CA ZAMBIA PROGRAMME EXAMINATIONS

APPLICATION LEVEL

CA 2.1: FINANCIAL REPORTING

MONDAY 11 DECEMBER 2017

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

INSTRUCTIONS TO CANDIDATES

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

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

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

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

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

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

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

8. Present legible and tidy work.

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

Section A

The question is compulsory and must be attempted

QUESTION ONE

(a) The draft statements of financial position for **Zambezi, Kafue** and **L:uangwa** at 30 September 2016 were as follows:

	Zambezi	*Kafue*	*Luangwa*
	K'000	K'000	K'000
Assets			
Non-current assets:			
Property, plant and equipment (Notes 1 & 3)	304,000	284,000	121,600
Intangible assets (Note 1)	64,000	32,000	16,000
Investments (Notes 1, 3 & 4)	397,600	-	-
	765,600	316,000	137,600
Current assets:			
Inventories (Note 5)	80,000	56,000	52,000
Trade receivables (Note 6)	64,000	52,800	40,000
Cash and cash equivalents (Note 6)	8,000	12,000	8,000
	152,000	120,800	100,000
Total assets	**917,600**	**436,800**	**237,600**
Equity and liabilities			
Equity			
Share capital (50 Ngwee shares)	120,000	160,000	96,000
Retained earnings (Notes 1 & 3)	398,400	148,800	48,000
Other components of equity (Notes 1, 3 & 4)	236,000	8,000	1,600
	754,400	316,800	145,600
Non-current liabilities:			
Provision (Note 7)	27,200	-	-
Long-term borrowings (Note 8)	48,000	40,,000	36,000
Deferred tax	28,000	24,000	20,000
	103,200	64,000	56,000
Current liabilities:			
Trade and other payables (Note 6)	40,000	44,000	28,000
Short-term borrowings	20,000	12,000	8,000
	60,000	56,000	36,000
Total equity and liabilities	**917,600**	**436,800**	**237,600**

Additional information

1. On 1 October 2013, Zambezi acquired 300 million shares in Kafue by means of a share exchange of one share in Zambezi for every two shares acquired in Kafue, when, the

market value of a Zambezi share was K1.92. Zambezi incurred the following directly attributable costs on acquisition of Kafue:

- K0·64 million cost of issuing own shares which was debited to Zambezi's share premium account within other components of equity;
- K0.96 million due diligence costs which were included in the carrying amount of the investment in Kafue in Zambezi's own statement of financial position

There had been no change to the carrying amount of this investment in Zambezi's own statement of financial position since 1 October 2013.

At acquisition, Kafue's Retained earnings were K100 million, while other components of equity were K8 million. A fair value exercise to measure identifiable assets and liabilities of Kafue carried-out by Zambezi's directors at 1 October 2013 revealed that:

- Plant and equipment having a carrying amount of K236 million had an estimated market value of K272 million. The estimated remaining useful economic life of this plant at 1 October 2013 was five years. None of this plant and equipment had been disposed of by 30 September 2016.

- An in-house research and development project with a fair value of K16 million existed at 1 October 2013 but did not meet the recognition criteria of IAS 38: *Intangible Assets*. The project started generating economic benefits on 1 October 2014 over an estimated period of four years.

The above two fair value adjustments have not been reflected in the individual financial statements of Kafue. Treat these fair value adjustments as temporary differences for the purposes of computing deferred tax in the consolidated financial statements. Zambezi uses the proportion of net assets method to calculate non-controlling interests in Kafue.

2. Impairment reviews for goodwill on acquisition of Kafue carried out on 30 September 2014 and 2015 showed no evidence of impairment. On 30 September 2016, directors of Zambezi concluded that the recoverable amount of the net assets (including the goodwill) of Kafue at that date was K360 million. Kafue is regarded as single cash generating unit for the purpose of measuring goodwill impairment.

3. On 1 October 2015, Zambezi paid K100 million in cash to acquire 144 million shares in Luangwa and incurred costs of K0.8 million associated with this purchase. These costs were debited to administrative expenses in the draft statement of profit or loss for the year ended 30 September 2016. There has been no change in the carrying amount of this investment in the financial statements of Zambezi since 1 October 2015 when individual financial statements of Luangwa showed the following reserves balances: Retained earnings K36 million and other components of equity K1.6 million.

   At acquisition of Luangwa, fair values of all net assets were the same as their carrying amounts with the exception of land which had a carrying amount of K80 million and a fair value of K104 million. The fair value adjustment has not been reflected in the individual financial statements of Luangwa. In the consolidated financial statements, this fair value adjustment will be regarded as a temporary difference for the purposes of computing deferred tax. There was no impairment of the goodwill arising on acquisition of Luangwa in the consolidated financial statements at 30 September 2016 and Zambezi uses the proportion of net assets method to calculate non-controlling interests in Luangwa.

4. Apart from its investments in Kafue and Luangwa, the investments of Zambezi included in the statement of financial position at 30 September 2016 are all financial assets which Zambezi measures at fair value through other comprehensive income. These investments are correctly measured in line with IFRS 9: *Financial Instruments*.

5. Inventories of Zambezi and Luangwa at 30 September 2016 included components purchased from Kafue in the last quarter of the financial year at a cost of K16 million to Zambezi and K12.8 million to Luangwa. Kafue supplied these goods to both Zambezi and Luangwa at a mark-up of 25% on the cost to Kafue.

6. The group policy is to clear intra-group balances on a given date prior to each year end. All group companies had complied with this policy at 30 September 2016.

7. On 30 September 2016, Zambezi finalised construction of an energy generating facility with an expected useful economic life of 25 years. Zambezi has a legal requirement to decommission the facility at the end of its estimated useful life and the directors estimated costs of this decommissioning to be K27.2 million: based on prices prevailing at 30 September 2041. At an appropriate discount rate, the present value of the cost of decommissioning the facility is K8 million. The directors of Zambezi made the appropriate provision and charged this amount as an operating cost in the financial statements of Zambezi for the year ended 30 September 2016.

8. On 1 October 2015, Zambezi issued 32 million K1 Bonds at par. The cost of issuing the Bonds was K0.8 million which was charged as a finance cost for the year ended 30 September 2016. No interest is payable on the Bonds but they are redeemable at a large premium which makes their effective finance cost 8% per annum. The Bonds are included at a carrying amount of K32 million in the statement of financial position of Zambezi at 30 September 2016.

9. The rate of deferred tax applicable on all temporary differences is 20%.

Required:

(a) Prepare a consolidated statement of financial position for Zambezi as at 30 September 2016 in accordance with applicable IFRSs and IASs. (36 marks)

(b) On 15 November 2016, Zambezi purchased shares in Chambeshi which gave Zambezi a 45% shareholding. On the same date, Zambezi purchased an option which gave Zambezi the right to acquire an additional 10% of the shares in chambeshi from the existing shareholders. This option is exercisable at any time between 15 November 2017 and 30 September 2018 at a price which makes it highly likely the option will be exercised during that period. Directors of Zambezi are uncertain how to treat Chambeshi in the consolidated financial statements for the year ended 30 September 2017.

Required:

Advise Directors of Zambezi on the appropriate treatment of Chambeshi in the consolidated financial statements for the year ended 30 September 2017 PRIOR to any exercising of the option. (4 marks)

[Total: 40 marks]

Section B

Attempt any THREE (3) questions in this section

QUESTION TWO

Lusaka Limited trial balance at 31 December 2016 is shown below:

	Notes	K' 000	K' 000
Sales revenue	(i)		60,000
Administrative expense		9,000	
Distribution costs		4,500	
5% Loan note (issued 2015, redeemable 2025)			14,000
License accumulated amortisation at 1 January 2016			1,350
Cost of sales		27,700	
Cash and cash equivalents			2,800
Equity dividends paid 30 November 2016		2,750	
Loan interest paid		350	
Income tax	(ii)	500	
Inventory at 31 December 2016	(iii)	9,300	
Land and Buildings at cost	(iv)	48,000	
Buildings Accumulated Dep @ 1 January 2016			1,650
Plant and Equipment at cost	(v)	24,000	
Plant and Equip Accumulated Dep at 1 January 2016			11,700
Equity share capital K1 each, fully paid at 1 January 2016			27,500
Share premium			5,500
Provision for deferred tax at 1 January 2016	(ii)		3,750
Licence	(vi)	4,500	
Retained earnings at 1 January 2016			6,050
Trade receivables/Trade payables	(vii)	6,750	3,050
		137,350	**137,350**

The following additional information is relevant:

(i) Sales revenue amount includes K750, 000 cash received in advance for goods to be produced and delivered in January 2017.

(ii) Income tax balance in the trial balance represent the under/over provision of tax for the year ended 31 December 2015. The income tax for the year is estimated at K2, 600, 000 and deferred tax provision should be increased by K750, 000.

(iii) Inventory amount in the trial balance includes items that cost K300, 000 but have net realisable value of K200, 000.

(iv) Land amount included in the land and building at cost is K8, 000, 000 and buildings are depreciated at 5% per year on straight line method. Buildings depreciation is treated as admin expense.

(v) Plant and equipment is depreciated at 20% per year on reducing balance basis and plant and equipment depreciation is treated as cost of sales.

(vi) The licence has 10 years useful life and is amortised on a systematic basis over its useful life. Amortisation is treated as cost of sales.

(vii) The company decided to write off K100, 000 since the customer was declared bankrupt by the court on 30 November 2016.

Required:

(a) Prepare Lusaka Limited statement of profit or loss for the year ended 31 December 2016.

(10 marks)

(b) Prepare Lusaka Limited statement of financial position as at 31 December 2016

(10 marks)

[Total: 20 Marks]

Note: Financial statements should be prepared in accordance with the requirements of International Financial Reporting Standards and **all workings must be clearly shown**.

QUESTION THREE

You work as an audit senior for Zambezi chartered Accountants, a registered auditing firm with ZICA.

You audit manager has provided you with the following information concerning four of the firm's clients:

Kitwe Copper Mines (KCM)

Kitwe Copper Mines (KCM) obtained a free licence from the government to operate a mine. KCM spent K250million before the mine started operations on 1 January 2015.

The licence requires KCM at the end of the mine's useful life of 25 years, to reinstate the site. At 31 December 2015, KCM estimated that the cost in 24 years' time of reinstating the site will be K180 million and its present value is K120 million.

On 31 March 2016 the floods damaged the mine plant and equipment and it was estimated that the mine will be closed for at least 1 year and it will cost K75 million to repair the plant and equipment. The carrying value of net assets at 31 December 2015 were K500 million.

The financial statements for the year ended 31 December 2015 were approved for issue on 15 April 2016.

Zam Group
Zam Group operates three different product lines i.e eggs, fish and meat. Each product line is treated as a separate business line. The eggs factory has been loss making because of high competition from cheaper competitors. The eggs factory made K150 million loss for the year to 31 December 2016. On 31 December 2016 management decided to close the eggs factory and stop the sale of eggs. Closure costs were estimated to be K25 million.

On 31 December 2016 management were still negotiating redundancy payments with the trade union and have not agreed an actual closure date. Management was yet to find a buyer for the eggs factory because they were waiting for factory revaluation report. Management wants advice on the accounting treatment for the eggs factory.

LIMBA Construction
Limba Construction has a construction contract in progress. The contract commenced on 1 January 2015 and is scheduled to run for 3 years. The contract has a fixed price of K120 million. Limba uses stage of completion to recognise revenue in accordance with IFRS 15 Revenue from contracts with customers.

	31 December:	
	2016	2015
Percentage completes	75%	50%.
Cost incurred to date	K60 million	K30 million
Estimated cost to complete contract	K75 million	K95 million
Progress billings/receipts to date	K95 million	K65 million

Zamb Build
Zam Build owns a building it uses as its offices and has a policy of regularly revaluing its building. The original cost of the building when acquired on 1 January 2011 was K25,000,000. The building is assumed to have 50 years useful life with no residual value. Depreciation is on straight line basis. The building was revalued on 31 December 2013 by a professional valuer at a market value of K28,200,000. In 2016 property values were adversely affected and the building was revalued on 31 December 2016 by a professional valuer at a market value of K24,000,000.

Required:
Based on the information for:

(a) Kitwe Copper Mines (KCM)

(i) Explain how the cost of restoring the site must be accounted for in the financial statements for the year to 31 December 2015 in accordance with IAS 37 Provisions, Contingent Liabilities and Contingent Assets.

(3 marks)

(ii) Explain the accounting treatment for the damage caused by floods in the financial statements for the year ended 31 December 2015 in accordance with IAS 10 Events after the reporting period.

(3 marks)

(b) Zam Group
Explain the accounting treatment for the eggs factory according to IFRS 5 Non-current assets held for sale and discontinued operations.
(4 marks)

(c) Limba Construction

(i) Calculate the amount of revenue, cost of sales and profit or (loss) that Limba should include in its statement of comprehensive income for the year ended 31 December 2016 in respect of the construction contract. (3 marks)

(ii) Calculate the asset or Liability amount Limba should report in its statement of financial position as at 31 December 2016. (2 marks)

(d) Zam Build
Explain the accounting treatment for the building in the financial statements of Zam Build according to IAS 16 Property, Plant and Equipment and IAS 36 Impairment of assets in the year ended 31 December 2016 (All relevant calculations must be shown).
(5 marks)
[Total: 20 Marks]

QUESTION FOUR

Makubi Limited wants to acquire one of the two companies below and as financial analyst you have been given the financial statements of the two companies by the chief financial officer to help you analyse the financial performance and financial position of the companies and recommend the company Makubi Limited should acquire and the reasons for your recommendation.

STATEMENT OF PROFIT OR LOSS FOR THE YEAR ENDED 31 DECEMBER 2016

	RHINO	LION
	K' Million	K' Million
Sales revenue	1,420	1,525
Cost of sales	(775)	(755)
Gross profit	645	770
Admin Expenses	(120)	(185)
Distribution costs	(220)	(325)
Operating profit	305	260
Finance cost	-	(25)
Profit before tax	305	235
Tax	(30)	(25)
Profit for the year	275	210

STATEMENT OF FINACIAL POSITION AS AT 31 DECEMBER 2016

	RHINO K' Million	K' Million	LION K' Million	K' Million
ASSETS				
Non-current assets:				
Property, Plant and Equipment		1,225		2,095
Current assets:				
Inventory	455		1,465	
Trade receivables	230		375	
Cash/Bank	320		75	
		1,005		1,915
Total Assets		2,230		4,010
EQUITY				
Equity share capital	1,590			2,685
Retained earnings	540			885
		2,130		3,570
LIABILITIES				
Non-current Liabilities:				
10% Loan notes	-	-		250
Current Liabilities:				
Trade payables		100		190
Total Equity and Liabilities		2,230		4,010

NOTE: The two companies are in the same sector and the Industry Key Performance Indicators (KPI) for the year 2016 are given to you to help you analysis the two companies.

(i)	Gross profit margin	35%
(ii)	Operating profit margin	20%
(iii)	ROCE (Operating profit/ Capital employed)	20%
(iv)	Trade payables days	60 days
(v)	Inventory turnover	1.5 times
(vi)	Quick ratio	1 time
(vii)	Debt/Equity ratio	50%
(viii)	Earnings per share	K0.20

Required:

(a) Calculate the ratios above for Rhino Company and Lion Company for 2016.
(8 marks)

(b) Analyse the financial performance and financial position of the companies and recommend the company Makubi Limited should acquire and the reasons for your recommendation (12 marks)
[Total: 20 marks]

QUESTION FIVE

Your supervisor has gone on an annual leave and has left you the following write ups:

The International Accounting Standards Board's (IASB) Framework
The International Accounting Standards Board's (IASB) Framework for the Preparation and Presentation of Financial Statements (Framework) identifies assets, liabilities and equity as key elements of statement of financial position. Further the framework separates fundamental qualitative characteristics from enhancing qualitative characteristics and specifically identifies two underlying assumptions.

Mukula Timber Limited
Mukula Timber Limited has a policy of not acquiring non-current assets for use in Timber production but to lease them on a long term basis. Management sent you for a ZICA CPD training workshop on the IFRS 16 leases updates and you were voted the best participant.

Mukula Timber Ltd entered a contract to lease an item of plant for use in its production from Kay Finance Ltd commencing 1 January 2016. The lease is for four years and requires an annual rental payment of K20 million on 31 December each year (in arrears). An initial deposit of K10 million was paid by Mukula Timber on 1 January 2016. Mukula Timber Ltd's incremental borrowing rate is 10% per annum. The fair value of the plant on 1 January 2016 was K500 million and its useful economic life was 10 years.

Mataba Limited
Mataba Limited has cash flow problems and the Chief Financial Officer wants you to look at the statement of financial position extracts below:

31 December:	2016	2015
	K' 000	K' 000
Equity share capital of K0.75each	22,500	15,000
Share premium	15,000	17,000
Retained earnings	13,000	9,000
10% Loan notes	21,000	18,000

Notes:

(i) Profit for the year ended 31 December 2016 was K6, 000, 000 and the company paid dividends to equity shareholders before 31 December 2016.

(ii) In June 2016, the company issued bonus shares, 1 share for every 4 shares held financed by share premium and in November 2016 the rights issue was made at a premium. Both issues were correctly recorded in the statement of financial position.

Required:

In relation to the write up on:

(a) *The International Accounting Standards Board's (IASB) Framework*

(i) Define an asset and a liability in accordance with the IASB framework and an example of each. (2 marks)

(ii) Explain the two fundamental qualitative characteristics of financial information specified in the IASB's framework. (4 marks)

(iii) Explain the two underlying assumptions according to the IASB framework (4 marks)

(b) *Mukula timber Limited*
Prepare Mukula Timber's financial statement extracts in respect of the lease with Kay Finance for the year to 31 December 2017.
(4 marks)

(c) *Mataba Limited*
Prepare the cash flows from financing activities section according to IAS 7 Indirect method
(6 marks)

[Total: 20 marks]

END OF PAPER

CA2.1: FINANCIAL REPORTING SOLUTIONS

Section A

SOLUTION ONE

(a) Consolidated statement of financial position of **Porcupine** at 30 September 2016

Assets	**K'000**
Non-current assets:	
Property, plant and equipment [304,000 + 284,000 + 121,600 +14,400 (W1) + 24,000 (W2) + 8,000 (re: provision)]	756,000
Intangible assets [64,000 + 32,000 + 16,000 + 8,000 (W1)]	120,000
Goodwill (W3)	31,600
Other investments (W8)	8,640
	916,240
Current assets:	
Inventories [80,000 + 56,000 + 52,000 - 5,760 (unrealised profit))]	182,240
Trade receivables [64,000 + 52,800 + 40,000]	156,800
Cash and cash equivalents [8,000 + 12,000 + 8,000]	28,000
	367,040
Total assets	**1,283,280**
Equity and liabilities	
Equity attributable to equity holders of the parent	
Share capital	120,000
Retained earnings (W6)	412,144
Other components of equity (W7)	236,000
	768,144
Non-controlling interest (W4)	148,160
Total equity	**916,304**
Non-current liabilities:	
Provision	8,000
Long-term borrowings [48,000 + 40,000 + 36,000 + 1,696 (W6)]	125,696
Deferred tax (W9)	81,280
Total non-current liabilities	**214,976**
Current liabilities:	
Trade and other payables [40,000 + 44,000 + 28,000]	112,000
Short-term borrowings (20,000 + 12,000 + 8,000)	40,000
Total current liabilities	**152,000**
Total equity and liabilities	**1,283,280**

WORKINGS: Please, **Do not** double count when awarding marks based on workings.

Working 1: Net assets table for Squirrel

	1Oct 2013	***30 Sep 2016***
	K'000	***K'000***
Share capital	160,000	160,000
Retained earnings:		
Per accounts of Squirrel	100,000	148,800
Plant fair value adjustment	36,000	36,000
Extra depn - FV adjustment (36,000 x 3/5)		(21,600)
Research project - FV adjustment	16,000	16,000
Extra amortization - FV adjust (12,000 x 2/4)		(8,000)
URP on intra-group sales (1/5 x 28,800)		(5,760)
Other components of equity	8,000	8,000
Deferred tax on fair value adjustments (20%)	(10,400)	(4,480)
Net assets for the consolidation	**309,600**	**328,960**

Post-acquisition increase in net assets is 19,360 (328,960 - 309,600)

Working 2: Net assets table for Alligator

Share capital	96,000	96,000
Retained earnings:	36,000	48,000
Land adjustment	24,000	24,000
Other components of equity	1,600	1,600
Deferred tax on FV adjustmt (20% x 24,000)	(4,800)	(4,800)
Net assets for the consolidation	**152,800**	**164,800**

The post-acquisition increase in net assets is 12,000 (164,800 -152,800)

Working 3: Goodwill on consolidation

	Squirrel	Alligator
Costs of investment:		
Shares issued on acquisition (150,000xK1·92)	288,000	
Cash paid to acquire shares in Alligator		100,000
NCI at date of acquisition:		
Squirrel - 25% x 309,600 (W1)	77,400	
Alligator - 40% x 152,800 (W2)		61,120
Net assets at date of acquisition (W1/W2)	(309,600)	(152,800)
Goodwill before impairment	55,800	8,320
Impairment of Squirrel goodwill (W4)	(32,520)	Nil
	23,280	8,320

The total goodwill is 31,600 (23,280 + 8,320)

Working 4: Impairment of Squirrel goodwill	**K'000**
Net assets of Squirrel per consolidated financial statements (W1)	328,960
Grossed up goodwill on acquisition (100/75 x 55,800)	74,400
	403,360
Recoverable amount of Squirrel as a CGU	(360,000)
So gross impairment equals	43,360
75% thereof equals	**32,520**

Working 5: NCI (proportion of net assets method)

	Squirrel	**Alligator**
Net assets at 30 Sep 2016 (W1/2)	328,960	164,800
Non-controlling interest (25%/40%)	82,240	65,920

Working 6: Retained earnings	
Porcupine	398,400
Adjustment for acquisition costs of Squirrel	(960)
Adjustment for decommissioning provision	27,200
Finance cost on zero-coupon bond (8% x (32,000 – 800) – 800)	(1,696)
Squirrel (75% x 19,360 (W1))	14,520
Alligator (60% x (12,000 (W2))	7,200
Impairment of Squirrel goodwill (W4)	(32,520)
	412,144

Working 7: Other components of equity	
Porcupine – per own financial statements	236,000
Squirrel and Alligator – post acquisition only	Nil

Working 8: 'Other investments' of Porcupine	
Investments figure per Porcupine statement of financial position	397,600
Deduct: investments to be eliminated on consolidation	
Shares issued to acquire Squirrel (W3)	(288,000)
Due diligence costs on Squirrel acquisition	(960)
Cash paid to acquire Alligator (W3)	(100,000)
Carrying value of remaining investments	**8,640**

Working 9: Deferred tax	
Porcupine + Squirrel + Alligator	72,000

On fair value adjustments in Squirrel (W1)	4,480
On fair value adjustments in Alligator (W2)	4,800
	81,280

(b) Advice on appropriate treatment of Warthog

According to IFRS 10: *Consolidated Financial Statements*, Warthog is a subsidiary of Porcupine if Porcupine has control in Warthog.

A key aspect of determining control is considering whether Porcupine has power to direct the relevant activities of Warthog. Based on its current shareholding, Porcupine cannot exercise that power by voting rights as Porcupine owns only 45% of the shares.

However, IFRS 10 states that where potential voting rights (e.g. share options) are currently exercisable, they should be taken into account in considering whether control exists.

If Porcupine exercised its options, this would take its total shareholding in Warthog to 55%. On this basis, the Directors of Porcupine should regard Warthog as a subsidiary.

SECTION B

SOLUTION TWO

Workings

W1 sales revenue: increase deferred income K750   decrease sales K750

W2 income tax 500 +2,600 + 750 = K3, 850.   Deferred tax 3,750 + 750 =K4, 500

W3 inventory 9, 300 – 300 + 200 = K9, 200

W4 Land and buildings: Dep = 48, 000 – 8, 000 = 40, 000 @ 5% = K2, 000 admin exp

N.B.V = 48, 000 – 1, 650 – 2, 000 = K44, 350

W5 Plant and equipment: Dep = 24, 000 – 11, 700 = 12, 300 @ 20% = K2, 460 Cost of sales

N.B.V = 24, 000 – 11, 700 – 2, 460 = K9, 840

W6 Licence: Amortisation = 4, 500 / 10 yrs. = 450 Cost of sales

N.B.V = 4, 500- 1, 350 – 450 = K2, 700

W7 increase bad debts K100 (admin exp)   decrease trade receivables K100

MASUKU statement of profit or loss for the year ended 31 December 2016

	K' 000
Sales revenue (60, 000 - 750 w1)	59,250
Cost of sales (27, 700 + 2, 460 w5 + 450 w6 + 100)	(30,710)
Gross profit	28,540
Admin expenses (9, 000 + 2, 000 w4 + 100 w7)	(11,100)
Distribution costs	(4,500)
Finance cost 14, 000 @ 5%	(700)
Profit before tax	12,240
Tax (w2)	(3850)
Profit for the year	8,390

MASUKU statement of financial position as at 31 December 2016

ASSETS	K' 000	K' 000
Tangibles:		
Land and buildings (w4)	44,350	
Plant and Equipment (w5)	9,840	
Intangibles:		
Licence w6	2,700	
		56,890
Current assets:		
Inventory (w3)	9,200	
Trade receivables (6, 750 - 100 w7)	6,650	
		15,850
Total assets		72,740
EQUITY AND LIABILITIES		
Equity:		
Equity share capital	27,500	
Share premium	5,500	
Retained earnings (6, 050 + 8, 390 - 2, 750 (T.B))	11,690	
		44,690
Liabilities:		
Non-current liabilities:		
5% Loan note	14,000	
Deferred tax (3750+750))	4,500	
		18,500
Current liabilities		
Trade payables	3,050	
cash and cash equivalents	2,800	
Accrued finance cost (700- 350 (T.B))	350	
Deferred income w1	750	
Tax estimate	2,600	
		9,550
		72,740
Total equity and liabilities		

SOLUTION THREE

(a)(i)IAS 37 Provisions, contingent liabilities and contingent assets requires that an entity must recognize a provision if there is a present obligation to transfer economic benefits in future, it is probable that the transfer will take place and the amount can be reliably estimated. With regard to the costs of restoring the mine site, KCM has a legal obligation to incur the cost. A provision must therefore be recognized at 1.1.2015. Since the amount of cost does not depend on extent of usage of the mine, the whole cost must be provided for on that date and be treated as part of the cost of the mine (i.e. the provision must be capitalized).

The provision will initial be measured at its present value of K120 million (i.e. Dr PPE, CR Provision). Subsequently, the initial provision liability will be increasing with the unwinding of the discount. The increases will be charged in P/L for each period.

(ii) The damage of the plant meets the definition of an event after the reporting date as it occurred after the year end but before the financial statements were authorised for issue and the repairs expenditure involved is material (i.e. 75/500X100 = 15%).

However, the event is primarily non- adjusting as the condition did not exist at the reporting date (31.12.2015).Accordingly; IAS 10 requires that the event must not affect the results of the year to 31.12.2015. The costs of repairs will be charged in the year to 31.12.2016 (the period the condition occurred). However, the event must be disclosed in the notes to the financial statements for the year to 31.12.2015.

(b) According to IFRS 5 Non-current assets held for sale and discontinued operations the eggs factory is a continuing operation because:

1. The sales is not highly probable e.g. management does not know the selling price as they are waiting for the factory valuation report.

2. The asset is not available for immediate sale in its present condition. e.g. the valuer has not determined its condition and value.

3. Management does not have an active plan or programme to locate a buyer.

4. The factory has not been closed and management was still negotiating redundancy cost at 31 December 2016.

5. It’s not probable that the sale will take place in the next 1 year.

6. The eggs factory should be reported as continuing operation and not as an asset held for sale or discontinued operation.

(c)

i) Amounts to report in the SPLOCI for the year to 31.12.2016:

		K'm
Revenue (working below)		30
Cost of sales (balancing figure)		(40)
Loss for the year (working below)		(10)
Working – Revenue y/e 31.12.2016:		
Revenue to date at 31.12.2016	75%X120	90
Less revenue to date at 31.12.2015	50%X120	(60)
Revenue for y/e 31.12.2016		30
Working – loss for the y/e 31.12.2016:		
Loss to date at 31.12.2016	(120-60-75)	15
Less loss to date at 31.12.2015	(120-30-95)	(5)
Loss for the y/e 31.12.2016		10

ii) Contract asset /liability to report in SFP at 31.12.2016:

Loss to date	(15)
Cost to date	60
Progress billings to date	(95)
Contract liability at 31.12.2016	(50)

(d)

1. The revaluation surplus on 31 December 2013 was:
   (28, 200, 000) – (25, 000, 000 – 1, 500, 000) = 4, 700, 000

This will be reported as other comprehensive incomes and will increase the assets value in the statement of financial position.

2. The 2016 statement of profit or loss will report depreciation charge of (28, 200, 000/47years) K600, 000

3. The impairment amount on 31 December 2016 is:
   (24, 000, 000) – (28, 200, 000 – 1, 800, 000) = K2, 400, 000
4. The previous revaluation surplus will be reduced by K2, 400, 000 impairment loss.
5. The building will be valued at K24, 000, 000 in the statement of financial position.

SOLUTION FOUR

(a)

		RHINO	LION
(i)	GP%	645/1420 = 45.4%	770/1525 = 50.5%
(ii)	OP%	305/1420 = 21.5%	260/1525 = 17%
(iii)	ROCE	305/2130 = 14.3%	260/1525 = 6.8%
(iv)	Debtors days	230/1420 x 365 = 59 days	375/1525 x 365 = 90 days
(v)	Inventory .t. over	775/455 = 1.7 times	755/1465 = 0.5 times
(vi)	Quick ratio	550/100 = 5.5 times	450/190 = 2.4 times
(vii)	Debt/Equity	-	250/3570 x 100 = 7%
(viii)	EPS	275/1590 = K0.17	210/2685 = K0.08

(b)

Analysis of financial performance and financial position and Recommendation

Profitability ratios

(i) Lion has reported a higher gross profit margin than Rhino and the industry indicator. Lion may be enjoying trade discounts or having a cheaper supplier since its cost of sales is 49.5% of sales compared to 54.6% for Rhino.

(ii) Rhino has reported a higher operating profit margin than Lion and the industry indicator. Rhino may be controlling its operating expenses efficiently. i.e. represent 23.9% of sales and Lion's admin and distribution costs represent 33.4% of sales.

(iii) Rhino has reported a higher ROCE than Lion and industry indicator. Rhino may be earning higher operating profit because of controlling operating expenses efficiently since its capital employed is much higher than that of Lion.

Liquidity ratios

(i) Rhino is collecting its debts quicker than Lion and earlier than normal practice. Rhino credit department is efficient and effective because it's convincing customers to pay early and this avoids bad debts and has boosted cash position. May be they are also giving customers some early settlement discounts.

(ii) Rhino's inventory is moving faster than Lion and faster than normal practice. Rhino may be giving its customers some trade discounts to sale its inventory quicker and reduce expenses such as distribution costs.

(iii) Both companies have reported better quick ratios at first sight but careful analysis shows that Lion does not have enough cash to pay its trade payables and it takes 3 months to collect its debts, therefore, it may take 3 months for it to pay their suppliers and this may affect its credit rating.

Gearing ratios

(i) Rhino has no long-term borrowings, this is because of its health cash position while Lion has 10% loan notes which will put more pressure on its cash flow which is already weaker, even though debt/equity is lower, the company needs to pay finance cost in addition to trade payables.

Investors' ratios

(i) Rhino is able to pay more dividends to its equity shareholders than Lion and more than expected in the industry. This increases potential investors' confidence in the company.

Recommendation

MAKUBI Limited should acquire Rhino Limited and not Lion Limited for the following reasons:

(i) Overall Rhino Limited is more profitable than Lion Limited and more than expected in the industry.
(ii) Rhino Limited is more efficient than Lion Limited and more than expected in the industry.
(iii) Rhino Limited has better liquidity position than Lion Limited and more than expected in the industry.
(iv) Rhino Limited has no borrowings compared to Lion Limited and industry expectation.
(v) Rhino Limited is able to pay more equity dividends than Lion Limited and more than expected in the industry.

SOLUTION FIVE

(a)

(i)

Asset - An asset is a resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow to the entity.

Liability - A liability is a present obligation of the entity arising from past events, the settlement of which is expected to result in an outflow of resources from the entity.

(ii)

Relevance

Information must be relevant to the needs of the user; it is relevant if it influences the economic decisions of the user. It should have confirmatory and predictive value.

Faithful representation

Information must represent what it purports to represent. Information should be complete, neutral and free from errors. Substance over form is implied.

(iii)

Going concern

Financial statements are normally prepared on the assumption that an entity is a going concern and will continue in operation for the foreseeable future. Any intention to liquidate or significantly reduce the scale of its operations would require the accounts to be prepared on a different basis and this basis would have to be disclosed.

Accruals basis

Financial statements are prepared on the accruals basis of accounting where the effects of transactions are recognised when they occur and are recorded and reported in the accounting periods to which they relate, irrespective of cash flows arising from these transactions.

b) Mukula Timber Ltd financial statement extracts for the year ended 31.12.2017:

SPLOCI		
P/L:		K'm
Depreciation expense	(73.68(w2)/4)	(18.42)
Finance cost on lease liability (working below)		(5.01)
SFP:		
Non current assets		
Right of Use Asset (73.68 – 18.42X2)		36.84
Non current liabilities		
Lease liability		18.57
Current liabilities		
Lease liability		16.49
		35.06

Workings:

1. Initial lease liability

Date (31.12)	Cash flow K'm	PV factor @10%	PV K'm
2016	20	0.909	18.18
2017	20	0.826	16.52
2018	20	0.751	15.02
2019	20	0.683	13.66
Initial lease liability			63.68

2. Initial carrying of the Right of Use Asset

	K'm
Deposit paid on 1.1.2016	10
Initial lease liability	63.68
Initial carrying amount of right of use asset	73.68

3. Lease liabilities/ finance costs

Period (y/e 31.12)	opening balance	finance cost @ 10%	rental paid	closing balance
	K'm	K'm	K'm	K'm
2016	63.68	6.37	(20)	50.05
2017	50.05	5.01	(20)	35.06
2018	35.06	3.51	(20)	18.57

(c) Working and Solution

Cash flows from financing activities		K' 000
Issue of equity shares (3750+1750)		5, 500
Issue of 10% Loan note	(21, 000 – 18, 000)	3, 000
Dividends paid		(2, 000)
Net cash from financing activities		6, 500

Workings

1. Cash received from rights issue:

	S/C	S/P
	K'000	K'000
Balance at 1.1.2016	15,000	17,000
Bonus issue 1/4X15000	3,750	(3,750)
Rights issue (balance)	3,750	1,750
Balances at 31.12.2016	22,500	15,000

2. Dividends paid:

Retained Earnings A/C:	K'000
Balance at 1.1.2016	9,000
Profit for the year	6,000
Dividends paid (balance)	(2,000)
Balance at 31.12.2016	13,000

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

APPLICATION LEVEL

CA 2.2: MANAGEMENT ACCOUNTING

TUESDAY 12 DECEMBER 2017

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

INSTRUCTIONS TO CANDIDATES

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

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

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

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

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

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

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

8. Present legible and tidy work.

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

SECTION A

This Question is compulsory and MUST be attempted

QUESTION ONE

Hachingaba Limited (HL) produces cooking pots which it sells locally and abroad. It has two production centres in Lusaka and Kitwe. The pots are produced in three different sizes with all of them being popular in both markets. HL intends to increase exports and plans to increase production and sales of the pots during the first half of next year 2018. The actual figures for November and December 2017 were:

Month	Production (units)	Sales (units)
November	35,000	35,000
December	40,000	40,000

The following are the plans for the next six months of next year:

(i) To produce 40,000 units in January with a growth of 25% for each subsequent month.

(ii) To sell 40,000 units in January with a growth of 20% for each subsequent month up to April. Sales forecast is 90,000 and 100,000 units for May and June respectively.

(iii) To sell the pots at an average price of K105 per unit, with an anticipated price increase to K115.50 per unit from 1 June 2018.

Additional Information:

(i) Receipts from sales:
- 40% for cash
- 60% on credit
- 5% discount is given to customer for payment within current month and on average 25% of customer will take up this option with the remainder paying the following month.

(ii) Raw material costs K40 per unit produced. Material purchases are paid one month after delivery and are held in inventory for one month before entering production.

(iii) Wages and other variable costs are K40 per unit produced. Wages, variable and fixed costs are paid in the month of production.

(iv) Other fixed costs are K9,000 per month rising to K11,000 from 1 May 2018 onwards.

(v) A new machine costing K2.25 million is to be purchased in February to cope with the planned expansion of demand. K1.075 million will be paid on 1 February and the remainder retained until the machine is operational (expected 1 May 2018).

(vi) An advertising campaign is also to be launched, involving payments of K500,000 in each month of February and May.

(vii) Corporation tax of K280,000 is due on 30 June 2018.

(viii) The company is financed by share capital of 1 million shares of K1 per share, a debenture of K0.5 million paying semi-annual interest of 17.5% on 31 March and 31 June each year. The debenture will be redeemed on 30 June 2019. The directors plan to pay a dividend of K0.1 per share in May 2018.

(ix) An overdraft of K0.5 million has been agreed with Hachingaba Ltd's bankers. The current overdraft interest rate is 21% per annum on the prior month closing balance.

(x) Interest is received on cash balances at 8% per annum on the prior month closing balance.

(xi) At the start of 1 January the firm's bank account would be overdrawn by K580,000.

Required:

(a) Prepare a six months cash budget (17 marks)

The management of HL uses a standard absorption costing system with budgets and variance analysis to evaluate its performance. Below are production and sales volumes details for two of its products.

Budget details

The budgeted details for last year were:

Size of pot	**Small**	**Medium**
Number of pots	13,000	12,000
	K	**K**
Average selling price per pot	60.00	80.00
Average direct costs per pot	35.00	50.00
Maintenance services charge per pot	17.50	17.50
Average profit per pot	7.50	12.50

Actual details

The actual details for last year were:

Size of pot	**Small**	**Medium**
Number of pots	7,500	13,000
	K	**K**
Average selling price per pot	65.00	70.00
Average direct costs per pot	39.50	45.25
Maintenance services charge per pot	17.50	17.50
Average profit per pot	8.00	7.25

The actual costs of Maintenance services department incurred during the period were K425,250.

The Finance Director has asked you to prepare the necessary operating variances for one of the production centres to access performance of the two types of pots, small and medium.

Required:

(b) Calculate the sales price variances and the sales mix profit and sales quantity profit variances for both the small and medium pots. (8 marks)

(c) Prepare a statement that reconciles the budgeted and actual profits and shows appropriate variances in as much detail as possible. (7 marks)

(d) Discuss the circumstances under which each of the following budgets might be used.

(i) Rolling budget (4 marks)

(ii) Zero based budget (4 marks)

[Total: 40 Marks]

SECTION B

Attempt Any THREE (3) questions in this section

QUESTION TWO

Chico Ltd manufactures three biscuits Lemon, Milky and Butter. The company that supplies the two raw materials that are used in all three products has informed Chico that their employees are refusing to work over-time. This means that supply of the materials is limited to the following quantities for the next period:

Material D - 1,030 kg

Material E - 1,220 kg

No other source of supply can be found for the next period.

Information relating to the three products manufactured by Chico Ltd is as follows:

	Lemon	Milky	Butter
Quantity of material used per unit manufactured			
Material D (kg)	2	1	4
Material E (kg)	5	3	7
Maximum sales demand (units)	120	160	110
Contribution per unit sold	K15	K12	K17.50

Owing to the perishable nature of the products, no finished goods inventory is held.

Required:

(a) Recommend a production mix that will maximise the profits of Chico Ltd for the forthcoming period. (8 marks)

(b) Chico Ltd has a valued customer to whom they wish to guarantee the supply of 50 units of each product next period. Would there be an impact on the recommended production plan in (a) above if the valued customer's supply is produced. (4 marks)

(c) Market research has discovered that the price demand relationship for product Milky during the initial launch phase will be as follows:

Price (K)	Demand (units)
100	100
80	200
60	300

Production of Milky biscuits would start immediately, and the production director believes that the variable manufacturing cost would be constant at K25 per unit. This would apply to the entire production and continue up to a production volume of 400 units.

Required:

Determine the optimum price at which Milky biscuits should be sold in order to maximise the company profits during the initial launch phase of the product. Include also the total maximum contribution. State clearly any assumptions you make.

(8 marks)

[Total: 20 Marks]

QUESTION THREE

Chanda Banda is a General trader engaged in selling second hand vehicles and Construction works. Chanda normally buys his cars online from Trade Cars for Zed, collects them from the border when they arrive and parks them in his yard for client viewing. On 1 November 2017, Chanda had 3 Corollas in the yard. These were valued at K11,400 each. During November 2017, 12 more Corollas were delivered as follows.

Date	Car received	Purchase cost per car
10 November	4	K11,875
20 November	4	K13,300
25 November	4	K14,250

Corrollas sold during November were as follows.

Date	Cars sold	Sales price per Car
14 November	5	K19,000
21 November	5	K19,000
28 November	1	K19,000

Required:

(a) Calculate the gross profit from selling the Cars in November 2017, applying the following principles of inventory valuation.

(i) First in first out (FIFO) (5 marks)
(ii) Last in first out (LIFO) (5 marks)
(iii) Weighted average (AVCO) (5 marks)

(b) Chanda's year end is 30 April each year. At 30 April 2017 costs of K415,625 had been incurred on a contract to construct a feeder road under the Road Development Agency. The value of work certified at the end of the period was K366,842. The contract price is K546,250 but it is anticipated that the final costs at 30 September 2017, when the contract is expected to end, will be K599,554.
Calculate the following:

(i) The anticipated future loss on the contract (2 marks)
(ii) The revenue figure for the period to 30 April 2017. (1 mark)
(iii) The cost of sales figure for the period to 30 April 2017. (2 marks)

[Total: 20 Marks]

QUESTION FOUR

Nkhosa Furniture Ltd produces and sells chairs. The company sells the chairs at an average price of K610 to both individual and corporate customers. Its current machines were purchased twenty (20) years ago and as a result some of the products produced are of poor quality. The current rate of rejects (i.e. products of unacceptable quality) is 10%.

Nkhosa Furniture Ltd is now considering replacing the machines with more technically advanced ones, which would eliminate rejects altogether. The company's standard costs for one chair are as follows:

	K	K
Direct material		
Wood	80	
Fabric	60	140
Direct labour		100
Variable overheads		200
Cost per unit produced		440
Cost of rejects		44
Variable cost per unit sold		484

Currently, the company sells 2,250 chairs per annum. The company's fixed overheads are K17,500 per month.

If the new machines were hired to replace the old machines, fixed costs would increase by K2,500 per month. However, the new machines would reduce variable overheads by 15%. The fabric usage by the new machines will result in a 12% decrease in the fabric cost.

Required:

(a) Calculate the current annual break-even point in units and revenue. (3 marks)
(b) Calculate the annual break-even sales revenue if the new machines are used. (5 marks)
(c) Calculate the annual number of chairs that would have to be produced and sold for Nkhosa Furniture to become indifferent about using the old or the new machines. (6 marks)
(d) Explain any three (3) limitations of the Cost-Volume-Profit model (6 marks)

[Total: 20 marks]

QUESTION FIVE

Momo Company produces a broad range of products, with some products extremely complex such that volumes are very low. The company has been using a single rate based on labour to absorb ALL its overhead costs. Following the recent challenges of power shortage, and fuel prices increases, overhead costs for Momo Co have tremendously increased to about 65% of the production cost.

Required:

(a) Explain four (4) advantages and four (4) disadvantages to Momo Co of switching to Activity Based Costing (ABC). (8 marks)

(b) Explain how the following management accounting techniques would be of benefits to Momo Company in light of the changes being experienced.

(i) Life circle costing (3 marks)

(ii) Just In Time production (3 marks)

(iii) Back flush accounting (3 marks)

(iv) Target costing (3 marks)

[Total: 20 Marks]

END OF PAPER

CA 2.2: MANAGEMENT ACCOUNTING SOLUTIONS

SOLUTION ONE

(a) Cash budget for the six months period (amounts in K)

	January	February	March	April	May	June
Cash Inflows:						
Receipts trade sales (w1)	3,932,250	4,624,200	5,549,040	6,658,848	8,392,545	10,518,375
Interest received		887		3,462	10,317	7,555
Total cash inflows	3,932,250	4,625,087	5,549,040	6,662,310	8,402,862	10,525,930
Cash outflows						
Payments to suppliers (w2)	1,600,000	1,600,000	2,000,000	2,500,000	3,125,000	3,902,240
Variable costs/wages	1,600,000	2,000,000	2,500,000	3,125,000	3,906,250	3,981,312
Fixed costs	9,000	9,000	9,000	9,000	11,000	11,000
Advertising		500,000			500,000	
Capital expenditure		1,075,000			1,175,000	
Corporate tax						280,000
Dividends					100,000	
Interest on overdraft	10,150		7,452			
Interest on loan			87,500			87,500
Total cash outflows	3,219,150	5,184,000	4,603,952	5,634,000	8,817,250	8,262,052
Net cash flows	713,100	(558,913)	945,088	1,028,310	(414,388)	2,263,878
Opening cash balance	(580,000)	133,100	(425,813)	519,275	1,547,585	1,133,197
Closing cash balance	133,100	(425,813)	519,275	1,547,585	1,133,197	3,397,075

Workings

1. Sales

Month	Jan	Feb	Mar	Apr	May	Jun
Sales units	40,000	48,000	57,600	69,120	90,000	100,000
Selling price (K)	105	105	105	105	105	115.5
Sales Value (K)	4,200,000	5,040,000	6,048,000	7,257,600	9,450,000	11,550,000
Receipts:						
Cash (40%)	1,680,000	2,016,000	2,419,200	2,903,040	3,780,000	4,620,000
Credit sales (60%)						

	Jan	Feb	Mar	Apr	May	Jun
Current 25% of 60% less 5%	598,500	718,200	861,840	1,034,208	1,346,625	1,645,875
From previous month 75% of 60%	1,653,750	1,890,000	2,268,000	2,721,600	3,265,920	4,252,500
Total trade receipts	**3,932,250**	**4,624,200**	**5,549,040**	**6,658,848**	**8,392,545**	**10,518,375**

2. Purchases

Month	Jan	Feb	Mar	Apr	May	Jun
Production units	40,000	50,000	62,500	78,125	97,656	122,070
Purchases price (K)	40	40	40	40	40	40
Purchase cost (K)	1,600,000	2,000,000	2,500,000	3,125,000	3,906,240	4,882,800
Payment:	**1,600,000**	**1,600,000**	**2,000,000**	**2,500,000**	**3,125,000**	**3,906,240**

3. Wages & other variable costs

Month	Jan	Feb	Mar	Apr	May	Jun
Production units	40,000	50,000	62,500	78,125	97,656	122,070
Purchases price (K)	40	40	40	40	40	40
Purchase cost (K)	1,600,000	2,000,000	2,500,000	3,125,000	3,906,250	4,882,800
Payment:	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**

4. Interest received

Month

February: (0.08/12 * 133,100) = K887

April: (0.08/12 * 519,275) = K3,462

May: (0.08/12 * 1,547,585) = K10,317

April: (0.08/12 * 1,133,197) = K7,555

5. Interest on overdraft

Month

January: (0.21/12 * 580,000) = K10,150

March: (0.21/12 * 425,813) = K7,452

(b) Variances

(i) Sales Price

		K
Small	(60-65) x 7,500 =	37,500(F)
Medium	(80-70) x 13,000 =	130,000(A)
	Variance	96,500(A)

(ii) Sales Mix Variance

PRODUCT	AQSM (UNITS)	AQAM (UNITS)	DIFFERENCE IN THE MIX (UNITS)	STANDARD PROFIT PER UNIT (K)	VARIANCE (K)
Small	10,660	7,500	(3,160)	7.5	23,700 (A)
Medium	9,840	13,000	3,160	12.5	39,500 (F)
	20,500	20,500	-		15,800 (F)

(iii) Sales Quantity variance

PRODUCT	SQSM (UNITS)	AQSM (UNITS)	DIFFERENCE IN THE MIX (UNITS)	STANDARD PROFIT PER UNIT (K)	VARIANCE (K)
Small	13,000	10,660	(2,340)	7.5	17,550 (A)
Medium	12,000	9,840	(2,160)	12.5	27,000 (A)
	25,000	20,500	(4,500)		44,550 (A)

(c) Operating statement

	K	K	K
Budgeted profit (w1)			**307,500**
Sales mix variance			15,800 (F)
Sales quantity variance			44,550 (A)
Standard profit for actual sales units			278,750
Sales price variance			96,500 A
Cost variances	(A)	(F)	
Direct costs (w2)		28,000	
Maintenance Expenditure (w3)		12,250	
Maintenance Volume (w4)	78,750		
	78,750	40,250	38,500 (A)
Actual Profit			**87,750**

Workings

1. Budgeted profit

   Small: 13,000 units x K7.5 per unit = K97,500
   Medium: 12,000 units x K17.5 per unit = K210,000
   Total budgeted profit = K307,500

2. Direct costs variance
   Small: (35 x 7,500) + (39.50 x 7,500) = K33,750 (A)
   Medium: (50 x 13,000) + (45.25 x 13,000) = K61,750 (F)
   Total direct cost variance = K28,000 (F)

3. Maintenance expenditure variance
   Budgeted cost: (K17.50 x 13,000) + (K17.50 x 12,000) = K437,500
   Actual cost: = K425,250

   Variance = K437,500 – K425,250 = K12,250 (F)

4. Maintenance Volume variance
   Budgeted Volume: (13,000 + 12,000) x K17.50 = K437,500
   Actual Volume: (7,500 + 13,000) x K17.50 = K358,750

   Variance = K437,500 – K358,750 = K78,750 (A)

(d) Budget systems

(i) A rolling budget, sometimes called a continuous budget, represents an alternative approach to periodic budgeting. Here, a portion of the budget period is replaced on a regular basis so that the overall budget period remains unchanged. For example, with a budget period of one year, at the end of each quarter a new quarter could be added to the end of the budget period and the elapsed quarter could be deleted, so that the budget was always looking one year ahead. Continuous budgeting continues to increase in popularity.
This type of budget will be used in the following circumstances:
   (a) accurate forecasts cannot be made. For example, in a fast moving environment.
   (b) or for any area of business that needs tight control.

(ii) A zero-based budget is a periodic budget which seeks to dispose of the incremental approach to budgeting. In the incremental approach, an increment is added to the relevant figure from last year’s budget, for example to take account of inflation. In this way, inefficiency can become embedded in the annual budget and profitability may suffer as a result. With the zero-based approach, each element of planned activity is required to be justified in terms of its contribution towards achieving organisational objectives. This involves the formulation of decision packages, which describe particular activities in such a way that managers can compare them in terms of their competing claims on organisational resources, and then rank them from a cost-benefit point of view. In this way, zero-based budgeting looks at each budget period with a new perspective.

A zero based budget is suitable for:

(a) allocating resources in areas were spend is discretionary, i.e. non essential. For example, research and development, advertising and training.
(b) public sector organisations such as local authorities.

SOLUTION TWO

(a) The first step is to check whether the supply of each material is adequate or whether either or both of them represent a limiting factor.

	Lemon	**Milky**	**Butter**	**Total**
Maximum sales demand (units)	120	160	110	
Material D required per unit (kg)	2	1	4	
Total material D required (kg)	240	160	440	840
Material E required per unit (kg)	5	3	7	
Total material E required (kg)	600	480	770	1,850

Comparison with the quantities available show that there will be sufficient material D to satisfy the maximum demand for the products but material E will be a limiting factor.

The next step is to rank the products in order of their contribution per unit of limiting factor. The available material E can then be allocated according to this ranking.

	Lemon	**Milky**	**Butter**
Contribution per unit sold	K15	K12	K17.50
Material E consumed (kg)	5	3	7
Contribution per kg of material E	K3	K4	K2.50
Ranking	2	1	3

The available material E will be allocated to the products according to this ranking, to give the optimum production plan for the next period.

Product		**Material E utilised (kg)**
Milky	160 (maximum)	480
Lemon	120 (maximum)	600
Butter	20 (140/7)	140 (balance)
		1,220

Comment

The available material E is allocated to satisfy the maximum market demand for products Milky and Lemon. The balance of available material is allocated to the last product in the ranking, product Butter.

(b) The recommended production plan in part (a) does not include sufficient products to satisfy the requirement of 50 units for the valued customer as the demand for Butter was not met. The plan must be recalculated, with priority given to the 50 units of Butter needed. The recommended production plan will now be as follows:

Product	**Production (units)**	**Material E utilized (kg)**
Butter	50	350
Milky	160	480
Lemon	78	390
		1,220

Comment

This recommendation makes the best use of the available material E within the restriction of the market requirements for each product. This has resulted in the reduction of product Lemon to allow the minimum production of Butter of 50 units

Note that these solutions ignore any commercial factors which may affect the final decision – such as customers moving to different suppliers.

(c)

1. Assuming there is a linear relationship between price and demand, and thus
   P (price) = A – bq; A is price at which demand is 0, b is the change in price/change in demand and q is the demand.
2. Assuming the Production Director's belief holds and variable costs remain constant, profit maximisation price would be at a point where marginal costs (MC) = marginal revenue (MR); MC = variable cost per unit, MR = A – 2bq

   Calculation of variables; b = K20/100 = K0.2 per unit
   A is obtained by substitution; @ K100 = A – K0.2(100 units) gives A of K120
   P = K120 – K0.2q; MR = K120 – K0.4q
   Therefore; K120 – K0.4q = K25 and solving for q gives 237.50 units
   Price at 237.50 would be; P = K120 – K0.2 (237.50) = K72.5
   Maximum contribution; (K72.5 – K25) x 237.50 = K11,281.25

SOLUTION THREE

(a)

(i) FIFO

Date		Cost of sales	Closing inventory
		K	K
14 November	3 units × K11,400 + 2 units × K11,875	57,950	
21 November	2 units × K11,875 + 3 units × K13,300	63,650	
28 November	1 unit ×K13,300	13,300	
Closing inventory	4 units ×K14,250		57,000
		134,900	57,000

(ii) LIFO

Date		Cost of sales	Closing inventory
		K	K
14 November	4 units × K11,875 + 1 unit × K11,400	58,900	
21 November	4 units × K13,300 + 1 unit × K11,400	64,600	
28 November	1 unit × K14,250	14,250	
Closing inventory	3 units × K14,250 + 1 unit × K11,400		54,150
		137,750	**54,150**

(iii) AVCO

	Units	Unit cost	Bal	Cost of sales	Closing inventory
		K	K	K	K
1 November	3	11,400	34,200		
10 November	4	11,875	47,500		
	7	11,671	81,700		
14 November	(5)	11,671	(58,355)	58,355	
	2		23,345		
20 November	4	13,300	53,200		

	6	12,757.5	76,545		
21 November	(5)	12,757.5	(63,787.5)	63,787.5	
	1		12,757.5		
25 November	4	14,250	57,000		
	5	13,951.5	69,757.5		
28 November	(1)	13,951.5	(13,951.5)	13,951.5	
30 November	4				55,806

	FIFO	LIFO	AVCO
	K	K	K
Opening inventory	34,200	34,200	34,200
Purchases	157,700	157,700	157,700
Total inventory available	191,900	191,900	191,900
Closing inventory	(57,000)	(54,150)	(55,806)
Cost of sales	134,900	137,750	136,094
Sales (11 × K19,000)	209,000	209,000	209,000
Gross profit	**74,100**	**71,250**	**72,906**

(b)

(i) The anticipated future loss on the contract is K 4,522.00

(ii) The revenue figure for the period to 30 April 2017 is K366,842.50

(iii) The cost of sales figure for the period to 30 April 2017 is K420,147.00

Workings

Cost of work done b/d K415,625 + K4,522 = K420,147 Cost of sales

*K[(599,554.5 – 546,250) – (415,625 – 366,842.5)] = K4,522

SOLUTION FOUR

(a) Current breakeven point

Fixed costs = K17,500 x 12 months = K210,000
Contribution per unit = K610 – 484 = K126

Breakeven point (Chairs) = $\frac{210,000}{126}$ = $\underline{\underline{1,666}}$

Breakeven point revenue = 1,666 chairs @ K610 = K1,016,260.00

(b) New breakeven point revenue

	K	K
Direct material		
Wood	80.00	
Fabric (60 @ 88%)	52.80	132.80
Direct labour		100.00
Variable overheads (200@85%)		170.00
Cost per unit produced		402.80

Contribution per unit = K610.00 – K402.80 = K207.20

Contribution/sales ratio = $\frac{207.20}{610}$ = 0.34

Additional fixed costs = 2,500 x 12 months = K30,000

Breakeven point revenue = $\frac{210,000 + 30,000}{0.34}$ = $\underline{\underline{K705,882.35}}$

(c) Output at which the company will be indifferent

The company would be indifferent about buying the new machines where the total cost (fixed costs and variable costs) for production using the old machines is the same as total cost for production using the new machines. This can be calculated as follows:

Total cost using old machines = (K17,500 x 12) + 484a
Total Cost using new machines = (K2,500 x 12) +210,000 + 402.80a

Therefore:
210,000 + 484a = 240,000 + 402.80a
81.20a = 30,000

Therefore, a = $\frac{30,000}{81.20}$ = $\underline{\underline{\text{369 chairs}}}$

(d) Limitations of cost – volume model

(i) This approach can only be applied to a company producing a single product or a mix of products in constant proportions.
(ii) Costs must be able to be split into fixed and variable elements, stepped costs cannot be included in the analysis
(iii) It is assumed that selling price per unit and variable cost per unit are constant at all levels of activity (and, therefore, that the C/S ratio remains constant).
(iv) This implies a linear relationship between profit and sales volume, in practice this is unlikely to be the case.
v) No account is taken of changes in inventory.

SOLUTION FIVE

Part (a)

For ABC systems, a number of cost drivers which will include non-production volume related drivers are used. These will include, number of purchase orders and number of production runs and not just one single rate as is the case with Momo Co.

In addition traditional systems normally allocate service/support costs to production centres. These costs are added to the production cost centres . However, in ABC systems separate cost driver rates for support centres are established and support activities costs are assigned to cost objects without any reallocation to production centres.

It is therefore evident from the above that by having a number of cost centres and cost drivers, ABC systems can more accurately measure the resources consumed by cost objects.

In contrast traditional cost systems tend to produce less accurate costs as most allocation bases used are not related to the cost objects.

The cost/benefit of implementing an ABC system should be analysed. It is quite obvious that the more complex the ABC system is the more beneficial it will be in the organization.

It is however a fact that, such a detailed and complex system will be more costly to a traditional costing system. Costs associated with an ABC system will include software and staff training which may be prohibitive.

Consideration must be given to the poor decisions that will be made as a result of having an inaccurate traditional costing system. Poor decisions may relate to having unprofitable products and dropping profitable products.

However it is not always that an ABC system will greatly improve the quality of cost allocation nor is it the case that a traditional cost system will produce inaccurate cost reports. Therefore ABC must meet the cost/benefit criterion and improvements should be made in the level of sophistication of the costing system up to the point where the marginal cost of improvement equals the marginal benefit from improvement.

Drawbacks of ABC Systems

The following pitfalls of ABC Systems can be noted:

The calculation of unit of costs under ABC faces the same disadvantages of the traditional cost system. This is so because to calculate unit costs of products, the batch level activity costs are divided by the number of units in the batch. This unitising approach is an allocation which yields a constant average cost per unit of output which varies depending on the level of activity.

It is not all costs which will be caused by activities that are measurable in quantitative terms and which can be related to production output. In such situations cost drivers cannot be used.

The behaviour of cost items in a cost pool cannot be explained by single cost driver.

The system can be very expensive to implement

Part (b)

(i) Life Cycle costing

Life Cycle Costing (LCC) involves collecting cost data for each product from inception through its useful life and including any end cost. These data are compared with the life cycle budgeted cost for the product. This comparison is important show if any savings may exist over the life of the product.

LCC will require the recognition of the total support required over the life of the product whereas traditional costing focus on the function based support e.g. Research & Development, production, marketing and so on. Therefore for manufacturers LCC makes explicit the relationship between design choice and production and marketing costs. The insights gained from company budgeted and actual life cycle costs may be used to refine future decisions. Consumers as well as producers may use LCC.

(ii) JIT production

JIT (just in time) production is a system whereby items are manufactured so that they may be delivered to the customers just as they require them. Where there is a series of manufacturing processes this principle extends to the completion of items at each stage of the production process just as the next process requires them. As a consequence of adopting this manufacturing methodology the Momo Co would not hold inventories of finished goods or any significant levels of work in progress. With the power shortages being experienced, the company will structure its production around times when there is power, meaning customers orders may not be met as required. JIT production would be a challenge in this case as suppliers (of power) are not reliable.

(iii) Backflush

Backflush is a costing system , associated with a JIT production system, which applies cost to the output of a process. Costs do not mirror the flow of products through the production process, but are attached to the output produced (finished goods inventory and cost of sales), on the assumption that such back flushed costs are a realistic measure of the actual costs incurred.

Backflush costing will be appropriate for MOMO in trying to keep inventories to the very minimum. In such circumstances, the recording of every little increase in inventory value is added, is simply an expensive and non-value-added activity that should be eliminated. The system should discourage managers from producing simply for inventory since working on material does not add value until the final product is completed or sold. The number of accounting entries should be greatly reduced, as are the supporting vouchers, documents and so on.

(iv) Target Costing

Target Costing is useful in a competitive market such as this where a company is not dominant in the market and is forced to accept the market price for its products or services. Thus Target Costing focuses on the achievement of a unit cost which will earn the company the financial return that it requires.

The starting point for the operation of Target Costing is the unit selling price of the company's product or service. From this is deducted the required profit (to yield the company's required financial return) and the result is the target unit cost that is to be achieved. This target cost is then compared with the expected unit cost to see if the target cost is already being met or if the company needs to consider making changes which will result in a lowering of unit costs.

In the case of high power costs, cost gaps may exist between the target cost and the estimated cost. This will prompt management to consider cost reduction mechanisms to close the gap.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

APPLICATION LEVEL

CA 2.3: AUDITING PRINCIPLES AND PRACTICE

THURSDAY 14 DECEMBER 2017

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

INSTRUCTIONS TO CANDIDATES

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

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

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

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

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

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

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

8. Present legible and tidy work.

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

SECTION A

This question is compulsory and must be attempted

QUESTION ONE

You are the Audit Manager responsible for the audit of the following five clients and you are performing the final stage of the review stage.

The following issues have come to your attention:

1. Fiscal Ltd is a large and well established Zambian agricultural company based in Mazabuka. However, irregular accounting practices for inventory during the year ended 31 March 2017 has been uncovered. Dates and amounts on a number of inventory documents have been changed by the Managing Director. The only audit procedure performed on the valuation of inventory is casting the inventory list to ensure it is mathematically correct. The year-end inventory count was properly conducted and any changes were done after the inventory count.

2. Biscal Plc. is listed on the Lusaka Stock Exchange (LuSE). The payables balance as at 31 March 2017 is immaterial. No audit work has been conducted because the Audit Senior who carried out tests of controls concluded that the controls were effective.

   The Audit Senior verified that:

   - All purchase requisitions were authorised by the Head of the User Department or Stores Manager.
   - All documents used were sequentially numbered.
   - Adequate copies were made of all the documents
   - The company had a list of preferred suppliers.
   - Goods Received Notes (GRN) were raised after matching the goods received to a copy of the appropriate order.
   - Supplier statements are reconciled to supplier ledger accounts.
   - The internal audit department monitors internal controls on a regular basis. It also provides direct assistance to external auditors.

3. Miscal Ltd supplies various electrical spares to most companies on the Copperbelt Province, which is one of the largest provinces in the Republic of Zambia. The Audit Assistant assigned to audit bank balances was unable to carry out any audit work on the bank reconciliation provided due to lack of experience.

   At one time, the various electrical spares were a differentiated product. They were relatively scarce and expensive, and were predominately imported from Germany. Electrical spares technology has developed and the price for electrical spares significantly reduced after the year-end.

4. Qiscal Ltd supplies tents to government institutions. The company has undergone a transformation in the last 21 years, with changes to both the range of tents, production, sourcing and distribution methods. However, audit procedures on the misstatements identified are yet to be performed.

You are aware that ISA 450 *Evaluation of Misstatements Identified During the Audit* gives detailed guidance in this area. It requires that once the relevant procedures have been completed the auditors should consider the impact of uncorrected misstatements on their reporting. It is company policy to charge all misstatements to repairs and maintenance.

5. Ziscal Ltd.'s Assistant Financial Reporting Officer has just provided the written representation requested on the validity of title to traditional land purported to have been acquired during the year. However, the Audit Senior, having exercised professional judgment and skepticism has concerns about the competence of the Assistant Financial Reporting Officer, and the integrity, ethical values and diligence of management. He wants your guidance on the way forward.

Your firm has also been appointed by a relatively newly incorporated company to advise on governance issues. The shareholders would want to have an effective board. The Managing Director strongly believes that lack of good governance in the financial systems is mirrored by similar inconsistencies in other areas. The UK Corporate Governance Code states that every company should be headed by an effective board with collective responsibility.

Required:

(a) (i) Explain the importance of the review stage of an audit. (3 marks)

(ii) Explain two (2) relevant financial statement assertions for each scenario. (10 marks)

(iii) Recommend any two (2) key audit procedures for each scenario. (10 marks)

(b) Explain why segregation of duties is important in corporate governance, giving two (2) examples. (4 marks)

(c) Explain three (3) responsibilities of an effective board of directors. (3 marks)

(d) (i) Define professional judgment and professional skepticism, and give One example for each, when it will be required. (4 marks)

(ii) Explain the recommended actions before using internal auditors to provide direct assistance. (6 marks)

[Total: 40 Marks]

SECTION B

Attempt any THREE (3) questions in this section.

QUESTION TWO

Abraham Kamwala incorporated his company, AK Ltd, in 2016. It provides various medical supplies to the public and private sectors. In 2017, he expects his sales to double and his client base to increase by 50%. Evidence of good service included accessibility at all times to a qualified pharmacist, Dr. Luke Mweemba, good advice, excellent physical and IT infrastructure.

Abraham Kamwala is worried about the poor internal controls in the company, especially in respect of the credit sales system. He is convinced that a lot of drugs are being stolen. Your firm, Ruth Musa Accountants, has been appointed to offer audit services for the year ended 31 March 2017.

The sales system operates as follows:

1. All new customers are subject to credit checks before orders are accepted.
2. Existing customers are not subject to credit checks.
3. All orders are approved by the sales and Marketing Manager.
4. Orders are signed by a general worker in stores.
5. Sequentially numbered Goods Dispatch Notes (GDNs) are raised and a copy is matched to the respective orders and filed. A copy of the GDN is sent to accounts.
6. Customers do not sign on the Good Delivery Note (GDN).
7. An invoice is raised and a copy is sent to accounts and an accounts clerk matches this to the Good Delivery Note (GDN).
8. The Accounts Supervisor agrees cash receipt back to the invoice.
9. Customer statements are sent out on a monthly basis.
10. Receivable ledger for credit customers is reviewed on a monthly basis

Required:

(a) Explain the control objectives for any six (6) controls in the scenario. (9 marks)

(b) State six (6) tests of controls for any of the controls in the scenario. (6 marks)

(c) (i) State two (2) limitations of internal controls. (1 mark)

(ii) Identify and explain the control deficiencies in the sales system of AK Ltd. (4 marks)

[Total: 20 Marks]

QUESTION THREE

You are the Audit senior in AR Associates, a ZiCA registered firm. The Engagement Partner has asked you to start the audit planning for a new client, Mande Swamps Ltd. The company sells mealie meal from seven stores. The Chief Financial Officer of Mande Swamps Ltd is the cousin to one of the drivers in AR Associates. The driver has worked for AR Associates for over eight years.

Mande Swamps Ltd sells mealie meal on credit to all the employees of AR Associates and deductions are made through the payroll. The Payroll Accountant for AR Associates delivers the cheque payment for the mealie meal to the head office for Mande Swamps Ltd on the 10^{th} of every month. The Managing Director of Mande Swamps Ltd always highlights three areas of focus: quality, prompt handling of customer complaints and empathy.

Last year, Mande Swamps Ltd experienced difficulties in recruiting a new Chief Financial Officer and therefore engaged AR Associates to recommend one. After much effort, AR Associates settled on the current Chief Financial Officer. He is currently studying for his last two papers of the CA Zambia qualification.

AR Associates has agreed to provide a short-term loan to Mande Swamps Ltd to enable the company buy 3,000 tonnes of maize. This has been necessitated by an abnormally huge reduction in the price of maize, and the company wants to take advantage and maintain maximum stocks. The probability of the price increasing in the next two months is high.

One of the employees of Mande Swamps Ltd, an Accounts Supervisor, has raised an issue with AR Associates in confidence. Part of his job is to review accounts prepared on a store by store basis, and he is concerned about a large sum of money that appears missing. He initially raised his concern with the Chief Financial Officer, who told him to ignore it.

Last year, the Managing Director was found to have sold his car to the company, sanctioned improvements costing many thousands of kwacha and then bought the car back at the original price. He later argued that this was done with the full sanction of the board of directors. Legal action was brought against him, instigated mainly by newly appointed directors. The Managing Director in turn counter-sued and the matter was eventually settled out of court.

Required:

(a) Explain the importance of independence of the auditor in an audit of financial statements. (2 marks)

(b) Identify and explain six (6) ethical threats which may affect AR Associates. (12 marks)

(c) For each ethical threat in (b), suggest appropriate safeguards, if any. (6 marks)

[Total: 20 Marks]

QUESTION FOUR

Kim Tutu Enterprises produces laptops which it sells in Ndola, Lusaka and Mpika. The laptops have sold well for many years, at relatively high prices, due to low competition. No credit sales are allowed. The company operates a divisionalised structure. All receipts are deposited in a collection account controlled by Head Office. Operational costs are paid out of the current accounts operated by each division. A weekly report is sent by each division to Head Office every Monday morning.

The company operates an imprest system for its petty cash at head office and at each of the divisions. The float for each division and head office is K40 000 and K76 000 respectively. The combined cash balances at the year-end are usually material. The Cashiers and their Supervisors carry out cash counts at the year-end.

Kim Tutu Enterprises' policy is to deposit all the cash receipts for a particular day on the following day. The head office Chief Accountant ensures that all Divisional Accountants observe this without fail. Any lapses attract serious disciplinary action, which can even result in summary dismissal.

Bank reconciliations are prepared on a monthly basis, and any misposts or unidentified credits or debits are immediately followed up by the head office Chief Accountant. In August, when the Cashier was forced to go on leave, the head office Chief Accountant discovered that 2% of the deposits for the month for Mpika Division were missing. Investigations revealed that the Cashier was engaged in teeming and lading fraud. The cashier was dismissed and the money recovered from his leave pay. The Cashier had not been on leave for six years.

Kim Tutu Enterprises is audited by Hakesu & Co.

Required:

(a) Explain the quality of the different sources of audit evidence. (5 marks)

(b) Explain three (3) financial statement assertions in the audit of cash and bank balances. (3 marks)

(c) Describe five (5) substantive procedures for the cash balance in the financial statements of Kim Tutu Enterprises. (5 marks)

(d) Describe seven (7) substantive procedures for the bank balance in the financial statements of Kim Tutu Enterprises. (7 marks)

[Total: 20 Marks]

QUESTION FIVE

BCP Ltd is wholly owned by Christine Mutale. The company supplies chemicals to the manufacturing industry. The company aims at having retail stores in all major towns in Zambia by 2023.

BCP Ltd has an IT department which is key to its success. Standards exist regarding developments over programming and documentation. The company has back-up power sources and backup copies of all programs. The IT department has been instrumental in introducing online sales.

You are the Audit Manager, of CPD & Co. One of the audit staff has just completed the CA Zambia qualification and you have included him on the audit team for the audit of BCP Ltd. He has noticed that BCP Ltd has proper segregation of duties in all departments, including I.T., although thefts relating to a chemical used in the manufacture of stock feed continue to be a big challenge for management.

The partners are very particular about one of the functions of ZiCA as stated in the Accountants Act 2008, as follows:

'Maintain appropriate practice standards among members that are consistent with the principle of self-regulation and the public interest'.

You are responsible for the audit of BCP Ltd. The draft financial statements for the year ended 30 June 2017 show revenue of K500 million (2016 – K470 million), profit before taxation of K60 million (2016 – K48 million) and total assets of K397million (2016 – K384million).

A new chemical which was introduced at a low price in order to penetrate the market, has been valued at the cost of K5 million. However, you have suggested that they should be valued at the net realisable value of K3 million. The directors have refused to adjust the inventory valuation.

Required:

(a) Explain the meaning of public interest. (3 marks)

(b) (i) Identify and explain four (4) audit risks in BCP Ltd. (4 marks)

(ii) Recommend an appropriate response by CPD & Co. for each audit risk identified in (i) above. (4 marks)

(c) Identify and explain three (3) IT general controls in BCP Ltd. (3 marks)

(d) Discuss the audit opinion which you would consider appropriate for BCP Ltd.

(6 marks)

[Total: 20 Marks]

END OF PAPER

CA2.3: AUDITING PRINCIPLES AND PRACTICE SOLUTIONS

SOLUTION ONE

a) (i) Importance of the review stage:

The review stage of the financial statements, in conjunction with the conclusions drawn from the other audit evidence obtained, gives the auditors a reasonable basis for their opinion on the financial statements. It should be carried out by a senior member of the audit team, with appropriate skills and experience.

The auditor usually considers the following:

- Compliance with accounting regulations
- Review for consistency and reasonableness
- Accounting treatment issues
- Treatment of misstatements.

(ii)/ (iii) Financial statement assertions and audit procedures:

Company	(ii) Financial Statement Assertions	(iii) Audit procedures
1. Fiscal Ltd	• Valuation – Inventory is recorded at the year-end at the lower of cost and net realisable value. • Cut-off – All purchases and sales of inventories are recorded in the correct period.	• Vouch a sample of inventory items to suppliers' invoices to ensure it is correctly valued. • Note the numbers of the last goods received notes (GRNs) and goods delivery notes (GDNs) before the year-end and the first GDNs and GRNs after the year-end and check that these have been included in the correct financial year.
2. Biscal Plc	• Completeness – All liabilities have been recorded. (the main risk in liabilities is understatement) • Valuation – All liabilities are included in the accounts at appropriate amounts.	• Obtain selected suppliers' statements and reconcile these to the relevant suppliers' accounts. • Trace selected samples from the trade accounts payables listing to the supporting

		documentation (purchase orders, minutes authorising expenditure, suppliers' invoices etc.)
3. Miscal Ltd	• Existence – Recorded balance exist at the year-end. • Valuation – Inventory is recorded at year-end at the lower of cost and net realisable value.	• Obtain standard bank confirmations. • Find the actual selling prices from the latest invoices and ensure inventory is valued at lower of cost and net realizable value as per IAS 2 *Inventories.*
4. Qiscal Ltd	• Valuation – costs are accurately determined in accordance with relevant standards. • Classification – Misstatements are adjusted in the proper accounts.	• Discuss with management and possibly those charged with governance regarding the wrong company policy of charging all misstatements to repairs and maintenance. • Review the list for repairs and maintenance and ensure misstatements not related to repairs and maintenance are corrected in the appropriate accounts.
5. Ziscal Ltd	• Occurrence – Additions represent assets acquired in the year. • Rights and obligations – The entity has rights to the assets purchased and those recorded at the year-end.	• Inspect supporting documentation such as correspondence from the traditional leaders, board minutes etc. • Verify title to land by inspection of title deed or other documents confirming ownership.

b) Segregation of duty implies a number of people being involved in the accounting process. This is important for a number of reasons such as:
   - It makes it more difficult for fraudulent transactions to be processed (since a number of people would have to collude in the fraud).

- It is also more difficult for accidental errors to be processed (since the more people are involved, the more checking there will be).
- In corporate governance segregation of duties will normally relate to the issue of independence and avoidance of conflict of interest. Examples include:
  - The separation of the roles of Chairman and Chief Executive Officer (CEO). This avoids the risk of conflict of interest.
  - Non-executive directors have no executive (managerial) responsibilities. They independently scrutinise the accuracy of financial information.

c) Effective board responsibilities include:

- Policy – Directors are responsible ultimately for managing the company, and this includes setting strategy, budgets, managing the company's people, maintaining company assets, and ensuring corporate governance rules are kept. This will include risky policy.
- Systems and controls – Director are responsible for the systems put in place to achieve the company policies and the controls put in place to mitigate risks.
- Monitoring – Directors are responsible for monitoring the effectiveness of systems and controls. Internal auditors normally assist directors in the monitoring exercise.

d) (i) Professional judgment is the application of relevant training, knowledge and Experience in making informed decisions about the courses of action that are appropriate in the circumstances of the audit engagement.

This may be required in the following areas:

- Materiality and audit risk
- Nature, timing and extent of audit procedures
- Drawing conclusions based on the audit evidence obtained etc.

Professional scepticism is an attitude that includes a questioning mind, being alert to conditions which may indicate possible misstatement due to error or fraud, and a critical assessment of audit evidence. This is required to reduce the risks of:

- Overlooking unusual transactions
- Over-generalising when drawing conclusions
- Over-generalising when evaluating the results etc.

(ii) Before using internal auditors to provide direct assistance, written agreement must be obtained:

- From an authorised representative of the entity (confirming that the internal auditors will be allowed to follow the external auditor's instructions, and that the entity will not intervene in the work that the internal auditor performs for the external auditor).

- From the internal auditors (confirming that they will keep specific matters confidential as instructed by the external auditor, and inform the external auditor of any threat to their objectivity).

It is especially important that the external auditor directs, supervises and reviews the work performed by the internal auditors, bearing in mind that the internal auditors are not independent of the entity.

ISA 610 (Revised) *Using the Work of Internal Auditors* requires the external auditor to check back to the underlying audit evidence for at least some of the work performed by the internal auditors.

Throughout the process, the external auditor must consider the degree of judgment involved in, and the assessed risk of material misstatement associated with, the work assigned to the internal auditor. They should also remain alert for indications that the internal auditors lack the required competence, and objectivity, to perform the work.

SOLUTION TWO

a) Control objectives for the controls in sales system of AK Ltd.

Control	**Control objectives**
1. All new customers are subject to credit checks before orders are accepted.	Goods and services are only supplied to customers with good credit ratings. This reduces the possibility of irrecoverable debts.
2. All orders are approved by the Marketing Manager.	Goods and services are provided at authorised prices and on authorised terms. This minimises the risk of fraudulent activities e.g. accepting orders from customers with overdue debts and getting a bribe.
3. Sequentially numbered goods dispatch notes (GDNs) are raised and a copy is matched to the respective orders and filed. A copy of the GDN is sent to accounts.	All revenue relating to goods dispatched is recorded. This ensures the completeness of revenue.
4. An invoice is raised and a copy is sent to accounts and an accounts clerk matches this to the GDN.	Transactions have been recorded in the correct period. This minimises cut-off problems.
5. The Accounts Supervisor agrees cash receipt back to the invoice.	Cash receipts are recorded at the correct amounts. This verifies accuracy of documents and guards against teeming and lading fraud.
6. Customer statements sent out on a monthly basis.	Recorded sales transactions represent goods dispatched. This addresses any customer queries and complaints on a timely basis.

b) Tests of control for controls in sales system of AK Ltd:

Controls	Tests of control
1. All new customers are subject to credit checks before orders are accepted.	Review a sample of approved credit facilities for new customers and ensure procedures followed.
2. All orders are approved by the Marketing Manager.	Inspect a sample of orders for evidence of approval by the Marketing Manager e.g. signature.
3. Sequentially numbered goods dispatch notes (GDNs) are raised and a copy is matched to the respective orders and filed. A copy of the GDN is sent to accounts.	Review a sample of GDNs and confirm that they are sequentially numbered.
4. An invoice is raised and a copy is sent to accounts and an accounts clerk matches this to the GDN.	Review a sample of processed invoices and confirm that they are appropriately matched to the GDN
5. The Accounts Supervisor agrees cash receipt back to the invoice.	Review a sample of reconciliations done by the Accounts Supervisor.
6. Customer statements sent out on a monthly basis.	Review AK Ltd.'s procedures for sending out monthly statements and examine evidence of dispatch of statements.

c) (i) Limitations of internal controls:

- The costs of control not outweighing their benefits
- The potential for human error
- Collusion between employees
- The possibility of controls being by-passed or overridden by management
- Controls being designed to cope with routine and not non-routine transactions.

(ii) Sales system control deficiencies for AK Ltd

Control deficiency	Explanation
1. Existing customers are not subject to credit checks.	There is a possibility that existing customers credit standing could deteriorate. This can be caused by a number of factors, some of which may be beyond the customer's control e.g. loss of business to a major competitor. Hence, periodic credit checks should be carried out for existing customers to ensure appropriate decisions are made on a timely basis.
2. Orders are signed by inventory general worker.	The inventory general worker is too junior to sign on orders. A senior person should be responsible for this task. An inventory general worker can easily be bribed, resulting in huge losses to AK Ltd.
3. Customers do not sign on the GDN.	It may be difficult to resolve future disputes regarding dispatches. In addition, this could

	encourage fraudulent activities by the drivers' e.g. short deliveries.
4. Receivable ledger for credit customers is reviewed on a monthly basis.	This could result in customers getting goods beyond their approved credit limits only to be discovered after the month-end. The risk of irrecoverable debts could be increased. The review must be done daily to minimise the stated risk.

SOLUTION THREE

a) Independence is important because of the following:

- The expectations of those directly affected, particularly the members of the company. The audit should be able to provide objective assurance on the truth and fairness of the financial statements that the directors can never provide.
- The public interest. Companies are public entities, governed by rules requiring the disclosure of information.
- Further, independence strengthens the objectivity of the auditor.

b) & (c) Ethical threats and safeguards faced by AR Associates:

(b) (c)

Identification of ethical threat	**Explanation**	**Safeguards**
1. The Chief Financial Officer of Mande Swamps Ltd is the cousin to one of the drivers in AR Associates.	Family relationship between audit firm and client staff could seriously threaten independence. The auditor could be too sympathetic towards the client due to familiarity threat.	In this case, however, no safeguards are required since the cousin is simply a driver and has no connection to the financial reporting process.
2. Mande Swamps Ltd sells mealie meal on credit to all the employees of AR Associates.	Generally speaking, purchasing goods and services from an assurance client on an arm's length basis does not constitute a threat to independence. However, if there is substantial number of such transactions, there may be a threat to independence and safeguards may be necessary. The arrangement in question involves substantial number of transactions. AR Associates may not want to lose this	The ethical threat to independence is significant and therefore the appropriate safeguard may be to terminate this business relationship.

	business deal and in the process fail to exercise appropriate professional scepticism.	
3. Recruitment of a new Chief Financial Officer.	Recruiting senior management for an audit client, particularly those able to affect the subject matter of an audit engagement creates a self-interest threat for the audit firm. Any shortcomings in terms of competence which may be identified during the audit will not be reported for fear of the negative impact this may have on AR Associates. In fact recruiting a partly qualified accountant to hold such a senior could be contrary to the provisions of the Accountants Act 2008.	AR Associates should ensure that the people who will audit this client should be different from those who participated in the recruitment of the Chief Financial Officer. In addition AR Associates should consider a second partner review. Mande Swamps Ltd must also be advised to recruit a qualified accountant to avoid any possible legal sanctions. AR Associates could assist by short listing the candidates so that the final decision is made by Mande Swamps Ltd.
4. AR Associates has agreed to provide a short-term loan to Mande Swamps Ltd to enable the company buy 3,000 tonnes of maize.	The IESBA *Code of Ethics for Professional Accountants* states that an audit firm or individual on the audit engagement should not enter into any loan or guarantee arrangements with a client. The self-interest created by entering into such an arrangement would be so significant that no safeguard would be able to reduce the threat to an acceptable.	AR Associates should not provide the short-term loan.
5. One of the employees, an Accounts Supervisor, has raised an issue with AR Associates in confidence. The Chief Financial Officer told him to ignore it.	Professional accountants must be straightforward and honest in all professional and business relationships. The Chief Financial Officer's behavior advice is totally unacceptable. This could bring into question the reliability of the financial statements.	The Accounts Supervisor should discuss the matter with other trusted supervisors. If the matter is not resolved, he should again seek audience with the Chief Financial Officer before escalating the matter further. Whistleblowing could be the final option.
6. Last year, the Managing Director was found to have sold his car to the company, sanctioned improvements costing many thousands of	The Managing Director's integrity appears questionable. The Managing Director must be seen to be honest. Control environment	The integrity of the Managing Director is put into question.AR Associates should consider resigning, if the transaction was not done

kwacha and then bought the car back at the original price.	could be poor. Hence the entire financial reporting process may not be reliable.	properly. The reputational risks could be significant.

SOLUTION FOUR

a) Quality of evidence:

- External Evidence – Audit evidence from external sources is more reliable than that obtained from the entity's records because it is from an independence source.
- Auditor generated evidence – Evidence obtained directly by auditors is more reliable than that obtained indirectly or by inference.
- Entity evidence – Evidence obtained from the entity's records is more reliable when the related control system operates effectively.
- Written evidence – Evidence in the form of documents (paper or electronic) or written representations are more reliable than oral representations, since oral representations can be retracted.
- Original documents– Original documents are more reliable than photocopies or facsimiles, which can easily be altered by the client.

b) Financial statement assertions relating to cash and bank balances are:

- Existence – Recorded cash and bank balances exist at the period-end.
- Completeness – Recorded cash and bank balances include the effects of all transactions that have occurred.
- Rights and obligations – The entity has legal title to all cash and bank balances shown at the period-end.

c) Substantive procedures for the cash balance include:

- Obtain certificates of cash-in-hand.
- Verify unbanked cheques/cash receipts have subsequently been paid in and agree to the bank reconciliation by inspection of the relevant documentation.
- Ensure IOUs and cheques cashed for employees have been reimbursed.
- Review whether IOUs or cashed cheques outstanding for unreasonable periods of time have been provided for.
- Verify the balances as counted are reflected in the accounts (subject to any agreed amendments because of shortages and so on) by inspection of draft financial statements.

d) Substantive procedures for the bank balance include:

- Obtain bank reconciliation(s) from the responsible official.
- Reperform arithmetic of bank reconciliation(s).
- Obtain standard bank confirmation(s) from each bank with which the client conducted business during the audit period.
- Verify the bank balances with reply to standard bank confirmation(s) and with the bank statement(s).

- Trace cheques shown as outstanding from the bank reconciliation to the cash book prior to the year-end and to the after-date bank statement(s) and obtain explanations for any large or unusual items not cleared at the time of audit.
- Obtain satisfactory explanations for all items in the cash book for which there are no corresponding entries in the bank statement and vice versa by discussion with finance staff.
- Verify balances per the cash book according to the bank reconciliation by inspecting cash book, bank statements and general ledger.
- Determine whether the bank accounts are subject to any restrictions by inquiries with management.

SOLUTION FIVE

a) Acting in the public interest means acting for the welfare of society at large. Various commentators have argued that the figures accountants produce are not neutral, but incorporate value judgments and are in accordance with the wishes of certain viewpoints in society.

The public interest is considered to be the collective wellbeing of the community of people and institutions the professional accountant serves, including clients, lenders, governments, employers, employees, investors, the business and financial community and others who rely on the work of professional accountants.

The International Ethics Standards Board for Accountants (IESBA) is a body of the International Federation of Accountants (IFAC). IESBA comments that an accountant's responsibility is not exclusively to satisfy the needs of an individual client or employer. It extends to society, and often consists of supplying information that society needs.

b) (i) Audit risks in BCP Ltd:

- Chemicals used in manufacture of stockfeed valuation – the valuation may be overstated since the chemicals are susceptible to theft. There is a risk that the valuation may include chemicals which do not exist because they have been stolen.
- The strategy to use a penetration strategy - there is a possibility that the new chemicals could be valued at cost instead of the lower net realisable value.
- Dominance of owner – the company is fully owned by one individual. This could impact on the going concern status of the company e.g. if anything happened to her.
- Online sales – there is a risk of the financial data being corrupted by viruses or hackers.

(ii) Responses to risks identified:

- Chemicals used in the manufacture of stockfeed – focus on testing internal controls over the chemicals.
- The strategy to use a penetration strategy – ascertain sales values for the new chemical sold post year- end that were in inventory at the year-end to ensure and the lower net realisable value which is lower.
- Dominance of owner – Discuss with management the governance structures in place.
- Online sales - Use computer assisted audit techniques (CAATS) to test the operational effectiveness of controls.

c) General controls in BCP Ltd include:

- The company has back-up power sources and back-up copies of all programs.
- BCP Ltd has proper segregation of duties in all departments, including I.T.
- BCP Ltd has standards regarding developments over programming and documentation.

d) The valuation of the new chemical is not in line with the guidance given by IAS 2 *Inventories.* According to IAS 2 inventories should be valued at the lower of cost and net realisable value. Hence in BCP Ltd the inventories are overstated by K2 million (K5 million – K3 million).

The audit opinion may have to be modified. ISA 705 (Revised) *Modifications to the Opinion in the Independent Auditor's Report* sets out the different types of modified opinions that can result. It identifies three possible types of modifications:

- A qualified opinion
- An adverse opinion
- A disclaimer of opinion

The type of modification issued depends on the following:

- The nature of the matter giving rise to the modifications (i.e. whether the financial statements are materially misstated or whether they may be misstated when the auditor cannot obtain sufficient appropriate audit evidence.)
- The auditor's judgment about the pervasiveness of the effects/possible effects of the matter on the financial statements.

In the case of BCP Ltd the misstatement is immaterial since it is 3.3% (2/60 X 100%) of profit before tax and only 0.5% (2/397 X 100%) of total assets. Hence an appropriate opinion will be an unmodified opinion.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

APPLICATION LEVEL

CA 2.4: TAXATION

THURSDAY 14 DECEMBER 2017

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.

Taxation Table

Income Tax

Standard personal income tax rates

Income band	**Taxable amount**	**Rate**
K1 to K39,600	first K39,600	0%
K39,601 to 49,200	next K9,600	25%
K49,201 to K74,400	next K25,200	30%
Over K74,400		37.5%
Income from farming for individuals		
K1 to K39,600	first K39,600	0%
Over K39,600		10%

Company Income Tax rates

On income from manufacturing and other	35%
On income from farming	10%
On income from mineral processing	30%
On income from mining operations	30%

Mineral Royalty

Mineral Royalty on Copper

Range of Norm Price	**Mineral Royalty Rate**
Less than US$4,500	4% of norm value
From US$4,500 to less than US$6,000	5% of norm value
From US$6,000 and above	6% of norm value

Mineral Royalty on other minerals

Type of mineral	**Mineral Royalty Rate**
Base Metals (Other than Copper)	5% on norm value
Energy and Industrial Minerals	5% on gross value
Gemstones	6% on gross value
Precious Metals	6% on norm value

Capital Allowances

Implements, plant and machinery and commercial vehicles:		
Wear and Tear Allowance –	Plant used normally	25%
	Used in Manufacturing and Leasing	50%
	Used in farming and agro-processing	100%
Non- commercial vehicles		
Wear and Tear Allowance		20%
Industrial Buildings:		
Wear and Tear Allowance		5%
Initial Allowance		10%
Investment Allowance		10%
Low Cost Housing	**(Cost up to K20,000)**	
Wear and Tear Allowance		10%
Initial Allowance		10%

Commercial Buildings

Wear and Tear Allowance	2%

Farming Allowances

Development Allowance	10%
Farm Works Allowance	100%
Farm Improvement Allowance	100%

Presumptive Taxes

Turnover Tax

Monthly turnover	**Turnover Tax per month**
K1 to K4,200	3% of monthly turnover above K3,000
K4,200.01to K8,300	K225 per month+3% of monthly turnover above K4,200
K8,300.01 to K12,500	K400 per month+3% of monthly turnover above K8,300
K12,500.01 to K16,500	K575 per month+3% of monthly turnover above K12,500
K16,500.01 to K20,800	K800 per month+3% of monthly turnover above K16,500
Above K20,800	K1,025 per month+3% monthly of turnover above K20,800

Annual turnover	**Turnover Tax per annum**
K1to K50,400	3% of annual turnover above K36,000
K50,400.01to K99,600	K2,700 per annum+3% of annual turnover above K50,400
K99,600.01 to K150,000	K4,800 per annum +3% of annual turnover above K99,600
K150,000.01 to K198,000	K6,900 per annum+3% of annual turnover above K150,000
K198,000.01 to K249,600	K9,600 per annum+3% of annual turnover above K198,000
Above K249,600	K12,300 per annum +3% of annual of turnover above K249,600

Presumptive Tax for Transporters

Seating capacity	**Tax per annum**	**Tax per day**
	K	K
From 64 passengers and over	7,200	19.70
From 50 to 63 passengers	6,000	16.40
From 36 to 49 passengers	4,800	13.00
From 22 to 35 passengers	3,600	10.00
From 18 to 21 passengers	2,400	6.60
From 12 to 17 passengers	1,200	3.30
Less than 12 passengers and taxis	600	1.60

Property Transfer Tax

Rate of Tax on Realised Value of Land, Land and Buildings and shares	5%
Rate of Tax on Realised Value on a transfer or sale of a mining right	10%

Value Added Tax

Registration threshold	K800,000
Standard Value Added Tax Rate (on VAT exclusive turnover)	16%

Customs and Excise

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%

5. Surtax

On all motor vehicles aged more than five (5) years from year of manufacture	K2,000

SECTION A

This question is compulsory and must be attempted

QUESTION ONE

The following extract of the statement of profit or loss has been obtained from the accounts of Copperbelt Minerals (CBM) Ltd, for the year ended 31 December 2017. Copperbelt Minerals Ltd is registered for Value Added Tax (VAT) and is engaged in the extraction and sale of copper.

	K	K
Gross Profit		44,020,400
Add: Additional income		
Gross Dividend income		166,000
Gross Treasury bill interest income		90,000
Gains on sale of property & investments (Note 7)		821,000
		45,097,400
Less: Expenses		
Depreciation	434,000	
Fines (Note 1)	2,016,500	
Wages and salaries (note 2)	5,483,500	
Legal fees (note 3)	716,000	
Donations (note 4)	880,000	
Infrastructure costs (note 5)	1,100,000	
Loss on disposal of equipment (note 7)	36,500	
General operating expenses (note 6)	7,037,900	
		(17,704,400)
Profit before tax		27,393,000

The following information is available:

Note 1: Fines

These comprises the following:

	K
Fines for traffic offences committed by company drivers	11,500
Fines charged for pollution of local river	650,000
Compensation paid to the employees affected by a mine accident	1,250,000
Penalties for late payment of NAPSA contributions	105,000
	2,016,500

Note 2: Wages and salaries

These comprises:

	K
Employees' wages and salaries	3,800,000
Employee's funeral grants	360,000
Staff canteen expenses	54,000
Compensation to former employees for wrongful dismissal	260,000
Loans to former employees written of	38,000
Employee pension benefits	952,500
Skills development allowance	19,000
	5,483,500

Included in employees' wages and salaries are gross annual emoluments of K420,000 and K320,000 for the Human resources Director and the Chief Resident Engineer respectively, who are accommodated in company owned houses.

Note 3 - Legal fees

These comprise the following:

	K
Costs associated with making a rights issue	26,000
Cost associated with recovery of loans from former mine employees	23,200
Costs associated with acquisition of new mine land	65,000
Fees in connection with defending title to mine land acquired 10 years ago	71,500
Other legal costs (which are all allowable)	530,300
	716,000

Note 4 - Donations

These comprises a donation of K210,000 made to approved public benefit organisations, K510,000 donated to Lukanga Golf Club and K160,000 to political parties. Copperbelt minerals (CBM) Ltd received free advertisement in the Golf club's magazines.

Note 5 - Infrastructure costs

These include K750,000 incurred on constructing a hospital in the local mining township and K350,000 incurred on constructing a police post in one of the compounds in the local mining township.

Note 6 General operating expenses

These include the following:	K
Mineral royalty	4,547,400
Drafting and mapping	255,500
Drilling Expenditure	365,000
Increase in specific allowance for receivables	36,000

Increase in general allowance of receivables	163,000
Entertaining key mine suppliers	56,000
General administration expenses (all allowable)	1,615,000
	7,037,900

The mineral royalty shown above paid during the year was based on the gross sales of copper based on the average London Metal Exchange cash price, which was above $6,000 throughout the tax year 2017.

Note 7: Disposals of non-current assets and investments

The company made the following disposals of non-current assets and investments during the year ended 31 December 2017:

(i) Sale of old mining equipment for K53,500 being the market value of the equipment on that date giving rise to the loss on disposal of equipment of K36,500 recognised in profit or loss above. The equipment was originally acquired at cost of K450,000. The income tax value of the equipment was K112,500 and the carrying amount in the financial statement on the date of disposal was K90,000.

(ii) Disposal of a commercial building which was surplus to its requirements for K276,000, being its market value on the date of disposal giving rise to a profit on disposal of K226,000 included under gains on sale of property & investments in the statement of profit or loss shown above. The original cost of the building was K200,000. It had an income tax value of K140,000 on the date of disposal with a carrying amount of K50,000 in the financial statements.

(iii) Sale of 250,000 shares (with a nominal value of K1 each) in Deltex plc a non-mining company listed on the LuSE for K10.50 per share in December 2017, being the market value of the each share on the date of disposal giving rise to a gain on disposal of K490,000 included under gains on sale of property & investments in the statement of profit or loss shown above. The carrying value of the shares in CBM plc's the financial statement on the date of disposal was K2,135,000.

(iv) Sale of 100,000 shares (with a nominal value of K2 each) in Delen Ltd a private limited company for K5 per share in December 2017 being the market value of each share on the date of disposal giving rise to a gain on disposal of K105,000 included under gains on sale of property & investments in the statement of profit or loss shown above. The carrying value of the shares in CBM plc's the financial statement on the date of disposal was K395,000.

Note 8 - Provision for Taxation

The amount of Company Tax paid under the provisional system of payment of Tax for the charge year ended 31 December 2017 was K8,200,000.

Note 9: Importation of Saloon Motor car

The company imported a saloon car with a cylinder capacity of 1500cc from overseas in January 2017, at a cost of US $9,400. The company paid insurance charges of US $1,300 and freight charges of US $600 in transit to the port of Dare Salam. Transportation and other costs from the Nakonde border post to the company's premises amounted to US $1,800. Motor car registration in Zambia was K12,000. The car was manufactured in 2016.

The exchange rate issued by the Commissioner General at that time was K9.20 per US $.

However, the exchange rate at the company's bank when the company paid for the saloon car was K9.10 per US$.

The motor car is used on a personal to holder basis by the chief resident engineer whose private use of the car was 40% in the tax year 2017

Note 10: Implements plant and machinery

During the year ended 31 December 2017, the company additionally purchased office equipment at a cost of K69,600 (VAT Inclusive) an Isuzu motor van (single cab) to be used as pool vehicle at a cost K139,200 (VAT inclusive) from local vendors.

The only other asset held by the company at 1 January 2017, used in the business qualifying for wear and tear allowances was a smelter plant which was constructed at a cost of K1,200,000 (VAT exclusive) in 2016.

Required:

(a) Explain the Property Transfer Tax implications of the disposal of assets in note (7) above and calculate the amount of any Property Transfer Tax arising on the disposal of each asset. (6 marks)

(b) In relation to the importation of the saloon motor car in note (9) above:

(i) Compute the Value for Duty purposes (VDP) of the car. (3 marks)

(ii) Compute the total import taxes paid on the importation of the motor car and determine the cost of the car for purposes of capital allowances. (5 marks)

(c) Compute the maximum amount of capital allowances claimable by CBM plc in the tax year 2017. (8 marks)

(d) Calculate the taxable business profit for the company for the year ended 31 December 2017. (12 marks)

(e) (i) Calculate the final amount of company Income Tax payable by the company for the charge year 2017. (3 marks)

(ii) State the due date of the payment of the company income tax you have computed in (e) (i) above and explain the consequences of paying the tax late. (3 marks)

[Total: 40 Marks]

SECTION B

Attempt any THREE (3) questions in this section.

QUESTION TWO

Dorcas Nanyangwe who had been employed as a Public Relations Manager at a Zambian resident company for many years was declared redundant on 31 August 2017.

Her annual salary in the year 2017 was K420,000. She had always been provided with airtime vouchers of K750 per month and with free meals at the company's staff canteen. The cost of these meals to the company was K2,000 per month.

Throughout her employment, Dorcas was accommodated in a company house, which had a market value of K650,000 in the tax year 2017. Had it been let out on a commercial basis, the company would have received monthly rentals of K5,500. During her period of employment in the tax year 2017, the company paid the wages for the workers employed by Dorcas at her residence. These included the security guard's wages of K1,200 per month and the housekeepers wages of K1,000 per month.

Throughout her employment in the tax year 2017, Dorcas used her own personal Toyota Prado motor car with a cylinder capacity of 3000cc for the purposes of the employment. She acquired the car in 2016 at a cost of K160,000. She travelled a total of 20,000 kilometres in the motor car in the tax year 2017, out of which 14,000 kilometres where in the performance of the duties of her employment, with the remaining 6000 kilometres being for private purposes. She incurred motor car running expenses of K3,500 per month in the tax year 2017. The company paid her a commuted fuel allowance of K2,000 per month throughout her period of employment with the company.

In January 2017, the company paid college fees for her children amounting to K15,000 and in May 2017, the company reimbursed her K8,000 she incurred on the medical treatment of her sick daughter.

Throughout her employment, her employer had always deducted NAPSA contributions of 5% of her basic salary as employee's contributions and the company had always contributed 5% of her basic salary as employer's NAPSA contributions on her behalf. Dorcas has always made life insurance payments of K1,500 per month in respect of her children and herself.

On being declared redundant on 31 August 2017, Dorcas received the following amounts:

	K
Accrued Leave pay	35,000
Repatriation pay	210,000
Severance pay	140,000
Pension	240,000

Half of the pension were employee's pension refunds and the remaining amount half was employer's pension refunds. Pay As You Earn of K93,763 was deducted from her emoluments in the tax year 2017.

Other income

Dorcas has run a farming business for many years. In the tax year 2017 the tax adjusted profit from farming before capital allowances was K367,500 generated from a turnover of K860,000. She had a tax loss brought forward from farming of K95,900, which arose in the previous tax year, when her crop was destroyed by army worms. Dorcas will not make an election to have farming profits for the tax year 2017 averaged in respect of the loss.

She incurred the following expenditure in relation to the farming business during the tax year 2017:

	K
Purchase of new irrigation equipment	80,000
New boreholes	50,000
Development expenditure on new Banana plantation	36,000
Construction of a dwelling house for farm manager	127,000
Construction of new storage buildings for farm produce	28,000

There were no other implements plant and machinery qualifying for capital allowances in the tax year 2017.

Required:

(a) Prepare a computation of the taxable emoluments from employment, clearly stating which of the benefits received by Dorcas from her employer in the tax year 2017, will be exempt from income tax. (10 marks)

(b) Compute the final taxable business profit from farming for the tax year 2017.

(5 marks)

(b) Calculate the total final income tax payable by Dorcas Nanyangwe in the tax year 2017. (5 marks)

[Total: 20 Marks]

QUESTION THREE

Assume today's date is 15 December 2016

Drydan Ltd will commence in business on 1 January 2017 making supplies that are standard- Rated for Value Added Tax (VAT) purposes. The company's sales, excluding VAT, for the first twelve months of trading are expected to be as follows:

Month	**Sales**
January 2017	K53,000
February 2017	K54,000
March 2017	K75,500
April 2017	K81,200
May 2017	K60,400
June 2017	K40,500
July 2017	K50,500
August 2017	K67,000
September 2017	K79,500
October 2017	K98,000
November 2017	K145,200
December 2017	K155,000

In January 2017, the company expects to incur expenditure on standard rated services valued at K33,640 (VAT inclusive). Drydan Ltd will purchase goods from VAT registered suppliers, and for the first eight months of trading purchases are expected to be K31,320 (VAT inclusive) per month. The price of goods is expected to be increased from K31,320 to K44,080 (VAT inclusive) per month with effect from 1 September 2017 due to inflation. Petrol and diesel expenses are expected to be K8,120 (VAT inclusive) and K11,600 (VAT inclusive) per month respectively.

On 20 December 2016, before the commencement of trading the company will purchase a Motor car at a cost of K197,200 (VAT inclusive) and a motor van at a cost of K208,800 (VAT Inclusive) to be used wholly and exclusively for business purposes.

Required:

(a) Explain whether Drydan will be required to pay provisional income tax or turnover tax in the tax year 2017. (2 marks)

(b) Discuss how the company will be required to account for the tax in (a) above to the ZRA in the tax year 2017, stating the relevant due date(s) for the payment of the tax. (4 marks)

(c) Determine when the sales of the business will exceed the annual VAT registration limit and explain the action the company will be required to take with regards to registration once the threshold is reached. (5 marks)

(d) Assuming that the company registers for Value Added Tax voluntarily on 1 January 2017, calculate the VAT payable for the year ended 31 December 2017. (5 marks)

(e) Explain two advantages and two disadvantages to the company of voluntarily registering for VAT. (4 marks)

[Total: 20 Marks]

QUESTION FOUR

Zambia Revenue Authority (ZRA) was established under an Act of parliament. Its main role is to collect taxes on behalf of the Central Government. ZRA is headed by the Commissioner General who is appointed by the Republican president. ZRA is managed by independent board whose members are appointed by the Minister, predominantly from the private sector.

Accountants play a role in providing taxation services to their clients as well as to their employer. As providers of tax services, accountants should help in reducing tax evasion in the country. Accountants are expected to observe the professional code of ethics in the provision of taxation services. They should not use unlawful practices to aid in tax reduction.

The International Ethics Standard Board for Accountants (IESBA), a body of IFAC, lays down the fundamental principles in the code of ethics for professional accountants. Accountants require such an ethical code because they hold positions of trust, and people rely on them and their expertise.

Required:

(a) In relation to the administration of taxes in Zambia:

(i) State any three (3) powers of the Commissioner General. (3 marks)

(ii) Explain any three (3) responsibilities of the Zambia Revenue Authority in addition to the responsibility to collect taxes. (3 marks)

(b) Explain the meaning of integrity and professional behavior as fundamental principles outlined in the code of ethics. (4 marks)

(c) Explain the meaning of tax evasion, and explain any five (5) practices of tax reduction which may constitute tax evasion. (7 marks)

(d) Explain three (3) consequences of tax evasion (3 marks)

[Total: 20 Marks]

QUESTION FIVE

Kabanki and Lubunda are Zambian resident individuals running a partnership business. Kabanki and Lubunda's partnership agreement provides for profits and losses to be shared in the ratio of 3 : 2 between Kabanki and Lubunda respectively. This is after allowing for annual partnership salaries of K30,000 for Kabanki and K36,000 for Lubunda.

For the tax year 2017, the partnership's amount of provisional income was K275,000 and based on this figure, the partners paid provisional income tax on the appropriate due dates. This amount of provisional income was made up of the partnership's tax adjusted profit after capital allowances.

For the year ended 31 December 2017, the partnership's statement of profit or loss showed a net profit figure of K300,000. This profit figure is after accounting for the following:

(i) Legal and professional fees which comprised of legal fees in connection with the purchase of a ten (10) year lease of land of K15,000, accounting and audit fees of K30,000 and legal fees incurred in defending title to business assets of K40,000.

(ii) Salaries and wages which comprised salaries for employees of K100,000, partners salaries of K18,000, employer's NAPSA contributions K5,000, and partners' pension contributions K12,000.

(iii) Other operating expenses which comprised motor car expenses of K14,000, entertaining customers of K28,000, labour day awards for employees of K20,000, depreciation of non-current assets of K17,000 and rent and rates paid of K30,000. The motor car expenses were incurred in respect of the cars used by Kabanki and Lubunda. It has been agreed with the Commissioner General that the business use in each car is 60%.

(iv) The partnership's capital allowances for the tax year 2017 on partnerships assets have been calculated as K58,200

Required:

(a) Calculate the provisional income tax paid by the partners for the tax year 2017.
(7 marks)

(b) Calculate the final income tax payable by the partners for the tax year 2017.
(13 marks)

[Total: 20 Marks]

END OF PAPER

CA 2.4: TAXATION SOLUTIONS

SOLUTION ONE

(a) There are no Property Transfer Tax (PTT) implications on the disposal of the mining equipment as chattels are outside the scope of PTT.

Property transfer tax is chargeable on the transfer of the commercial building. The amount of property transfer tax arising will be:

K276,000 x 5% = K13,800

There will be no PTT implications on the transfer of the shares in Deltex plc as the sale of shares in a company listed on the LuSE is exempt from PTT.

Property transfer Tax chargeable on the transfer of the shares in Delen will amount to:

(100,000 x K5) x 5% = K25,000

(b) (i) COMPUTATION OF VDP

Cost	$9,400
Insurance	$1,300
Freight	$600
	$11,300
	X 9.20
VDP	K103,960

(ii) COMPUTATION OF IMPORT TAXES

	K	K
VDP	103,960	
Customs Duty @30%	31,188	31,188
	135,148	
Excise Duty @20%	27,030	27,030
	162,178	
Import VAT @ 16%	25,948	25,948
Total Cost	188,126	
Transportation costs		
($1,800 x K9.20)	16,560	
*Motor car registration	12,000	
Total cost for capital allowances purposes	216,686	
Total import duties		84,166

*Note: Motor car registration costs are capitalised as part of the cost of the car, whilst insurance expenses within Zambia, are treated as revenue expenditure.

(c) COMPUTATION OF CAPITAL ALLOWANCES

	K
Mining equipment	
Balancing allowance	
(K112,500 – K53,500)	59,000
Commercial building	
Balancing charge (proceeds restricted to original cost)	
(K140,000 – K200,000)	(60,000)
Salon Motor car	
Wear and tear allowance	
K216,686 x 20%)	43,337
Office equipment	
Wear and tear allowance	
(69,600 x 25/29) x 25%)	15,000
Isuzu motor van	
Wear and tear allowance	
(K139,200 x 25/29)x 25%	30,000
Smelter Plant	
Wear and tear allowance	
(K1,200,000 x 25%)	300,000
Hospital	
wear and tear allowance	
(K750,000 x 25%)	187,500
Police post	
Wear and tear allowance	
(K350,000 x 25%)	87,500
	662,337

(d) COMPUTATION OF TAXABLE MINING PROFIT

	K	K
Profit before tax		27,393,000
Add		
Depreciation	434,000	
Fines- pollution	650,000	
NAPSA Penalties	105,000	
Staff canteen expenses	54,000	
Loans to former employees written of	38,000	
Accommodation benefit		
- HR Director's accommodation (K420,000 x 30%)	126,000	
- Chief Resident Engineer's accommodation (K320,000 x 30%)	96,000	
Fees - Acquisition of mine land	65,000	
Fees in connection with a rights issue	26,000	
Costs associated with recovery of loans	23,200	
Donation to golf club	510,000	
Donation to political party	160,000	
Construction of hospital	750,000	
Construction of police post	350,000	
Increase in general allowance	163,000	
Entertaining key suppliers	56,000	
Loss on disposal	36,500	
Personal to holder car benefit	18,000	3,660,700
		31,053,700
Less		
Dividend income	166,000	
Treasury bill interest	90,000	
Gains on sale of property and investments	821,000	
Capital allowances (W)	662,337	
		(1,739,337)
Taxable mining profit		29,314,363
Treasury bill interest		90,000
Taxable business profit		29,404,363

(e) (i) COMPUTATION OF COMPANY INCOME TAX PAYABLE

	K
Company income tax on mining profit (29,314,363 x 30%)	8,794,309
Company income tax on Treasury bill interest (K90,000 x 35%)	31,500
	8,825,809
Less Tax already paid:	
Provisional income tax	(8,200,000)
WHT on Treasury bill interest (K90,000 x 15%)	(13,500)
	612,309

(ii) Due date for payment of company income tax and consequences of late Payment of the tax:

(1) The due date of the payment of the above company income is 21 June 2018
(2) if company income tax is paid late, then a penalty is 5% of that income tax per month or part thereof will arise
(3) Additionally, interest on overdue tax will be charged at the Bank of Zambia discount rate plus 2% per annum.

SOLUTION TWO

(a) COMPUTATION OF TAXAXBLE EMOLUMENTS

	K	K
Salary (K420,000 x 8/12)		280,000
Airtime vouchers(K750 x 8)		6,000
Fuel allowance (K2,000 x 8)		16,000
Security guard's wages (K1,200 x 8)		9,600
Housekeeper's wages (K1,000 x 8)		8,000
College fees		15,000
Accrued leave pay		35,000
Total income		369,600
Less allowable deductions		
NAPSA contribution (restricted to maximum)	3,060	
Capital allowances (K160,000 x 20%) x 14,000/20,000)	22,400	
Motor car running expenses (K3,500 x 8) 14,000/20,000)	19,600	
		(45,060)
Taxable emoluments		324,540

EXEMPT BENEFITS

The following benefits received by Dorcas in the tax year 2017, will be exempt from income tax:

(1) Free residential accommodation
(2) Free meals from staff canteen
(3) Reimbursement of cost of medical treatment
(4) Repatriation pay
(5) Severance pay
(6) Pension refunds

(b) COMPUTATION OF FINAL TAXABLE PROFIT FROM FARMING

	K	K
Taxable profit before capital allowances		367,500
Less capital allowances:		
Irrigation equipment (K80,000 x100%)	80,000	
Bore hole (K50,000 x 100%)	50,000	
Banana Plantation (K36,000 x 10%)	3,600	
Dwelling house (restricted to)	20,000	
Storage buildings (K28,000 x 100%)	28,000	
		(181,600)
Taxable profit before loss relief		185,900
Less loss relief		(95,900)
Final taxable profit from farming		90,000

(c) COMPUTATION OF FINAL TAXABLE PROFITS

	Total	*Non-farming income*	*Farming income*
	K	K	K
Income from employment (a)	324,540	324,540	Nil
Farming profits (b)	90,000	Nil	90,000
	414,540	324,540	90,000
Less tax free income	(39,600)	(39,600)	Nil
	374,940	284,940	90,000
Income tax on non- farming income			
K9,600 x 25%		2,400	
K25,200 x 30%		7,560	
K250,140 x 37.5%		93,803	
		103,763	
Tax on farming profits			
(K90,000 x 10%)		9,000	
		112,767	
PAYE		(93,763)	
Final income tax payable		19,000	

SOLUTION THREE

(a) The company's annual turnover is expected to be K959,800. The company will therefore be required to pay provisional income tax and not turnover tax as the annual turnover is expected to be above K800,000 and the income it will generate will consist of business profits.

(b) In order to calculate provisional income tax for the tax year, the company will be required to estimate the taxable income at the start of the tax year 2017 and complete a return of provisional income which should be submitted to the Commissioner General not later than 31 March 2017.

This return will contain an estimate of the taxable income for the tax year 2017 as well as an estimate of income tax on that taxable income. The estimated income tax is the provisional tax which is payable in four quarterly instalments on the dates following dates:

1st Instalment:	31 March 2017 but not later than 10 April 2017
2nd Instalment:	30 June 2017 but not later than 10 July 2017
3rd Instalment:	30 September 2017 but not later than 10 October 2017
4th Instalment:	31 December but not later than 10 January 2018

Following the end of the tax year 2017, the company will be required to complete a self-assessment income tax return. This return must contain the amounts of income received from all the sources and a computation of income tax payable thereon. As advance payments of income tax would have been made under the provisional tax system during 2017, any balance of income tax payable will be the actual tax computed less all the taxes already paid.

The self-assessment income tax return must be submitted to the Commissioner General by 21 June 2018.

(c) The VAT exclusive turnover for the year 2017 is expected to be as follows:

	Monthly sales	**Cumulative sales**
January	53,000	53,000
February	54,000	107,000
March	75,500	182,500
April	81,200	263,700
May	60,400	324,100
June	40,500	364,600
July	50,500	415,100
August	67,000	482,100
September	79,500	561,600
October	98,000	659,600
November	145,200	804,800
December	155,000	959,800

Therefore, the VAT exclusive turnover will exceed the annual threshold of K800,000 in November 2017.

The company will be required to notify ZRA of liability to register for VAT, within one month (that is, December 2017). This notification is done using form VAT 1.

The company will be registered by ZRA effective 1 December 2017 or an agreed earlier date.

(d) COMPUTATION
VAT PAYABLE FOR THE YEAR ENDED 31 DECEMBER 2017

	K	K
Output VAT		
Sales (959,800 x16%)		153,568
Input VAT		
Services: (K33,640 X 4/29)	4,640	
Purchases:		
[(K31,320 X 8) + (K44,080 x 4)] x 4/29	58,880	
Petrol	-	
Diesel: (K11,600 X 4/29 X 90%)	1,440	
Motor car (Pre-registration/irrecoverable)	-	
Motor van (Pre-registration)	-	
		(64,960)
VAT payable		88,608

(e) The advantages of registering voluntarily for VAT are as follows:

(i) The impression of a substantial business is given to customers and competitors,
(ii) A trader is able to compete favourably for all business opportunities,

(iii) A trader is able to recover all the recoverable input VAT and thereby improving the business' liquidity position.

Disadvantages

(i) VAT registration results in increased administration. The trader's administrative costs will rise as a result of registering for VAT purposes.
(ii) Non-registered customers who get supplies from the trader will have an increased cost.
(iii) Penalties will be charged if the trader fails to pay VAT or submit the VAT return.

SOLUTION FOUR

(a) (i) The Commissioner General has the following powers:

- (i) Power to enter and search tax payer's premises for money and documents
- (ii) Power to request and examine financial statements of the tax payer for the purpose of obtaining information
- (iii) Power to assess, charge and collect tax dues and make recoveries
- (iv) Power to seize property, and any documents of the tax payer.
- (v) Power to request a tax return to be submitted by the tax payer any time.

(ii) The Zambia Revenue Authority has the following responsibilities:

- (i) Properly assess and collect taxes, duties, levies and fees at the right time
- (ii) Properly enforce all relevant legislation and administrative provisions
- (iii) Provide revenue and trade statistics to the central Government
- (iv) Ensure that all monies collected are properly accounted for and banked
- (v) Facilitating international trade, travel and movement of goods.

(b) Integrity

This principle means that members shall be straightforward and honest in all professional and business relationships. The principle of honesty and integrity impose an obligation on the practitioner to ensure straightforwardness, fair dealing, a commitment not to mislead or deceive and truthfulness.

This means that a member providing tax services shall ensure that their own personal tax obligations and those of any associated entities for which the member is responsible are properly discharged.

Professional behavior

This principle means that members shall act in a manner consistent with the good reputation of the institute and the tax profession, refraining from any conducts that might bring the institute and/or tax profession into disrepute.

Members should conduct themselves professionally with due consideration towards clients, third parties, other members of the tax profession, staff, employers and the general public.

(c) Tax evasion refers to the use of illegal means to avoid or reduce tax liabilities. The main aim of the tax payer practicing tax evasion is to defraud the government of the tax revenue.

The illegal means of evading tax include the following:

(i) Deliberate concealment of income, including overstatement of tax credits or exemptions and suppression of profits
(ii) Deliberate misrepresentation of material fact, manipulation of accounts, disclosure of unreal expenses for deductions, showing personal expenditure as business expenses.
(iii) Hiding relevant documents which may help in the computation of taxable income, and eventually tax payable.
(iv) Tax payers failure to maintain proper accounting records of all the transactions
(v) Tax payer's failure to report taxes such as VAT, PAYE and withholding ta which are collected on behalf of the government.

(d) Tax evasion has the following consequences:

(i) Loss of revenue for the government which directly affect its debt level and jeopardize its capacity to provide services and fund programmes that meet the needs of our ever-changing society.
(ii) People who comply with the law shoulder a heavier tax burden than they should because they must compensate for others who participate in the underground economy.
(iii) Businesses that fulfill their tax obligations face unfair competition from non-compliant businesses.

SOLUTION FIVE

(a) KABANKI AND LUBUNDA
PROVISIONAL INCOME TAX PAYABLE FOR THE TAX YEAR 2017

			K
Estimated taxable profit			275,000
	TOTAL	KABANKI	LUBUNDA
	K	K	K
Salaries	66,000	30,000	36,000
Balance 3:2	209,000	125,400	83,600
Total	275,000	155,400	119,600
Computation			
First K74,400		9,960	9,960
Balance: K81,000 @37.5%		30,375	
: K45,200 @37.5%			16,950
Provisional tax paid		40,335	26,910

(b) KABANKI AND LUBUNDA
INCOME TAX PAYABLE FOR THE TAX YEAR 2017

	K	K
Net profit as per accounts		300,000
Add		
Legal fees in connection with 10 year lease	15,000	
Partners' salaries	18,000	
Partners' pension contributions	12,000	
Entertaining customers	28,000	
Depreciation	17,000	
Motor car expenses: K14,000 x 40%	5,600	
		95,600
		395,600
Less:		
Capital allowance		(58,200)
Adjusted business profit		337,400

	TOTAL	KABANKI	LUBUNDA
	K	K	K
Salaries	66,000	30,000	36,000
Balance 3:2	271,400	162,840	108,560
Total	337,400	192,840	144,560

Computation	KABANKI	LUBUNDA
First K74,400	9,960	9,960
Balance K118,440 @37.5%	44,415	
K70,160 @37.5%		26,310
Income tax liability	54,375	36,270
Less		
Provisional income tax	(40,335)	(26,910)
Income tax payable	14,040	9,360

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

APPLICATION LEVEL

CA 2.5: FINANCIAL MANAGEMENT

FRIDAY 15 DECEMBER 2017

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

INSTRUCTIONS TO CANDIDATES

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

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

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

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

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

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

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

8. Present legible and tidy work.

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

SECTION A
This question is compulsory and must be attempted

QUESTION ONE

JIL Inc. is a company involved in the business of research & development. The company has incurred expenditure of K4.5 million over the past three years researching and developing a special computer with artificial human intelligence. The computer is now fully developed, and the directors are considering which of two mutually exclusive options should be taken to exploit the potential of the new product. The directors think the completion of the project would now allow the company to hold on to cash after massive expenditure on research & development. The options are as follows:

Option one

The option involves the company manufacturing the computer. This would be a new departure, since the company has so far concentrated successfully on research and development projects. However, the company has manufacturing space available that is currently idle. The company would have to purchase plant and equipment costing K200 million and invest K80 million in working capital immediately for production to begin. The working capital is expected to increase by 5% per year. A market research report, for which the business paid K80, 000, indicates that the new product has an expected life of five years. Sales of the product during this period are predicted as follows:

Year	1	2	3	4	5
Number of units (‘000)	8.4	13.5	19.6	13	7.2

The selling price per unit will be K25, 000 in the first two years but will fall to K20, 000 in the following two years. In the final year of the product’s life, the selling price will fall to K18, 000. Variable production costs are predicted to be 35% of the selling price, and fixed production costs (including depreciation) will be K60 million a year. Marketing costs will be K3 million per year. The business intends to depreciate the plant and equipment using the straight-line method and based on an estimated residual value at the end of the five years of K50 million. The project would be funded using 60% equity and the remainder 10% bond with five years maturity and par value of K1, 000. The bonds have a market value of K1, 030. The estimated project beta is 1.4. The equity premium is 8% and risk free rate of 4.5%. The annual tax rate is 30% payable in arrears of one year.

Option Two

JIL Inc. could sell the patent rights to an American company AHN plc. for K190 million net of tax, payable in two equal installments. The first installment would be payable immediately and the second at the end of two years. This option would give AHN plc. the exclusive right to manufacture and market the new product. The company cost of capital is 10%.

Required:

(a) Evaluate each of the two options available to JIL Inc. and state the suitable one based on your financial evaluation. (24 marks)

(b) Discuss any other factors that JIL Inc. should consider before arriving at a decision. (6 marks)

(c) Explain the major factors that you think can influence how much cash a business will hold. (10 marks)

[Total: 40 marks]

SECTION B

Attempt any THREE (3) questions in this section.

QUESTION TWO

DoDi Ltd has an annual turnover of K30 million before taking into account bad debts of K0.2 million. All sales made by the business are on credit, and, at present, credit terms are negotiable by the customer. On average, the settlement period for trade receivables is 60 days. Trade receivables are financed by an overdraft bearing a 15% rate of interest per year. The business is currently reviewing its credit policies to see whether more efficient and profitable methods could be employed. Only one proposal has so far been put forward concerning the management of trade credit.

The credit control department has proposed that customers should be given a 2% cash discount if they pay within 30 days. For those who do not pay within this period, a maximum of 45 days' credit should be given. The credit department believes that 65% of customers will take advantage of the discount by paying at the end of the discount period, and the remainder will pay at the end of 45 days. The credit department believes that bad debts can be effectively eliminated by adopting the above policies and by employing stricter credit investigation procedures, which will cost an additional K25,000 a year. The credit department is confident that these new policies will not result in any reduction in sales revenue. The department also believes that the new policy will improve the cash level of the company which has been poor in the recent past. DoDi Ltd has enough retained profits which the management feels could be a free source of finance for the business.

Assume 360 days in a year.

Required:

(a) Evaluate the proposal to abandon the existing credit policies and adopt the proposals of the credit control department. (10 marks)

(b) Explain whether retained profits are a free source of finance to the business. (4 marks)

(c) Discuss the reasons a business may decide to hold at least some of its assets in the form of cash. (6 marks)

[Total: 20 Marks]

QUESTION THREE

(a) A company, IV Bank Plc is considering acquiring a MFNance institution, MFN Plc, whose annual dividend is due for payment in a few days. Financial information for the two companies is as follows:

	IV Bank	MFN
Number of ordinary shares	10 million	5 million
Ordinary share price (ex div basis)	K4·45	K3·30
Earnings per share	50 ngwee	40 ngwee
Proposed payout ratio		60%
Dividend per share a year ago	40 ngwee	23·3 ngwee
Dividend per share two years ago	30 ngwee	22 ngwee
Equity beta	1·3	1·4
Other relevant financial information		
Average sector price/earnings ratio	10	10
Risk-free rate of return	4·6%	4·6%
Return on the market	10·6%	10·6%

Required:
Determine the value of MFN Plc using the following methods:

(i) dividend growth model; (3 marks)

(ii) Price/earnings ratio method; (4 marks)

(b) Explain the significance to IV Bank Plc , of the values you have calculated in (a) above, in comparison to the current market value of MFN Plc. (3 marks)

(c) IV Bank Plc has in issue 9% bonds which are redeemable at their par value of K100 in five years' time. Alternatively, each bond may be converted on that date into 20 ordinary shares of the company. The current ordinary share price of IV Bank Plc is expected to grow at a rate of 6.5% per year for the foreseeable future. The bank has a cost of debt of 7% per year.

Required:

Calculate the following current values for each K100 convertible bond:

(i) Conversion value;
(ii) Market value;
(iii) Conversion premium and explain its significance.

(10 marks)
[Total: 20 marks]

QUESTION FOUR

The following financial information relates to Crypto Zambia Ltd:

Extract Income statement information for the last year is follows:

	K'000
Profit before interest and tax	12,000
Interest	(3000)
Profit before tax	9,000
Income tax expense	(3,000)
Profit for the period	6,000
Dividends	(2,000)
Retained profit for the period	4,000

Extract Statement of Financial Position information at the end of the last year:

	K'000	K'000
Ordinary shares, par value 50ngwee	5,000	
Retained earnings	15,000	
Total equity		20,000
8% loan notes, redeemable in three years' time		30,000
Total equity and non-current liabilities		50,000

Average data on companies similar to Crypto Zambia Ltd:

Interest coverage ratio	8 times
Long-term debt/equity (book value basis)	80%

The board of directors of the company is considering several financial proposals that have been made by its Chief Financial Officer. Each financial proposal is independent of any other proposal.

Proposal 1: Dividend Increase

The current dividend per share should be increased by 20% in order to make the company more attractive to equity investors.

Proposal 2: Bond Issue

A bond issue should be made in order to raise K15 million of new debt capital. Although there are no investment opportunities currently available, the cash raised would be invested on a short-term basis until a suitable investment opportunity arose. The loan notes would pay interest at a rate of 10% per year and be redeemable in eight years' time at par.

Proposal 3: Rights Issue

A 1 for 4 rights issue should be made at a 20% discount to the current share price of K2.30 per share in order to reduce gearing and the financial risk of the company.

Required:

(a) Evaluate each of the three financial proposals made by the Chief Financial officer.

[Total: 20 Marks]

QUESTION FIVE

Msanzi Limited is considering embarking on a project to manufacture a new product, the JK. A feasibility study recently undertaken at a cost of K170,000 (yet to be paid for), has recommended that the selling price for the JK should be K70 each for the next sixteen years. It further indicated that at least 5,000 units of the product could be sold annually.

Annual overheads of the proposed project are expected to be as follows:

	K
Variable overheads	86,000
Depreciation	100,000
Factory rentals	24,000
Head office charges	60,000
Salaries	196,000
Total	466,000

NOTES

1. The salaries figure of K196,000 consists of the following:

	K
Current salary of supervisor from head office	45,000
Responsibility allowance of the supervisor for taking charge of JK production	9,000
Senior manager's current salary	96,000
Salary of assistant manager who will be recruited specially for the project	46,000

In the event that the project does not start for any reason, the senior manager will be retired and a new manager will be recruited at an estimated salary of K90,000 per annum.

2. Production equipment is expected to cost K1 million with no scrap value at the end of 16 years. Msanzi Ltd Charges depreciation at the rate of 6.25% per annum on cost.

3. Because direct labour is in short supply, labour resources would have to be diverted from other work which currently earns a contribution of K2/hr.

4. Product JK will be produced in an already existing factory which the company is currently renting for K24,000 per annum. This figure is subject to an increase of 10% per annum.

5. Msanzi absorbs its fixed overheads at the rate of K5 per direct labour hour. However actual expenditure on fixed overheads would not alter.

6. The estimated cost of capital of Msanzi is 10% per annum in real terms.

7. The cost of one unit of the JK is expected to be as follows:

	K
Direct Labour 3hrs at K4.5/hr.	13.5
Materials 2kg at 3.5/kg	7
Variable overheads 2hrs at K2.15/hr.	4.30
Fixed overheads (including depreciation) 2hrs at K5/hr.	10
Total	34.8

The directors of Msanzi Limited are unsure of whether or not to proceed with the manufacture of the product.

As the consultant of Msanzi Limited, you have been approached by the managing director to provide financial advice to the board of directors.

Required:

(a) Provide relevant computations to show whether or not the company should proceed with the manufacture of the product on financial grounds. (report format not required). (10 marks)

(b) Explain the term "relevant costs" and provide reasons for your treatment of the various costs in part (a). (6 marks)

(c) Measure the sensitivity of the project to changes in the following variables:
    (i) Sales Volume (2 marks)
    (ii) Sales Price (2 marks)

[Total: 20 Marks]

THE END OF PAPER

CA 2.5 -FINANCIAL MANAGEMENT SOLUTIONS

SOLUTION ONE

Option 1 Financial Evaluation

Year	0	1	2	3	4	5	6
	K'm	K'm	K'm	K'm	K'm	K'm	K'm
Sales (W.1)		210	338	392	260	130	
Variable costs (W.1)		(74)	(118)	(137)	(91)	(45)	
Fixed costs		(30)	(30)	(30)	(30)	(30)	
Marketing costs		(3)	(3)	(3)	(3)	(3)	
Net cash flow before tax		104	186	222	136	51	
Tax@30%		-	(31)	(56)	(67)	(41)	(15)
Working capital	(80)	(4)	(4)	(4)	(5)	102	-
Initial investment	(200)	-	-	-	-	50	-
Net cash flow	(280)	100	151	161	65	163	(15)
Discount@12%	1.000	0.893	0.797	0.712	0.636	0.567	0.507
Present values	(280)	89	120	115	41	92	(8)

NPV 170

Workings

1. Sales & Variable cost

Year	1	2	3	4	5
	K'm	K'm	K'm	K'm	K'm
Selling price	0.025	0.025	0.02	0.02	0.018
Units	8,400	13,500	19,600	13,000	7,200
Sales	210	338	392	260	130
Variable costs	73.50	118.13	137.20	91.00	45.36
2. Fixed cost	60	60	60	60	60
Depreciation	30	30	30	30	30
	30	30	30	30	30
W.C by 5%	84.0	88.2	92.6	97.2	102.1
Incremental	4.0	4.2	4.4	4.6	4.9

Cost of Debt	Cash flow	Discount@10%	PV	Discount@5%	PV
Yr 0 MV	(1,030)	1	(1,030)	1	(1,030)
Yr 1-5 Interest	70	3.791	265.37	4.329	303
Yr 5	1,000	0.621	621	0.784	784
		(144)			57

IRR= 5% + 57/201 (10%-5%)
IRR = 6.4%
Cost of debt = 6.4%

Cost of equity = 4.5% + 1.4(8%)
Cost of equity = 15.7%

WACC = 15.7%(0.6) + 6.4% (0.4)

WACC= 12%

Option 2 Financial evaluation			
Year	0	1	2
Net proceeds (K'm)	95	0	95
Discount@10%	1	0.909	0.826
Present Value	95	0	78
Total PV	**173**		

JIL plc should choose option 2 because it gives a higher Net present value compared to option 1 on financial grounds.

b)
The overall strategy of the business. The business may need to set the decision within a broader context. The business may need to concentrate on its core business of research & development where it has succeeded. Just like the financial evaluation has indicated, JIL may opt to sell the patent rights to AHN and concentrate on its core business. However, JIL may also consider another company manufacturing and marketing the product under license. This would enable JIL to retain the ownership rights.

Accuracy of forecasts. The forecasts made by the business should be examined carefully. Inaccuracies in the forecasts or any underlying assumptions may change the expected outcomes. For instance the cost of capital may not remain constant as assumed in the financial evaluation.

Risk. JIL should consider using other techniques such as sensitivity analysis to take into account the risk of the project.

c)

i) *The nature of the business*. Some businesses such as utilities (for example, water, and electricity and gas suppliers) may have cash flows that are both predictable and reasonably certain. This will enable them to hold lower cash balances. For some businesses, cash balances may vary greatly according to the time of year. A seasonal business may accumulate cash during the high season to enable it to meet commitments during the low season. A research company like JIL might need a lot of cash to carry out its business operation.

ii) *The opportunity cost of holding cash*. Where there are profitable opportunities it may not be wise for JIL to hold a large cash balance.

iii) *The level of inflation*. Holding cash during a period of rising prices will lead to a loss of purchasing power. The higher the level of inflation, the greater will be this loss.

iv) *The availability of near-liquid assets*. If a business has marketable securities or inventories that may easily be liquidated, the amount of cash held may be reduced.

v) *The availability of borrowing*. If a business can borrow easily (and quickly) there is less need to hold cash.

vi) *The cost of borrowing*. When interest rates are high, the option of borrowing becomes less attractive.

vii) *Economic conditions*. When the economy is in recession, businesses may prefer to hold cash so that they can be well placed to invest when the economy improves. In addition, during a recession, businesses may experience difficulties in collecting debts. They may therefore hold higher cash balances than usual in order to meet commitments.

viii) *Relationships with suppliers*. Too little cash may hinder the ability of the busines2s to pay suppliers promptly. This can lead to a loss of goodwill. It may also lead to discounts being forgone.

SOLUTION TWO

DoDi Ltd
New proposals from credit control department

		K'm	K'm
Current level of investment in receivables			
	[K30m × (60/360)]		5
Proposed level of investment in receivables			
	[(K30m × 65%) × (30/360)]	(1.63)	
	[(K30m × 35%) × (45/360)]	(1.31)	(2.94)
Reduction in level of investment in receivables			2.06

The reduction in overdraft interest as a result of the reduction in the level of investment will be K2.06m × 15% = K0.31million.

		K'm	K'm
Cost of cash discounts offered	(K30m × 65% × 2%)		0.39
Additional cost of credit administration			0.025
			0.415
Bad debt savings		(0.2)	
Interest charge savings (see above)		(0.31)	(0.51)
Net cost of policy each year			0.095

The evaluation shows a net benefit of K0.095million if the proposal is implemented. It would therefore be cheaper to stay to adopt the new proposed credit policy.

a)

It is tempting to think that retained profits are a 'cost-free' source of funds for a business. However, this is not the case. If profits are reinvested rather than distributed to shareholders, those shareholders cannot invest the profits made in other forms of investment. They will therefore expect a rate of return from the profits reinvested that is equivalent to what they would have received had the funds been invested in another opportunity with the same level of risk.

b)

i) To meet day-to-day commitments, a business requires a certain amount of cash. Payments for wages, overhead expenses, goods purchased and so on must be made at the due dates. Cash has been described as the lifeblood of a business. Unless it circulates through the business and is available for the payment of maturing obligations, the survival of the business will be at risk. Profitability is not enough; a business must have sufficient cash to pay its debts when they fall due.

ii) If future cash flows are uncertain for any reason, it would be prudent to hold a balance of cash. For example, a major customer that owes a large sum to the business may be in financial difficulties. Given this situation, the business can retain its capacity to meet its obligations by holding a cash balance. Similarly, if there is some uncertainty concerning future outlays, a cash balance will be required.

iii) A business may decide to hold cash to put itself in a position to exploit profitable opportunities as and when they arise. For example, by holding cash, a business may be able to acquire a competitor's business that suddenly becomes available at an attractive price.

SOLUTION THREE

a)

(i) Dividend growth model

Earnings per share of MFN = 40n
Proposed payout ratio = 60%
Proposed dividend of MFN is therefore = 40 x 0.6 = 24n per share

If the future dividend growth rate is expected to continue the historical trend in dividends per share, the historic dividend growth rate can be used as a substitute for the expected future dividend growth rate in the dividend growth model.

Average geometric dividend growth rate over the last two years = $(24/22)^{1/2}$ = <u>1.045 or 4.5%.</u> (Alternatively, dividend growth rates over the last two years were 3% (24/23.3) and 6% (23.3/22), with an arithmetic average of (6 + 3)/2 = 4.5%)
<u>Cost of equity</u> of MFN using the capital asset pricing model (CAPM)
= 4.6 + 1.4 x (10.6 – 4.6) = 4.6 + (1.4 x 6) = <u>13%</u>

Value of ordinary share from dividend growth model = (24 x 1.045)/(0.13 – 0.045) = <u>K2.95</u>. Value of MFN = 2.95 x 5m = <u>K14.75 million</u>

ii) Price/earnings ratio method valuation

Earnings per share of MFN = 40n
Average sector price/earnings ratio = 10
Implied value of ordinary share of MFN = 40 x 10 = K4.00
Number of ordinary shares = 5 million
Value of MFN = 4.00 x 5m = **<u>K20 million</u>**

b) The current market capitalisation of MFN is K16.5m (K3.30 x 5m).The price/earnings ratio value of the company is higher than this at K20m = (0.4X10)5m, using the sector average price/earnings ratio. MFN's own price/earnings ratio is 8.25 (3.30/0.4). The difference between the two price/earnings ratios may indicate scope for improving the financial performance of MFN following its acquisition. If IV t Bank has the managerial skills to effect this improvement, the company and its shareholders may be able to benefit as a result of the acquisition.

The dividend growth model value is lower than the current market capitalisation at K14.75m. This represents a minimum value that MFN shareholders will accept if Invest Bank makes an offer to buy their shares. In reality they would want more than this as an inducement to sell. The current market capitalisation of MFN of K16m may reflect the belief of the stock market that a takeover bid for the company is imminent and, depending on its efficiency, may indicate a fair price for MFN's shares, at least on a marginal trading basis.

Alternatively, either the cost of equity or the expected dividend growth rate used in the dividend growth model calculation could be inaccurate, or the difference between the two values may be due to a degree of inefficiency in the stock market.

c) (i) Conversion value of each convertible bond:

Expected share price in five years' time = 4.45 x $(1.0655)^5$ = K6.10
Conversion value = 6.10 x 20 = **K122**
Compared with redemption at par value of K100, conversion will be preferred. The current market value will be the present value of future interest payments, plus the present value of the conversion value, discounted at the cost of debt of 7% per year.

(ii) Market value of each convertible bond

Year	Cash flow (K)	DF	PV(K)
1-5	9	4.100	36.90
5	122	0.713	86.99
			123.89

Calculation of floor value of each convertible bond - The current floor value will be the present value of future interest payments, plus the present value of the redemption value, discounted at the cost of debt of 7% per year.

Floor value of each convertible bond = (9 x 4.100) + (100 x 0.713) = K108.20

(iii) Calculation of conversion premium of each convertible bond:

Current Conversion value = 4.45 x 20 = K89.00

Conversion premium = current market value – current conversion value
= K123.89 – 89.00 = **K34.89**
This is often expressed on a per share basis, i.e. 34.89/20 = K1.75 per share. The premium accepted by investors in the convertible bond will depend on IV Bank's growth potential and prospects for an increase in its share price. The

conversion premium has the effect on conversion of bonds of reducing the number of new ordinary shares issued.

SOLUTION FOUR

Proposal 1: Dividend Increase

Crypto Zambia Ltd paid a total dividend of K2 million or 20 ngwee per share according to the income statement information. An increase of 20% would make this K2·4 million or 24 ngwee per share and would reduce dividend cover from 3 times to 2·5 times. It is debatable whether this increase in the current dividend would make the company more attractive to equity investors, who use a variety of factors to inform their investment decisions, not expected dividends alone. For example, they will consider the business and financial risk associated with a company when deciding on their required rate of return.

It is also unclear what objective the CFO had in mind when suggesting a dividend increase. The primary financial management objective is the maximisation of shareholder wealth and if the company is following this objective, the dividend will already be set at an optimal level. From this perspective, a dividend increase should arise from increased maintainable profitability, not from a desire to 'make the company more attractive'. Increasing the dividend will not generate any additional capital for the company, since existing shares are traded on the secondary market.

Miller and Modigliani have shown that, in a perfect capital market, share prices are independent of the level of dividend paid. The value of the company depends upon its income from operations and not on the amount of this income which is paid out as dividends. Increasing the dividend would not necessarily make the company more attractive to equity investors, but would attract equity investors who desired the new level of dividend being offered. Current shareholders who were satisfied by the current dividend policy could transfer their investment to a different company if their utility had been decreased.

The proposal to increase the dividend should therefore be rejected, perhaps in favour of a dividend increase in line with current dividend policy.

Proposal 2: Bond Issue

The proposal to raise K15 million of additional debt finance does not appear to be a sensible one, given the current financial position of Crypto Zambia Ltd. The company is very highly geared if financial gearing measured on a book value basis is considered. The debt/equity ratio of 150% is almost twice the average of similar companies . This negative view of the financial risk of the company is reinforced by the interest coverage ratio, which at only four times is half that of similar companies.

Raising additional debt would only worsen these indicators of financial risk. The debt/equity ratio would rise to 225% on a book value basis and the interest coverage ratio would fall to 2.7 times, suggesting that the company would experience difficulty in making interest payments.

The proposed use to which the newly-raised funds would be put merits further investigation. Additional finance should be raised when it is needed, rather than being held for speculative purposes. Until a suitable investment opportunity comes along, the company will be paying an opportunity cost on the new finance equal to the difference between the interest rate on the new debt (10%) and the interest paid on short-term investments. This opportunity cost would decrease shareholder wealth. Even if an investment opportunity arises, it is very unlikely that the funds needed would be exactly equal to K15m.

The interest charge in the income statement information is K3m while the interest payable on the 8% loan notes is K2.4m (30 x 0.08). It is reasonable to assume that K0.6m of interest is due to an overdraft. Assuming a short-term interest rate lower than the 8% loan note rate – say 6% – implies an overdraft of approximately K10m (0.6/0.06), which is one-third of the amount of the long-term debt. The debt/equity ratio calculated did not include this significant amount of short-term debt and therefore underestimates the financial risk of Crypto Zambia Plc.

The bond issue would be repayable in eight years' time, which is five years after the redemption date of the current loan note issue. The need to redeem the current K30m loan note issue cannot be ignored in the financial planning of the company. The proposal to raise K15m of long-term debt finance should arise from a strategic review of the long-term and short-term financing needs of the company, which must also consider redemption or refinancing of the current loan note issue and, perhaps, reduction of the sizeable overdraft, which may be close to, or in excess of, its agreed limit.

Given the above concerns and considerations discussed, the proposal to raise additional debt finance is not recommended.

Analysis

Current gearing (debt/equity ratio using book values) = 30/20 = 150% Revised gearing (debt/equity ratio using book values) = (30 + 15)/20 = 225%

Current interest coverage ratio = 12/3 = 4 times

Additional interest following debt issue = 15m x 0·1 = K1·5m Revised interest coverage ratio = 12/(3 + 1·5) = 2·7 times

Proposal 3: Rights Issue

Rights issue price = 2·30 x 0·8 = K1·84

Number of new shares issued = (5/0·5)/4 = 2·5 million

Cash raised = 1·84 x 2·5m = K4·6 million

Number of shares in issue after rights issue = 10 + 2·5 = 12·5 million

Current gearing (debt/equity ratio using book values) = 30/20 = 150%

Revised gearing (debt/equity ratio using book values) = 30/24·6 = 122%

Current interest coverage ratio = 12/3 = 4 times Current return on equity (ROE) = 6/20 = 30%

In the absence of any indication as to the return expected on the new funds, we can assume the rate of return will be the same as on existing equity, an assumption consistent with the calculated theoretical ex rights price.

After-tax return on the new funds = 4·6m x 0·3 = K1·38 million

Before-tax return on new funds = 1·38m x (9/6) = K2·07 million

Revised interest coverage ratio = (12 + ·07)/3 = 4·7 times

The current debt/equity and interest coverage ratios suggest that there is a need to reduce the financial risk of Crypto Zambia Plc. A rights issue would reduce the debt/equity ratio of the company from 150% to 122% on a book value basis, which is 47% higher than the average debt/equity ratio of similar companies. After the rights issue, financial gearing is still therefore high enough to be a cause for concern.

The interest coverage ratio would increase from 4 times to 4·7 times, again assuming that the new funds will earn the same return as existing equity funds. This is still much lower than the average interest coverage ratio of similar companies, which is 8 times. While 4·7 times is a safer level of interest coverage, it is still somewhat on the low side.

No explanation has been offered for the amount to be raised by the rights issue. Why has the CFO proposed thatK4·6m be raised? If the proposal is to reduce financial risk, what level of financial gearing and interest coverage would be seen as safe by shareholders and other stakeholders? What use would be made of the funds raised? If they are used to redeem debt they will not have a great impact on the financial position of the company, in fact it appears likely that that the overdraft is twice as big as the amount proposed to be raised by the rights issue. The refinancing need therefore appears to be much greater than K4·6m. If the funds are to be used for investment purposes, further details of the investment project, its expected return and its level of risk should be considered.

There seems to be no convincing reason for the proposed rights issue and it cannot therefore be recommended, at least on financial grounds.

SOLUTION FIVE

(a)

WORKINGS

1) Wages
   K13.5 x 5,000 = K67,500
2) Responsibility allowance of supervisor K,9000
3) Incremental cost of senior manager’s salary K96,000-K90,000=K9,000
4) Materials k7 x 5000 = K35,000
5) Variable overheads k4.3/unit x 5000 = K21,500
6) Contribution foregone from direct labour diverted K2/hr x 3hrs =K6/unit

CONTRIBUTION FROM JK		K’000
Year 1-16	5,000 x (K70 –K24.8)	226
Less contribution foregone	5,000 x K2/unit	(10)
Contribution per unit		216

NPV COMPUTATION

YEAR	0	1-16
	K'000	K'000
Contribution		216
Equipment	(1,000)	-
Responsibility allowance	-	(9)
Senior manager(K96,000-K90,000)	-	(6)
Assistant manager	-	(46)
Net cash flows	**(1,000)**	**155**
D.F 10%	1.000	7.824
	(1,000)	1,212.72
NPV K212.72		

Msanzi should proceed with the manufacture of the product because the financial evaluation gives a positive NPV which means the value of the shareholders will be increased.

b) Only future incremental cash flows which are a consequent of the decision are relevant costs. Relevant costs are those that arise as a consequence of the investment decision. Examples include cash flows and opportunity costs. Past and committed costs and centrally allocated overheads are irrelevant to the investment decision as they have been incurred or in the case of committed costs, will be incurred regardless of the investment decision. Relevant costs are included in the NPV computation but irrelevant costs are ignored.

(i)Feasibility study
This is a committed cost even though it hasn't been paid for yet and so it is irrelevant.

(ii) Depreciation of the equipment K100,000 is not a cash flow.

(iii)The current salary of K45000 and K96000 are both committed costs .However the responsibility allowance is an added cost specific to the project and so it is relevant. The assistant manager's salary is also specific to the project and therefore a relevant cost.

(iv) Cost of production equipment is a future incremental cash flow relevant to the project.

(v) Diversion of direct labour is an opportunity cost as it leads to a loss of contribution.

(vi) Factory rentals of K24,000 are a committed cost as they will be incurred whether production commences or not.

(vii) Absorbed fixed overheads are irrelevant costs as they are not a future incremental cash flow arising from the manufacture of JK.

(viii) Head office charges of K60,000 are centrally allocated overheads and so are irrelevant to the decision.

(c) SENSITIVITY ANALYSIS

<u>Sales volume</u>
(K212.72/K1, 212.2) x 100 = 17.54%
<u>Sales price</u>
K212.72/K 2,738,400 = 0.0078%

END OF SOLUTIONS