in some cases.

You also performed a quality control review of the working papers of a publicly owned enterprise. In the section on going concern, you observed that the audit team concluded that there was material uncertainty regarding the going concern ability of this enterprise. You did not agree with the opinion reached because an unmodified opinion was issued even when there was inadequate disclosure in the financial statements concerning the material uncertainty.

Required:

(a) Identify and explain the extent of adherence to the ethical values contained in ISSAI 30: *Code of Ethics* by the Supreme Audit Institution (SAI) of the Republic of Madagascar. (10 marks)

(b) Evaluate the extent of adherence by the Supreme Audit Institution of the Republic of Madagascar with the principles of value and benefits in accordance with ISSAI 12: *Value and Benefits of SAIs*. (10 marks)

(c) (i) Discuss the relevance of performing audit procedures on the going concern ability of a client company. (4 marks)

(ii) Discuss the audit objectives of performing audit procedures on going concern. (6 marks)

(iii) Discuss the impact on the audit report when there exists a material uncertainty related to going concern of a public sector institution and the use of the going concern basis of preparing financial statements is considered appropriate. (8 marks)

(iv) Discuss the impact on the audit report when the going concern basis of preparing financial statements is considered inappropriate. (2 marks)

[Total: 40 Marks]

SECTION B

There are four (4) questions in this section.

Attempt any three (3) questions.

<u>QUESTION TWO</u>

You have joined the Office of the Auditor General (OAG) as an Audit Manager. Before joining the OAG, you were an Audit Supervisor at a medium-sized audit firm. Your first assignment is a performance audit at the Disaster Management and Mitigation Unit (DMMU), which involves verification of whether its objectives have been met. During the period under review, the DMMU received massive support from the government, and both local and foreign donors.

During the pre-audit meeting with the Auditor-General (AG), there was an emphasis not to confuse performance audit in the public sector and private sector. In addition, one of the Junior Auditors wanted to know the different approaches to performance auditing normally used in the public sector.

You have obtained a detailed performance report for the period under review, showing the budgeted figures, actual figures and the variances. There are no adverse variances. The figures are accompanied by various charts and commentaries.

The DMMU spent K70 million and one (1) of the comments states that all key performance indicators (KPIs) were met. However, the information in the public media indicates otherwise. Some pressure groups are even planning to stage a protest in order to register their displeasure with the performance of the DMMU.

The key performance indicators (KPIs) include:

1. Ratio of late responses to those on time.
2. Number of complaints compared to previous period.
3. Fuel consumption and cost per delivery compared to budget.

Required:

(a) Compare the key features of performance audit in the public sector and private sector. (6 marks)

(b) Describe the approaches to performance auditing normally used in the public sector. (6 marks)

(c) Using the information in the scenario regarding the Disaster Management and Mitigation Unit (DMMU), advise the audit team on the following:

(i) The suitable approach to take in respect of the performance audit. (4 marks)

(ii) Suggest four (4) audit procedures which should be carried out to verify whether objectives have been met. (4 marks)

[Total: 20 Marks]

QUESTION THREE

You work for the Office of the Auditor General (OAG) and you have been assigned to lead a team of auditors to conduct a compliance audit on the electronic payment system which was introduced by the Zambia Revenue Authority (ZRA). The main features of the electronic payment system are as follows:

1. Service Level Agreements (SLAs) have been signed with a number of financial institutions and telecommunications service providers. However, only a few of them are able to transfer funds to suppliers of goods and services within twenty four (24) hours as agreed.
2. Before any payment is initiated, the Budget Controller checks that funds are available as per budget and ensures that the correct accounting code is used. Any expenditure which does not conform to any of these requirements is rejected.
3. An Accounts Clerk in the accounts payable section matches the purchase order; Goods Received Note (GRN) and invoice. Thereafter he/she initiates the electronic payment using the various Information Technology (IT) platforms.
4. The Finance Director approves the payment and funds are electronically transferred to the respective financial institution or telecommunications service provider. No back-ups are kept.
5. The financial institutions and telecommunications service provider send electronic statements on a monthly basis.
6. The Senior Financial Accountant is unable to perform reconciliations due to limited IT knowledge.

A retired Senior Auditor was invited to a political discussion which will be aired on the national television. She has asked for your advice regarding the invitation to speak on matters relating to the operations of the Office of the Auditor General (OAG).

Required:

(a) Explain, giving relevant examples, what is meant by "Authorities" in a compliance audit. (3 marks)

(b) Discuss the importance of "Authorities" in the compliance audit of the electronic payment system for the Zambia Revenue Authority (ZRA). (2 marks)

(c) Explain six (6) deficiencies in the electronic payment system and recommend measures which can improve the electronic payment system for the Zambia Revenue Authority (ZRA). (12 marks)

(d) Advise the retired Audit Senior on whether she should accept the invitation. (3 marks)

[Total: 20 Marks]

QUESTION FOUR

You are a Senior Auditor in the Office of the Auditor General (OAG). You are currently planning a forensic audit for one (1) of the biggest councils in Zambia. Parliament approved a budget for Community Development Funds (CDF) and it is expected that these funds will play a major role in the economic and social development of the country.

The council in question received Community Development Funds (CDF) totaling K300 million for all the constituencies within its area. The procurement and accounting processes are computerized. However, there have been widespread allegations of rampant fraudulent activities, especially on the social media.

You are aware that there are strict CDF guidelines. However, it alleged that Councilors have awarded lucrative contracts to their newly incorporated companies. In addition, some Senior Managers have been accused of demanding 2% of the contract value from foreign contractors.

A Senior Accountant was recently summoned by the Drug Enforcement Commission (DEC) to answer questions pertaining to twenty (20) properties suspected to have been built using proceeds of money laundering. The properties were built by a foreign contractor who was awarded a major contract to rehabilitate all township roads in the constituencies.

You recently held a meeting with the members of the Audit Committee who informed you that the financial reports for the CDF for the last quarter were rejected as being misleading. Most of the figures were unreconciled and the Internal Auditors were tasked to audit the figures before the next meeting. You are planning to have a meeting with the Internal Auditors, although one (1) of the Junior Accountants confided in you that there was pressure from Senior Management to avoid criticism regarding the utilization of CDF. In addition, K400,000 is reported to have been stolen by cyber criminals mainly because of the poor Information Technology (IT) controls.

One (1) of the Senior Managers was heard threatening a local contractor that the requested variation of the contract amount will not be approved if an amount of K60,000 was not paid to the Chairperson of the Management Procurement Committee (MPC).

Required:

(a) Define fraud and explain three (3) broad types of fraudulent activities. (10 marks)

(b) Using the information in the scenario, identify and explain three (3) corruption fraud activities. (3 marks)

(c) Recommend seven (7) procedures that should be performed in the determination of the alleged bribery. (7 marks)

[Total: 20 Marks]

QUESTION FIVE

(a) ISSAI 40: *Quality control for SAIs* sets out principles for establishing and maintaining a system of quality control in the work carried out by the Supreme Audit Institutions (SAIs).

Required:

Write brief notes on each of the following elements of quality control:

(i) Leadership responsibilities for quality control within the SAI. (2 marks)

(ii) Acceptance and continuance. (2 marks)

(iii) Human resources. (2 marks)

(b) An induction workshop was recently held for newly elected members of parliament.

The Auditor General (AG) was one of the presenters at this workshop and the following was an extract from the presentation that he made:

'Those who are entrusted with the custody and use of public funds are expected to use the funds in the public interest for the benefit of the general citizenry. The funds are held in trust for the citizens of the country'.

The Office of the Auditor General (OAG) cannot manage to carry out audits for all the recipients and custodians of public funds. The Office of the Auditor General (OAG) has the mandate to choose the audit subjects in the short and long term.

Required:

(i) Discuss the above statement extracted from the presentation by the Auditor General (AG). (6 marks)

(ii) Explain how the Supreme Audit Institution (SAI) helps achieve transparency and accountability in the public sector. (4 marks)

(iii) Suggest how the Office of the Auditor General (OAG) decides on the subjects to audit in the short and long term. (4 marks)

[Total: 20 Marks]

END OF PAPER

CA 3.7 SUGGESTED SOLUTIONS

SOLUTION ONE

(a) Adherence to the ethical values by the SAI:

1. Assigning SAI staff who previously worked in other government institutions to audit the same institutions is not in line with the ethical value of independence and objectivity. The staff will be familiar with the staff with whom they worked and unless suitable safeguards are applied, this should not be allowed.
2. The receiving of bribes by staff of the SAI is an act that shows that they lack **integrity**. Staff of the SAI are expected to be honest and straight forward in all their business dealings. Further, this shows that they have breached the fundamental principle of **professional behavior** by bringing the name of the profession into disrepute.
3. The SAI reports to the Ministry of Finance which means that it lacks the necessary independence to be objective. Further, a majority of the SAI staff are former employees of the ministries that they are required to audit thereby threatening their **independence and objectivity** because of the familiarity threat.
4. The accepting of lunch and accommodation, this gives a self-interest threat to the SAI and they may lose their independence and objectivity. Such offers should be declined unless they are clearly insignificant. Acceptance is breach of the fundamental principle of **independence and objectivity.**
5. Disclosing confidential information such as that implicating a senior government official is breach of the fundamental principle of **confidentiality**. Staff are required to adhere to the principle that information should not be disclosed without the permission of the employer, in this case the SAI.
6. The act of the SAI staff member involving a fight for whatever reason is an act of **unprofessional behavior** which brings the name of the profession in disrepute.

(b) **Evaluation of adherence with the provisions of ISSAI 12:**

1. The fact that the SAI has not had an external evaluation of its activities and it rejected a request for one by the INTOSAI suggests that it lacks transparency. This is contrary to one of the principles of ISSAI 12: *Value and benefits of SAIs* under the objective of being a ***role model organization***.
2. By not responding to the public concerns about financial scandals in the public service the SAI is not ***demonstrating its ongoing relevance***. One of the principles under this heading states that the SAI should demonstrate its ongoing relevance by being responsive too changing environments and risks.
3. The fact that most of the members of the public interviewed expressed ignorance of the existence and role of the SAI shows that the SAI is failing in demonstrating its ongoing relevance. One principle under this objective states that the SAI should communicate in such a manner that increases stakeholders" knowledge of the role of the SAI.
4. The fact that there are instances of work not being reviewed shows that the SAI does not consider quality seriously. This suggests that the SAI is not

being a *role model organization* and one of the principles under this objective states that the SAIs should strive for service excellency and quality. This requires that the SAI should adhere to the provisions of the ISSAO 40: *Quality control for SAIs*

5. The rejection of a peer review by other INTOSAI member countries the SAI is not ***demonstrating its ongoing relevance***. One of the principles under this objective states that the SAI should collaborate within INTOSAI in order to promote its role in addressing global issues relating to public sector auditing, accounting and accountability.

(c) (i) **Going concern and public sector audits:**

Going concern is the ability of an entity continuing operations in the near foreseeable future. The relevance of the going concern ability of the company is important in terms of the basis of preparing financial statements. The historical basis of preparing financial statements is used on the assumption that the company is a going concern. In the event that the company is not a going concern, the financial statements are supposed to be prepared on the basis of an alternative basis which is a break-up basis.

The ability of a company as a going concern has audit implications on the audit opinion.

(ii) **The objective of the public sector auditor with regards to going concern**:

ISSAI 1570: *Going concern* gives guidance on the auditor's responsibilities and duties of the public sector auditors.

The objective of the procedures that the public service auditor performs with regards going concern are as follows:

1. The public sector auditor to gather and obtain sufficient appropriate evidence regarding management's use of going concern basis of preparing the financial statements and for the public sector auditor to conclude on the appropriateness of using this basis.
2. The public sector auditor to conclude whether there exists material uncertainty with regards the going concern ability of the audited entity.
3. The public sector auditor to report as appropriate in accordance with the provisions of ISSAI 1570: *Going concern*.

(iii) **Impact of material uncertainty related to going concern on the audit report:**

The impact on the audit report of there being material uncertainty with regards to the ability of an entity as a going concern depends on disclosure and the appropriateness of the use of the going concern basis of preparing financial statements.

The situation of where the going concern basis of preparing financial statements is appropriate but there exists a material uncertainty, the impact on the report is as follows:

1. If there is adequate disclosure of the material uncertainty in the financial statements.
    - An unmodified audit opinion will be issued.
    - A separate paragraph will be introduced in the auditor's report entitles *'Material uncertainty related to going concern'* in which details of the material uncertainty will be given.
2. If there is inadequate disclosure in the financial statements about the material uncertainty:
    - A qualified opinion may be appropriate.
    - A basis for qualified opinion paragraph will be introduced in the auditor's report.

(iv) **Impact on the audit report if basis of preparing accounts inappropriate**:

Where the financial statements are prepared on the going concern basis and the auditor concludes that this is not appropriate and there exist a material uncertainty, the auditor will issue an adverse opinion in the audit report.

SOLUTION TWO

(a) Comparison of key features of performance audit in the public sector and private sector

- **Statutory requirement** – in the public sector, there is a statutory requirement for performance audits, while in the private sector, there is no statutory requirement.
- **Follow-up responsibility** – in the public sector the auditors have responsibility to follow up the performance audits they make. There should be a post-audit review to make sure that changes have been made to improve economy, efficiency and/or effectiveness, in line with recommendations in the audit report. In the private sector, there is no such responsibility for auditors. Since performance audit is done at the request of management, the auditors' involvement will normally finish with the submission of the audit report.
- **Policy** – a performance audit in the public sector will not question the policy behind the work that is being audited, because this would be encroaching on political issues. In the private sector, there is no such political constraint, and performance audit could, in principle, question why a certain area of work is being performed at all, and for what purpose.

(b) **Approaches to performance auditing normally used in the public sector**

- **A results-oriented approach** – deals with questions such as: "What results have been achieved, and have the requirements or objectives been met? Findings are usually presented in the form of a deviation from criteria, and recommendations are aimed at eliminating the deviation. Hence, this assesses whether the objectives for outcomes or output have been achieved as intended, or whether programs or services are operating as intended.
- **A problem-oriented approach** – deals with questions such as: "What is the problem?" "What are causes of the problem" To what extent can the government resolve the problem?" The audit begins with a recognition that there is a problem or deviation. The audit should set out to establish what the problem is, what its causes are, and what can be done about it. Hence, this examines and analyses the causes of particular problems or deviations from criteria.
- **A system-oriented approach** – is concerned with the functioning of a system, such as a financial management system or a control system, and considers whether they are well managed and functioning efficiently and effectively, or whether improvement can be made. Hence, this examines the proper functioning of management systems, such as a financial management system.

(c) **Advice to the audit team**

(i) Suitable approach

There is reported displeasure with the performance of the Disaster Management and Mitigation Unit (DMMU). However, the performance report shows that there are no adverse variances. It will therefore be important for the public sector auditors to give an independent assurance on whether the DMMU is operating as intended.

Hence, a results-oriented approach may be more suitable.

(ii) Suggested audit procedures which should be carried out to verify whether objectives have been met

- Ascertain and document the system for monitoring performance and evaluate the internal controls.
- Discuss with management issues relating to the planned protest by some pressure groups.
- Review minutes of board meetings for discussions of significant adverse variances regarding performance.
- Review the performance report and recalculate the variances.
- Agree the budgeted figures to the budget, and actual figures to the cash book and bank statement, including supporting documents.
- Check the reported fuel consumption and cost per delivery against the budget and supporting documentation.
- Review the public media reports for specific areas of concern and discuss the same with those charged with governance.
- Interview selected beneficiaries in order to confirm the responsive times.
- Talk to employees responsible for recording complaints and review the completeness of the record.

SOLUTION THREE

(a) **Authorities**

Compliance auditing is an independent assessment of whether a given subject matter is in compliance with applicable authorities. The criteria are the benchmarks used to evaluate the subject matter. Authorities may include rules, laws and regulations, budgetary resolutions, policy, established codes, or general principles governing sound public-sector financial management and the conduct of public officials.

(b) **Advice to the Junior Auditor regarding the importance of "Authorities" in the compliance audit of the electronic payment system**

Authorities provide suitable criteria in a compliance audit. Criteria are the relevant laws, regulations and agreements. Without a frame of reference provided by suitable criteria, any conclusion by the auditors would be open to individual interpretation and misunderstanding.

(c) **Deficiencies in the payment system and recommended measures**

Deficiencies	Explanations	Measures
(1) Breach of Service Level Agreements (SLA).	The service providers could misuse the funds.	Effective monitoring mechanism should be put in place and any breaches should attract appropriate levels of penalties.
(2) No checking of the work of the Accounts Clerk in the accounts payable section.	Errors and even frauds may go unnoticed.	A separate responsible party should have responsibility for checking the payments before approval.
(3) Approval is only done by the Finance Director.	The Finance Director may at times fail to identify frauds or errors. He could also be involved in fraudulent activities which could be difficult to detect.	There should be at least two (2) signatories for approving payments so that there is some form of internal check. The Commissioner-General (CG) should also be a signatory.
(4) No back-up are kept.	Resolution of disputes will be unnecessarily difficult. In addition, in case of a disaster, recovery could prove to very difficult and most likely very expensive.	Back-ups should be kept and stored at a remote location.
(5) No reconciliations.	It is not easy to detect errors or even frauds.	The Senior Financial Accountant should be replaced with a more competent person with the requisite IT knowledge to be able to perform the reconciliations.
(6) Electronic statements are sent on a monthly basis.	The period is too long for any controls to be effective.	Electronic statements must be sent after a day to

		facilitate effective monitoring.

(d) **Advice to the retired Audit Senior**

Confidentiality is an important duty for all professional accountants. SAI staff is required to maintain professional confidentiality after their employment has terminated, as well as during their employment.

If the retired Senior Auditor was to attend the political discussion, she may be in breach of the duty of confidentiality by disclosed information which came to her attention as a result of her professional duties.

Hence, it will be advisable for her not to attend the political discussion.

SOLUTION FOUR

(a) **Definition of fraud and broad types of fraudulent activity**

Fraud is an intentional act by one or more individuals among management, those charged with governance (management fraud), employees (employee fraud) or third parties involving the use of deception to obtain an unjust or illegal advantage.

The three (3) broad types of fraudulent activity are:

- **Asset misappropriation** – this may involve cash theft, fraudulent disbursements, inventory fraud, misuse of assets etc.
- **Corruption fraud** – this may involve dishonest or deceitful activity. There are three (3) types of corruption fraud:
  - **Bribery** – occurs when money, or something else of value, is offered in return for a favorable decision, such as the award of a major contract.
  - **Extortion** – occurs when money is demanded by force or by threats, in return for either doing or not doing something. This is much less likely to occur in the public sector than bribery.
  - **Conflict of interest fraud** – between doing what is 'proper' and doing what is wrong for personal benefit, and chooses to act improperly (fraudulently)
- **Financial statement fraud** – this is also known as fraudulent financial reporting, and it involves a deliberate material misstatement in the financial statements. As a result of the fraud, there may be a deliberate understatement of liabilities in the statement of financial position or the omission of material transactions or balances. The preparers of the financial statements may expect to be rewarded for the performance of their organization or may succeed in avoiding criticism from those charged with governance for poor performance.

(b) **Corruption fraud activities**

- Some Senior Managers have been accused of demanding 2% of the contract value from foreign contractors.
- It alleged that Councilors have awarded lucrative contracts to their newly incorporated companies
- Twenty (20) properties suspected to have been built using proceeds of money laundering

(c) **Recommended procedures to performed in the determination of the alleged bribery**

- Obtain a list of contracts awarded and ask the councilors to indicate themselves the contracts in which they have interests
- Inspect details at the company registry to verify ownership of companies awarded contracts
- Interview the staff responsible for awarding contracts and the internal auditors whether they are aware of contractors owned by councilors and other related parties
- Review related party disclosures in the financial statements

- Summarize the list of companies owned by councilors and agree the list to the annual returns, financial statements disclosures on related parties and where necessary confirmations with responsible company officials
- Use data analytics (CAATs) to identify all contracts for companies owned by councilors and the values involved
- Vouch payments for the identified contracts in the cashbook and trace to ledger accounts and to bank statements
- Request for Goods Received Notes (GRN) for payments for identified contracts
- Evaluate the strength of evidence obtained and summarize the findings and value the corruption fraud that may have taken place.

SOLUTION FIVE

(a) **Brief notes on:**

(i) **Leadership responsibilities for quality in the SAI:**

The ISSSAI requires that there should be leadership responsibility within the SAI to be responsible for quality control. This should be someone who is familiar with the provisions of ISSAI 40 Quality control for SAIs.

This responsibility lies with the Auditor-General (AG) who delegates this to staff under him who are in charge of audits.

(ii) **Acceptance and continuation:**

This principle requires that the SAI should only accept and continue with carrying out assignments when it has the competence, resources and time to carry out the assignment.

The mandate of the SAI is contained in statute and so the SAI cannot decline or discontinue an assignment even when it may not have the competences to do so. The SAI could outsource the services from outside from those with the necessary skills and competences. This is contrary to the audit of the private sector where the auditor will decline or resign from the engagement.

(iii) **Human resources:**

The SAI should have procedures that it employs staff who have the skills and competences in carrying out public sector audits. It should have policies to train staff and also for continuous professional development.

The staff should be committed to adhering to ethical principles and to carry out audits in accordance with the relevant auditing standards.

(b) (i) **Discussion of statement by the Auditor General (AG):**

The money that is used to run the affairs of the country is from taxes that are paid by the citizens. This money is supposed to be used in the best interest of the general citizenry and not the interest of those entrusted to manage the public funds.

The custodians of public funds hold them in trust and should be held accountable on how they spend this money. It is for this reason that in a democracy, the citizens elect members of parliament who represent their interest on how public funds are spent. The members of parliament through the budget confer responsibility on the executive on how the funds are to be spent. The same parliament confers responsibility to the Supreme Audit Institution to carry out audits of how public funds have been spent and report back to it. The reports of the Supreme Audit Institution are made public for the public to know how those entrusted to manage public affairs have performed their duty.

The general citizenry have the power to change governments if they are not happy on how affairs are managed including the use of public funds.

(ii) **How SAI helps achieve transparency and accountability in the public sector:**

The Supreme Audit Institution helps in holding those entrusted with public funds accountable for their actions. This is done through various types of audits that it performs and issues reports of its findings.

The report is published and issued to the Public Accounts Committee (PAC) comprising elected members of parliament to whom custodians of public funds appear and are required to explain any observations made. Through the publication of the report, the public is free to comment on the findings and this acts as a deterrent in the misuse of public funds.

The Supreme Audit Institutions (SAI) makes recommendations as necessary and they also follow up to confirm implementation of the recommendations made in the reports.

(iii) **Choice of audit subjects by the OAG:**

Because of limited resources available to the OAG, it is not possible it will be able to audit all the custodians of public funds.

For this reason the Office of the Auditor General (OAG) uses sampling methods to decide on the subjects and audit topics that it intends to carry out.

This will be done at the strategic level where the SAI will decide on the subjects to be audited in the long term say over a period of five (5) years.

Annually arising from the strategic plan the OAG will choose the subjects that will be audited and in so doing will consider the following:

- The risks applicable to the subject matters.
- Any legal requirements requiring audits to be carried out on specific topics.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

CA ADVISORY PROFESSIONAL IN ACCOUNTANCY

CA 3.8: PUBLIC SECTOR FINANCIAL MANAGEMENT

FRIDAY 17 JUNE 2022

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.

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)

(a) The Department of Forestry has developed an online tool that will assist the members of the public access products such as Forest Cord Permit, Forest Concession License, Forestry Produce Conveyance Permit, Forestry Production Permit and Forestry Tree Felling Permit. The Department has two (2) options open to them, to test the online tool or abandon it.

If the department tests it with a small number of companies and individuals, the costs will be K200m and response from payments of licenses could be positive or negative with probabilities of 0.7 and 0.3. If the response is positive, the department could either abandon the online tool or roll it out full scale.

If the departments rolls out the online tool full scale, the outcome might be low, medium or high demand, and the respective net benefits/costs would be K (300m), K300m or K1500m. These outcomes have probabilities of 0.1, 0.5 and 0.4 respectively.

If the result of testing is negative, the department goes ahead, and rolls out on the online tool estimated costs would be K700m.

If at any point, the Department abandons the product, there would be a net gain of K100m from the sale of intellectual property rights and other intangible assets associated with the online tool. All financial values have been discounted to the present.

Required:

(i) Using decision trees, evaluate the decisions at each point and advise management of the Forestry Department whether they should go ahead to implement the system. (17 marks)

(ii) Explain to management the limitations of making decisions based on the decision trees. (8 marks)

(iii) Define sensitivity analysis and explain how it is carried out. (4 marks)

(b) In Zambia, the Public Private Partnership Act No. 14 of 2009 aims to promote and facilitate the implementation of the Public Private Partnerships in particular privately financed infrastructure projects. Since then Zambia has embarked on a number of PPP using different models to deliver capital projects. Each delivery model has a range of benefits and disadvantages and governments select these models based on the circumstances to deliver capital projects.

Required:

Outline the merits and demerits of using Public Private Partnership or Private Provision Model to deliver capital Projects**.** (11 marks)

[Total: 40 Marks]

SECTION B

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

QUESTION TWO

Country A recently went through a General Election which was declared free and fair by the International Community and the Election Observers drawn from the Local Non-Governmental Organisations. The General Elections were in December, 2019. The New Members of Parliament took office in January, 2020. In their first parliamentary session, it was noted by the Speaker of the National Assembly that Parliamentarians required to be introduced to the theory of Public Financial Management Cycles with special emphasis on the budget processes. It was further noted that the Parliamentarians needed to understand the Public Finance Management Reforms. This motion was introduced by one of the opposition members of Parliament who recommended a training program to be arranged for the Members of Parliament. The motion was overwhelmingly supported by all the Parliamentarians with no divergent views.

A parliamentary Sub-Committee was mandated to ensure that a consultant be engaged to carry out this particular training program by ensuring that an advertisement is done in the media; both local and International. This is because the training was considered under consulting services. The Chairman of this Sub-Committee suggested that the awarding of consultancy services should follow the normal bidding process.

A Private University was awarded this consultancy upon satisfying the bid requirements as stipulated in the "Expression of Interest" documents submitted to the tender committee. An inception report was submitted which clearly stated the technical and financial proposals.
Further, the terms of reference included explaining to the Parliamentarians the issues associated with Activity Based Budgeting (ABB) framework and the rolling three-year Medium Term Expenditure Framework (MTEF).

Required:

(a) As the consultant engaged to conduct the training program, prepare notes explaining to the Parliamentarians:

(i) The Public Financial Management Cycle. (10 marks)

(ii) Activity Based Budgeting and its shortfalls. (5 marks)

(b) Identify the best practices which are necessary to make certain that there is efficiency and effectiveness in the national budget execution, monitoring and control. (5 marks)

[Total: 20 Marks]

QUESTION THREE

Brilliant is a student pursuing a degree in economics at a private University. Upon completion of her economics degree she plans to enroll for the CA Zambia professional qualification and later on for a law degree. Her reasons for pursuing economics and later on pursuing accountancy and law is to have a broad view of political and economic affairs of the country.

Her ultimate goal is to represent the people of Zambia in the legislature. She has a vision of a nation with strong and effective public financial management practices.

You are currently pursuing the final papers of the CA Zambia professional qualification and one of these papers is the Public Sector Financial Management professional paper. As your former class mate at high school, brilliant calls you to find out more about the public sector financial management syllabus, the role of the legislature, and the public sector financial management reforms in Zambia.

Required:

(a) Explain to Brilliant the four (4) functions of the legislature according to Article 63 (2) of the constitution of Zambia and how these functions are executed. (10 marks)

(b) Explain the key areas addressed by the public financial management reforms of 2018. (10 marks)

[Total: 20 Marks]

QUESTION FOUR

An African country recently got independence from its colonial masters. In the prior years to its independence, the Annual Budgets for the country were being prepared by the experts from the country which had colonized it. This was largely because the country had no established Government Structures, Ministries and Institutions. There was no effective accountability of the Government Income received and its utilization in the different sectors of the economy.

The newly elected Government immediately after it obtained independence embarked on aggressive polices in order to create Government Structures and Institutions. They sought the advice of financial experts from the International Monetary Fund (IMF), the World Bank (WB) and the local Universities based in Country S to help do this. The team suggested that a "Think Tank" should be established by the country to specifically address the issues raised.

The IMF recommended to the "Think Tank" that the country should establish and follow effective Public Financial Management (PFM) systems. Further, it was recommended that the assessment of PFM should be done through the Public Expenditure and Financial Accountability Framework (PEFA).

Required:

(a) Explain the reasons it is important for the African country to use the Public Financial Management (PFM) Measurement Frameworks. (6 marks)

(b) Identify the Seven pillars of performance that are critical in achieving the objectives of PFM as explained in part (a) above. (14 marks)

[Total: 20 Marks]

QUESTION FIVE

The University of Zambia is a Public University wholly managed and controlled by the Ministry of Higher Education. The main objective of the University is to provide affordable quality tertiary education to the public. The University has also financial objectives that are supposed to be achieved. The University is planning to undertaken the construction of hostels but it does not have adequate funding. Therefore, the University management suggested to the Ministry of Higher education that the funding of the hostel construction be done through Public Private Partnership (PPP). The repayment of capital and interest will be over a period of 16 years at a floating rate of interest currently 10.5% per year. The permanent secretary under the Ministry of Higher Education made a comment to the University management that he wished the treasury management in the public sector could have been decentralised rather than centralised for easy accessibility of funding.

Required

(a) Discuss the main differences in the business risks involved in the achievement of the financial objectives of a public institution such as the University and a private sector institution, and how the risks can be managed. (8 marks)

(b) Explain how the financial risks introduced into the University through the use of PPP might affect the achievement of its objectives and provide comments on how these risks might be managed. (6 marks)

(c) Explain the advantages of Centralised Treasury Management. (6 marks)

[Total: 20 Marks]

END OF PAPER

Formulae

Modigliani and Miller Proposition 2 (with tax)

$$k_e = k_e^i + (1 - T)(k_e^i - k_d)\frac{V_d}{V_e}$$

Two asset portfolio

$$s_p = \sqrt{w_a^2 s_a^2 + w_b^2 s_b^2 + 2w_a w_b r_{ab} s_a s_b}$$

The Capital Asset Pricing Model

$$E(r_i) = R_f + \beta_i (E(r_m) - R_f)$$

The asset beta formula

$$\beta_a = \left[\frac{V_e}{(V_e + V_d(1 - T))}\beta_e\right] + \left[\frac{V_d(1 - T)}{(V_e + V_d(1 - T))}\beta_d\right]$$

The Growth Model

$$P_o = \frac{D_o(1 + g)}{(r_e - g)}$$

Gordon's growth approximation

$$g = br_e$$

The weighted average cost of capital

$$WACC = \left[\frac{V_e}{V_e + V_d}\right]k_e + \left[\frac{V_d}{V_e + V_d}\right]k_d(1 - T)$$

The Fisher formula

$$(1 + i) = (1 + r)(1 + h)$$

Purchasing power parity and interest rate parity

$$S_1 = S_0 x \frac{(1 + h_c)}{(1 + h_b)} \qquad F_0 = S_0 x \frac{(1 + i_c)}{(1 + i_b)}$$

Modified Internal Rate of Return

$$MIRR = \left[\frac{PV_R}{PV_I}\right]^{\frac{1}{n}}\left(1 + r_e\right) - 1$$

The Black-Scholes option pricing model

$$c = P_a N(d_1) - P_e N(d_2) e^{-rt}$$

Where:

$$d_1 = \frac{\ln(P_a / P_e) + (r + 0.5s^2)t}{s\sqrt{t}}$$

$$d_2 = d_1 - s\sqrt{t}$$

The Put Call Parity relationship

$$p = c - P_a + P_e e^{-rt}$$

Present Value Table

Present value of 1 i.e. $(1 + r)^{-n}$

Where r = discount rate
n = number of periods until payment

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	0·980	0·961	0·943	0·925	0·907	0·890	0·873	0·857	0·842	0·826	2
3	0·971	0·942	0·915	0·889	0·864	0·840	0·816	0·794	0·772	0·751	3
4	0·961	0·924	0·888	0·855	0·823	0·792	0·763	0·735	0·708	0·683	4
5	0·951	0·906	0·863	0·822	0·784	0·747	0·713	0·681	0·650	0·621	5
6	0·942	0·888	0·837	0·790	0·746	0·705	0·666	0·630	0·596	0·564	6
7	0·933	0·871	0·813	0·760	0·711	0·665	0·623	0·583	0·547	0·513	7
8	0·923	0·853	0·789	0·731	0·677	0·627	0·582	0·540	0·502	0·467	8
9	0·941	0·837	0·766	0·703	0·645	0·592	0·544	0·500	0·460	0·424	9
10	0·905	0·820	0·744	0·676	0·614	0·558	0·508	0·463	0·422	0·386	10
11	0·896	0·804	0·722	0·650	0·585	0·527	0·475	0·429	0·388	0·305	11
12	0·887	0·788	0·701	0·625	0·557	0·497	0·444	0·397	0·356	0·319	12
13	0·879	0·773	0·681	0·601	0·530	0·469	0·415	0·368	0·326	0·290	13
14	0·870	0·758	0·661	0·577	0·505	0·442	0·388	0·340	0·299	0·263	14
15	0·861	0·743	0·642	0·555	0·481	0·417	0·362	0·315	0·275	0·239	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	0·812	0·797	0·783	0·769	0·756	0·743	0·731	0·718	0·706	0·694	2
3	0·731	0·712	0·693	0·675	0·658	0·641	0·624	0·609	0·593	0·579	3
4	0·659	0·636	0·613	0·592	0·572	0·552	0·534	0·516	0·499	0·482	4
5	0·593	0·567	0·543	0·519	0·497	0·476	0·456	0·437	0·419	0·402	5
6	0·535	0·507	0·480	0·456	0·432	0·410	0·390	0·370	0·352	0·335	6
7	0·482	0·452	0·425	0·400	0·376	0·354	0·333	0·314	0·296	0·279	7
8	0·434	0·404	0·376	0·351	0·327	0·305	0·285	0·266	0·249	0·233	8
9	0·391	0·361	0·333	0·308	0·284	0·263	0·243	0·225	0·209	0·194	9
10	0·352	0·322	0·295	0·270	0·247	0·227	0·208	0·191	0·176	0·162	10
11	0·317	0·287	0·261	0·237	0·215	0·195	0·178	0·162	0·148	0·135	11
12	0·286	0·257	0·231	0·208	0·187	0·168	0·152	0·137	0·124	0·112	12
13	0·258	0·229	0·204	0·182	0·163	0·145	0·130	0·116	0·104	0·093	13
14	0·232	0·205	0·181	0·160	0·141	0·125	0·111	0·099	0·088	0·078	14
15	0·209	0·183	0·160	0·140	0·123	0·108	0·095	0·084	0·074	0·065	15

Annuity Table

Present value of an annuity of 1 i.e. $\frac{1 - (1 + r)^{-n}}{r}$

Where r = discount rate
n = number of periods

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	1·970	1·942	1·913	1·886	1·859	1·833	1·808	1·783	1·759	1·736	2
3	2·941	2·884	2·829	2·775	2·723	2·673	2·624	2·577	2·531	2·487	3
4	3·902	3·808	3·717	3·630	3·546	3·465	3·387	3·312	3·240	3·170	4
5	4·853	4·713	4·580	4·452	4·329	4·212	4·100	3·993	3·890	3·791	5
6	5·795	5·601	5·417	5·242	5·076	4·917	4·767	4·623	4·486	4·355	6
7	6·728	6·472	6·230	6·002	5·786	5·582	5·389	5·206	5·033	4·868	7
8	7·652	7·325	7·020	6·733	6·463	6·210	5·971	5·747	5·535	5·335	8
9	8·566	8·162	7·786	7·435	7·108	6·802	6·515	6·247	5·995	5·759	9
10	9·471	8·983	8·530	8·111	7·722	7·360	7·024	6·710	6·418	6·145	10
11	10·37	9·787	9·253	8·760	8·306	7·887	7·499	7·139	6·805	6·495	11
12	11·26	10·58	9·954	9·385	8·863	8·384	7·943	7·536	7·161	6·814	12
13	12·13	11·35	10·63	9·986	9·394	8·853	8·358	7·904	7·487	7·103	13
14	13·00	12·11	11·30	10·56	9·899	9·295	8·745	8·244	7·786	7·367	14
15	13·87	12·85	11·94	11·12	10·38	9·712	9·108	8·559	8·061	7·606	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	1·713	1·690	1·668	1·647	1·626	1·605	1·585	1·566	1·547	1·528	2
3	2·444	2·402	2·361	2·322	2·283	2·246	2·210	2·174	2·140	2·106	3
4	3·102	3·037	2·974	2·914	2·855	2·798	2·743	2·690	2·639	2·589	4
5	3·696	3·605	3·517	3·433	3·352	3·274	3·199	3·127	3·058	2·991	5
6	4·231	4·111	3·998	3·889	3·784	3·685	3·589	3·498	3·410	3·326	6
7	4·712	4·564	4·423	4·288	4·160	4·039	3·922	3·812	3·706	3·605	7
8	5·146	4·968	4·799	4·639	4·487	4·344	4·207	4·078	3·954	3·837	8
9	5·537	5·328	5·132	4·946	4·772	4·607	4·451	4·303	4·163	4·031	9
10	5·889	5·650	5·426	5·216	5·019	4·833	4·659	4·494	4·339	4·192	10
11	6·207	5·938	5·687	5·453	5·234	5·029	4·836	4·656	4·486	4·327	11
12	6·492	6·194	5·918	5·660	5·421	5·197	4·988	4·793	4·611	4·439	12
13	6·750	6·424	6·122	5·842	5·583	5·342	5·118	4·910	4·715	4·533	13
14	6·982	6·628	6·302	6·002	5·724	5·468	5·229	5·008	4·802	4·611	14
15	7·191	6·811	6·462	6·142	5·847	5·575	5·324	5·092	4·876	4·675	15

Standard normal distribution table

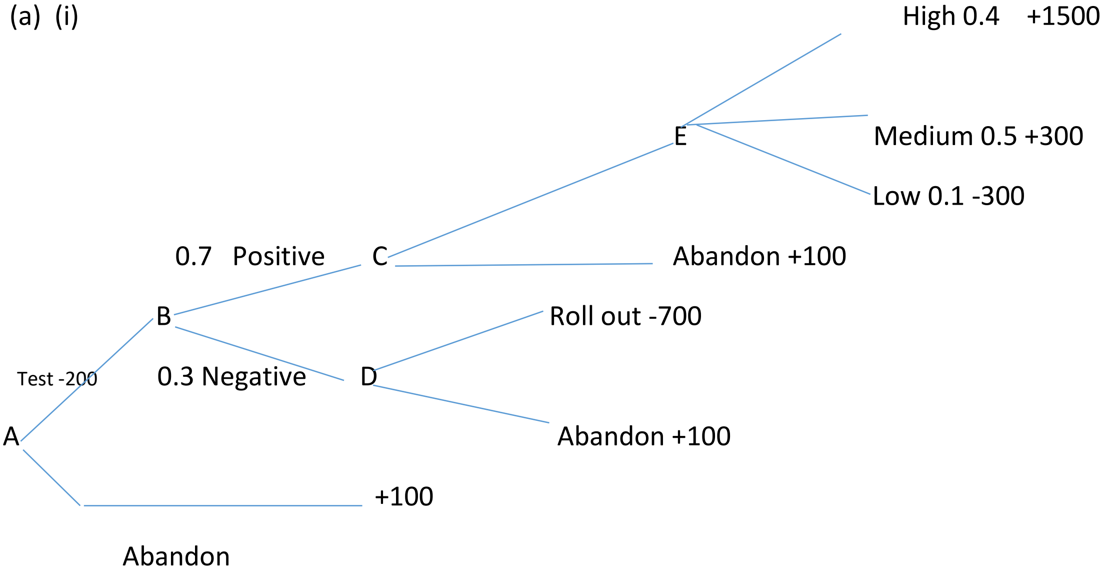
	0·00	0·01	0·02	0·03	0·04	0·05	0·06	0·07	0·08	0·09
0·0	0·0000	0·0040	0·0080	0·0120	0·0160	0·0199	0·0239	0·0279	0·0319	0·0359
0·1	0·0398	0·0438	0·0478	0·0517	0·0557	0·0596	0·0636	0·0675	0·0714	0·0753
0·2	0·0793	0·0832	0·0871	0·0910	0·0948	0·0987	0·1026	0·1064	0·1103	0·1141
0·3	0·1179	0·1217	0·1255	0·1293	0·1331	0·1368	0·1406	0·1443	0·1480	0·1517
0·4	0·1554	0·1591	0·1628	0·1664	0·1700	0·1736	0·1772	0·1808	0·1844	0·1879
0·5	0·1915	0·1950	0·1985	0·2019	0·2054	0·2088	0·2123	0·2157	0·2190	0·2224
0·6	0·2257	0·2291	0·2324	0·2357	0·2389	0·2422	0·2454	0·2486	0·2517	0·2549
0·7	0·2580	0·2611	0·2642	0·2673	0·2704	0·2734	0·2764	0·2794	0·2823	0·2852
0·8	0·2881	0·2910	0·2939	0·2967	0·2995	0·3023	0·3051	0·3078	0·3106	0·3133
0·9	0·3159	0·3186	0·3212	0·3238	0·3264	0·3289	0·3315	0·3340	0·3365	0·3389
1·0	0·3413	0·3438	0·3461	0·3485	0·3508	0·3531	0·3554	0·3577	0·3599	0·3621
1·1	0·3643	0·3665	0·3686	0·3708	0·3729	0·3749	0·3770	0·3790	0·3810	0·3830
1·2	0·3849	0·3869	0·3888	0·3907	0·3925	0·3944	0·3962	0·3980	0·3997	0·4015
1·3	0·4032	0·4049	0·4066	0·4082	0·4099	0·4115	0·4131	0·4147	0·4162	0·4177
1·4	0·4192	0·4207	0·4222	0·4236	0·4251	0·4265	0·4279	0·4292	0·4306	0·4319
1·5	0·4332	0·4345	0·4357	0·4370	0·4382	0·4394	0·4406	0·4418	0·4429	0·4441
1·6	0·4452	0·4463	0·4474	0·4484	0·4495	0·4505	0·4515	0·4525	0·4535	0·4545
1·7	0·4554	0·4564	0·4573	0·4582	0·4591	0·4599	0·4608	0·4616	0·4625	0·4633
1·8	0·4641	0·4649	0·4656	0·4664	0·4671	0·4678	0·4686	0·4693	0·4699	0·4706
1·9	0·4713	0·4719	0·4726	0·4732	0·4738	0·4744	0·4750	0·4756	0·4761	0·4767
2·0	0·4772	0·4778	0·4783	0·4788	0·4793	0·4798	0·4803	0·4808	0·4812	0·4817
2·1	0·4821	0·4826	0·4830	0·4834	0·4838	0·4842	0·4846	0·4850	0·4854	0·4857
2·2	0·4861	0·4864	0·4868	0·4871	0·4875	0·4878	0·4881	0·4884	0·4887	0·4890
2·3	0·4893	0·4896	0·4898	0·4901	0·4904	0·4906	0·4909	0·4911	0·4913	0·4916
2·4	0·4918	0·4920	0·4922	0·4925	0·4927	0·4929	0·4931	0·4932	0·4934	0·4936
2·5	0·4938	0·4940	0·4941	0·4943	0·4945	0·4946	0·4948	0·4949	0·4951	0·4952
2·6	0·4953	0·4955	0·4956	0·4957	0·4959	0·4960	0·4961	0·4962	0·4963	0·4964
2·7	0·4965	0·4966	0·4967	0·4968	0·4969	0·4970	0·4971	0·4972	0·4973	0·4974
2·8	0·4974	0·4975	0·4976	0·4977	0·4977	0·4978	0·4979	0·4979	0·4980	0·4981
2·9	0·4981	0·4982	0·4982	0·4983	0·4984	0·4984	0·4985	0·4985	0·4986	0·4986
3·0	0·4987	0·4987	0·4987	0·4988	0·4988	0·4989	0·4989	0·4989	0·4990	0·4990

This table can be used to calculate $N(d)$, the cumulative normal distribution functions needed for the Black-Scholes model of option pricing. If $d_i > 0$, add 0·5 to the relevant number above. If $d_i < 0$, subtract the relevant number above from 0·5.

CA3.8 SUGGESTED SOLUTIONS

SOLUTION ONE

(a) (i)



At point E , Expected Value is as follows:

	Net Benefit	Probability	Expected Value
High	1,500	0.4	600
Medium	300	0.5	150
Low	(300)	0.1	(300)
Expected Value			**450**

EV at outcome point E is positive, therefore proceed with roll out

At Decision Point C

Roll out , EV = +450 (EV at point E)

Abandon, value +100

The decision would therefore be roll out at EV 450

At Decision, point D

- Roll out , value = -700
- Abandon , Value =+100

Decision is to abandon, EV at decision point D is +100

At Outcome Point B

Ev = 0.7 x 450 EV at C

+ 0.3 x 100 EV at D

= 315 +30 = K345

Options at decision Point A

- Test = EV at B minus test marketing cost (K345-200) = K145
- Abandon : Value K100

Decision point here is to test and market the online tool , because it has higher EV

(ii) Explain to management the limitations of using decisions tress to make decisions.

- The time value of money may not be taken into account
- Decision trees are not very suitable for use in complex situations
- The outcome with the highest EV may have the greatest risks attached to it so risk appetite needs to be considered
- The probabilities associated with different branches of the tree are likely to be estimates and possibly unreliable or inaccurate. This is particularly the case when dealing with uncertainties

(iii) Define sensitivity analysis and how are costs analyzed.

- Sensitivity analysis is used to assess the vulnerability of options to future uncertainties.
- It is undertaken by changing key benefit and cost variables to understand how conclusions over a projects worth might change.

(b)

Outline the advantages and disadvantages of using Public Private Partnership or Private Provision Model to deliver capital Projects.

Advantages

- Provides external finance for the construction of an asset that the public sector may not be able to provide
- Can improve efficiency and effectiveness by achieving an allocation of risks to whichever party in the public or private sector is best able to manage
- Encourages innovation in approach by focusing on performance indicators and output
- Tying of payments to when construction of assets is completed ensures that private sector is incentivized to deliver on time.
- Whole life costs of assets including ongoing maintenance are explicitly

considered in contracts and design thus improving efficiency
- Tying payments to output against performance indicators incentivizes private sector to meet service levels
- Financial due diligence procedures conducted by those providing finance reduces risk of problems emerging following signing of contracts.

Disadvantages

- External financing may be more expensive in the long term when compared to the cost of government borrowing
- Public Sector is paying for the transfer of risk to private sector but ultimate risk always rests with the public sector if the services provided by the asset are essential
- "Off Balance Sheet" nature of financing may encourage public sector to use PPP or private provision model when not value for money
- Long term nature of financing requires long term services that are inflexible when circumstances change
- Public sector faces significant costs if it is required to change or terminate contracts , for example it is usually necessary to reimburse private sector for financing costs and future profits lost
- More complicated than conventional procurement which can increase costs and timescale to deliver
- Requires a range of commercial, procurement, legal and financial skills that may not be available within the public sector.

SOLUTION TWO

(a) **Prepare notes explaining to the Parliamentarians:**

(1) The Public financial Management Cycle

i. **Formulation of the budget**

Public service goals for a country are important and essential. Governments endeavor to ensure that the general populace is provided to its nationals. It is therefore critical that Formulation of the budget is designed in such a manner that it spells out the policies relating to implementation of the formulated national budget is clearly defined.

ii. **Approval of the budget**

The Budget so formulated should eventually be approved by the legislature, which scrutinizes these Government Plans. In a country like Zambia, the budget is approved by the National Assembly which appropriates resources for expenditure by the organizations of the state and the various institutions, provincial administration, local authorities and other bodies.

In Zambia, the budget is submitted to parliament every October before the commencement of the fiscal year that begins in January. This allows the parliamentarians to review, debate and review if necessary prior to subsequent approval.

iii. **Budget Execution**

In order to ensure that controls are effected and accountability is enhanced, there should therefore a level of predictability by ensuring that the standard procedures and processes are followed.

The consultant explained to the parliamentarians that the budget is essentially devolved to individual Ministries, Provinces and Spending Agencies. These bodies, must act, in accordance with the financial management regulations and policies, processes, procedures and systems as developed and set by the Ministry Of Finance (MOF). The responsibility of monitoring accounting processes and feedback on the budget execution of public funds lays in the hands of the Ministry of Finance.

iv. **Evaluation of the Budget**

This is another critical step in the Public Management Cycle. On a yearly basis, the financial reports are required to be prepared and produced. These should be subject to an independent scrutiny and this is done by the Auditor's General's Office and the National Audit office. The purpose is to ascertain and determine that the funds that parliament has appropriated or has been raised by Government and disbursed has been applied for the purpose for which it was appropriated or raised, was utilized in conformity with the authority that governs it , and was expended economically, efficiently and effectively in order to obtain value for money.

The Report from the Auditor's General is submitted to the National Assembly who then scrutinizes the public expenditure and monitors the executive's response to exemptions and their subsequent responses.

(2) Activity Based Budgeting (ABB) and its shortfalls

The Activity Based Budget (ABB) ensures all the inputs to a specific activity that is to be carried-out and implemented are identified, quantified and eventually costed. What is expected therefore is that such activities will be scrutinized in order to quantity and input costs so as to be able to allocate the scarce resources so that these activities are implemented and also to be able to prioritize them.

A number of challenges have been noted in implementing the ABB. In Zambia, it has been observed that programs and activities specified in the ABBs lacked the strategic element, with no clear aspects linking to the outputs and outcomes expected from them. It is believed that instead of the Activity Based Budget, Output Based Budgeting (OBB) improves this aspect. The OBB requires the identification of outputs and targets, with expenditure which has been budgeted aligned to the expected outputs.

(b). **Identify the best practices which are necessary to make certain that there is efficiency and effectiveness in the national budget execution, monitoring and control**

Budgets are an important aspects of a country as they act as a guide in the provision of funds and how these funds should be utilized. The budgets that the country prepares stand the test of their being reliable and realistic.

There are different aspect which ensure that there is reliability and effective budget execution, monitoring and control. These factors include the following:

i. Transparent open and competitive procurement arrangement.
ii. There should be integrity and completeness of financial data and information which should be comprehensive, timely and accurate regarding budget execution.
iii. The procedure for the collection and monitoring of central government revenue, recording and reporting
iv. Cash management and cash flow forecasts by the Ministry of Finance (MOF) should be effective and well executed.
v. There should be strong and working internal control mechanisms particularly regarding salary and non-salary expenditure.

SOLUTION THREE

(a) The 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:

(1) Ensuring equity in the distribution of national resources among the people of Zambia.
(2) Appropriating funds for expenditure by state organs, state institutions, provincial administration, local authorities and other bodies.
(3) Scrutinizing public expenditure, including defense, constitutional and special expenditure.
(4) Approving public debt before it is contracted.

(5) These functions are executed through various departmental committees which monitor policy implementation of the executive, and general purpose committees including the estimates and public accounts committees which have responsibility for examining bills and scrutinizing government budgets and expenditure. A government assurances committee monitors the executive's response to recommendations arising from audit reports.

(b)

1. The public finance management act of 2018 was meant to address financial irregularities in the central government and the local government systems.
2. The act among other things upgraded the office of the Accountant General and Controller of Internal Audit to Permanent Secretary Level in order to strengthen the execution of the public finance management mandate.
3. The act is also embedded with provisions that facilitate the effective operation of the Single Treasury Account and The Integrated Financial Management Information System (IFMIS).
4. It also provides a platform for further regulation of electronic financial transactions within the framework of public financial management, in line with the government's e-Government policy. In effect this will enhance public service delivery by reducing operational costs, improving resource allocation and promoting efficiency in management of public resources.

5 The act also clearly outlines fiduciary duties for controlling officers in Ministries, Provinces and Spending Agencies and for boards of state owned enterprises and statutory corporations. Board members of state owned enterprises and statutory corporations under the act are individually and severally accountable for their decisions.

SOLUTION FOUR

(a) **Explain the reasons it is important for the African country to use the Public Financial Management measurement Frameworks**

This framework was developed in order to measure performance in the Public Finance Management (PFM) System. There are essentially three expected and desirable fiscal and budgetary outcomes and these are as follows;

i. The Aggregate fiscal discipline demands that there is effective control of the total budget and the management of fiscal risks.
ii. Strategic and long-term allocation of resources which involves planning and executing the budget in line with government priorities aimed at ensuring that policy objectives are fulfilled.
iii. Efficient service delivery demands that using budgeted revenues in achieving the best levels of public services within the available resources.

(b) **Identify and Describe the Seven pillars of performance that are critical in achieving the Objectives of PFM as expounded under part (a) above.**

PEFA has identified seven pillars of performance that are necessary in the achieving of the objectives. These pillars are also considered as the main elements of the PFM system.

The pillars are as follows;

i. Budget reliability- It is noted that the budget is realistic and is implemented as intended. It is measured by comparing actual revenues with expenditures and determining the variances which can either be negative or positive and corrective action taken which can also include vehement if necessary.
ii. Transparency of public finances- Information and records of on PFM is comprehensive, consistent, and easily accessible to users. This is achieved by comprehensively clarifying and classifying of the budget in order to achieve transparency of all government revenue and expenditure including intergovernmental transfers, published information on service delivery performance and ready access to fiscal and budget documents.
iii. Management of Assets and liabilities- Effective and efficient management of assets and liabilities facilitates and provides assurances that public expenditure provide value for money, the recording and management of assets, identification of fiscal risks, and debts and guarantees are prudently planned, approved and monitored.
iv. Policy-based fiscal strategy and budgeting- The budget and fiscal strategy are prepared with due consideration to government fiscal policies, strategic plans, and adequate macroeconomic and fiscal projections.
v. Predictability and control in budget execution-The implementation of the budget is confined in a system of effective standards, processes, and internal controls, ensuring that the resources are obtained and disbursed in accordance to the original purpose.
vi. Accounting and reporting- Reliable and accurate records are maintained, and information is extracted and made available at the appropriate time for decision making, management and reporting requirements.

vii. External Security and audit- Public finances are independently reviewed by the Auditor's General Office other oversight institutions and the exceptions noted or recorded are followed-up to enhance executive performance.

SOLUTION FIVE

(a) There is a difference between the Private and Public sectors in terms of the management of risk. Private sector organisations generally have to compete for customers and ensure that they charge a price which covers cost, generates a profit, but is nevertheless competitive with other suppliers. The main risk they face is a loss of customer demand.

Public sector services are often provided free of charge to the user, or at minimal cost to the user. The health sector has the problem of managing capacity to meet demand and this can lead to prioritisation and effectively rationing, with waiting lists as a consequence. Other areas of the public sector may need to have contingency plans for sudden changes in state funding, which will impact upon financial viability. The public sector may thus face risks of both excess demand and reduced funding because of demand changes or changes in political priorities.

Managing risk in the private sector may therefore entail:

- meeting the needs of customers and of stakeholders
- undertaking market research to get a better understanding of customers and markets
- taking steps to assess and manage risks via insurance, hedging of foreign exchange and interest rate risks.

Managing risks in the public sector may therefore entail:

- monitoring of economy, efficiency and effectiveness and value for money
- using internal markets to purchase services and establish 'fair' transfer prices
- using private sector funds where appropriate to give longer term investment horizons.

(b) The PPP would limit the longer term fiscal flexibility because the government, through the University would be required to make contractual payments to the private sector partner (s), with such payments extending into the longer term. Because such payments will be contractual, University of Zambia must ensure that they are made even if their payment would hinder the achievement of University objectives.

The risks arising should be reduced by ensuring that the government sets overall limits on PPP which should not be exceeded. The proposed PPP should therefore ensure that the overall limit on PPP already in place will not be exceeded.

(iv) The advantages of centralised treasury management include:

(i) Centralised liquidity management- cash is consolidated which avoids having a mix of cash surpluses and overdrafts in different local bank accounts. This facilitates bulk cash flows, enabling lower bank charges.
(ii) Consolidated view of cash requirements across the public sector- enables central view of expected borrowing requirements, and enables borrowing to be arranged in bulk which can provide for lower interest rates;
(iii) Larger volumes of cash are available to invest- this provides better short-term investment opportunities.

(iv) Skilled and experienced staff- a centralised specialised function enables the employment of experts who have knowledge of borrowing and investment opportunities and the use of techniques such as hedging;
(v) Better control- centralisation can enable the exercise of better control through the use of standardised procedures and risk monitoring.

END OF SOLUTIONS