CA ZAMBIA PROGRAMME EXAMINATIONS

ADVISORY LEVEL

CA 3.1: ADVANCED FINANCIAL REPORTING

MONDAY 14 DECEMBER 2020

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

INSTRUCTIONS TO CANDIDATES

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

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

   Section A: One (1) compulsory scenario question.

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

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

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

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

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

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

8. Present legible and tidy work.

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

10. Present Value and Annuity tables are attached at the end of this paper.

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

SECTION A

This question is compulsory and must be attempted.

QUESTION ONE

The following consolidated financial statements relate to Mukatasha Group for 2019.

Consolidated statement of profit or loss for the year ended 30 September 2019.

		K'million
Revenue		5,000
Cost of sales		(3,500)
Gross profit		1,500
Other income		500
Distribution and Administrative costs		(940)
Finance cost		(70)
Share of associate profit after tax		180
Profit before tax		1,170
Taxation		(170)
Profit for the period	1,000	
Other comprehensive income:		
Revaluation surplus		74
Net actuarial gain or loss		nil
Other comprehensive for the year		74
Total comprehensive income		1,074
Profit for the period attributable to:		
Equity shares of parent		836
Non – controlling interest		164
		1,000
Total comprehensive income attributable to:		
Equity shares of parent		910
Non – controlling interest		164
Total comprehensive income	1,074	

Consolidated statements of financial position as at:

	30 September 2019 K'million	30 September 2018 K'million
Assets		

Non – current					
Intangible	300			0	
Property, plant & equipment		3,800		3,218	
Goodwill		178			196
Investment in associate		340			110
Other investments		136			136
Financial assets		156			206
			4,910		
3,866					
Current					
Inventories		244			272
Trade receivables		460			512
Other receivables		72			90
Bank		40			332
			816		
1,206					
Total assets	**5,726**	**5,072**			
Equity & liabilities					
Equity					
Equity share K1 each	1, 900		1,560		
Share premium		640		280	
Revaluation reserve – Land		206		132	
Retained earnings	1,100		312		
Non – controlling interest		800		518	
Total equity	4,646		2,802		
Liabilities					
Non – current					
Deferred tax		168		218Defined	
benefit plan	96			9012% Loan	
notes	274		814		
	538		1,122		
Current					
Trade payables		296		800	
Current tax		170		240	
Interest payable		76			108
			542		1,148
Total liabilities	1,080	2,270			

Total equity & liabilities	**5,726**	**5,072**

The following information is relevant:

(i) On 30 June 2019, Mukatasha acquired 80% of the equity shares of Natasha Plcfor a cash consideration of K1,260million. The fair value of non – controlling interest at that date was K320million. The fair value of net assets of Natasha Plc at acquisition was K1,520million. This is summarised below:

	K'million
Deferred tax	(116)
Current tax	(32)
Property, plant and equipment	1, 560
Inventory	46
Trade receivables	102
Bank	36
Trade payables	(76)

(ii) Intangible asset relates to development expenditure that met capitalisation criteria in accordance with IAS 38'Intangible assets'. During the year to 30 September 2019, the company incurred and paid for development expenditure.The amount shown in the statement of financial position is the gross amount, amortisation was not charged because the project had not yet been substantially completed.

(iii) Consolidated goodwill impaired for the year to 30 September 2019 relates to Twatasha Plc a subsidiary that was acquired two years ago. Mukatasha has owned 75% of the equity shares in Twatasha Plc since acquisition date. The goodwill in other subsidiaries did not suffer any impairment loss.

(iv) Kwacha is the functional and reporting currency of Mukatasha Plc. As part of hedging strategies, Mukatasha maintains two accounts, Zambian Kwacha account and United States Dollars account. The company has maintained $0.50 million in the dollar account since 30September 2018. This figure has been translated to Kwacha and included in other income and total bank balance.

Kwacha to dollar exchange rates:

30 September 2018	K23.20
Average rate for the year to 30 September 2019	K24.00
30 September 2019	K24.80

(v) An item of plant, with a carrying value of K200million, was disposed of on 31 August 2019 by Mukatasha. 20% of the disposal value had not been paid by the buyer by 30 September 2019. This amount is shown as other receivables. The gain on disposal has been included in other income.

There was no other separate sale of an item of property, plant and equipment during the year to 30 September 2019.

Depreciation charged to cost of sales for the year ended 30 September 2019 amounted to K540million.

(vi) The financial assets figure relates to financial assets classified as 'fair value through profit or loss'. During the year to 30September 2019, Mukatasha sold for cash a financial asset with a carrying value of K50 million at a profit of K100million. This has been included in other income.There was no acquisition of financial assets.

(vii) Mukatasha acquired 22% equity shares in Zikomo Plc for cash consideration of K50 million on 30December 2018. Mukatasha is able to exercise significant influence in Zikomo Plc. Investments in associate were not impaired in the year to 30 September 2019.There was no disposal of any investment in associate during the year.

(viii) Mukatasha paid total contribution amounting to K30 million to a defined benefit plan. Pension benefits amounting to K666 million were paid during the year to 30 September 2019.

(ix) On 30 September 2019, Mukatasha disposed of a 70% of the equity shares in Twalumba Plc for cash consideration of K1,178million. This left Mukatasha with 20% equity shares in Twalumba Plc fair valued at K300million. Mukatasha is able to exercise significant influence in Twalumba Plc.The fair value of net assets of Twalumba Plc at the date of disposal are summarised below:

	K'million
Trade receivables	132
Bank	24
Trade payables	(84)
Current tax	(56)
Property, plant and equipment	1, 300
Inventory	64
	1, 380

Mukatasha acquired the equity shares of Twalumba Plc three (3) years ago for a cash consideration of K1,206million when the fair value of its net assets stood at K1,300 million. The fair value of non – controlling interest at that date was K142 million.

The gain on the disposal of 70% equity shares in Twalumba Plc has been included in other income.

(x) During the financial year, Mukatasha Plc issued equity shares for cash, further the company converted K100 million loan notes into equity shares.

(xi) The balance of other income relates to cash interest received from other investments. There was no acquisition and disposal of other investments.

(xii) It is Mukatasha's policy to value non – controlling interest at fair value.

(xiii) Directors of Mukatasha have been reviewing the International Integrated Reporting Council's *Framework forIntegrated Reporting*. The directors believe that International Financial Reporting Standards are already extensiveand provide stakeholders with acomprehensive understanding of an entity's financial position and performancefor the year. In particular, statements of cash flow enable stakeholders to assess the liquidity, solvency andfinancial adaptability of a business. They are concerned that any additional disclosures could be excessive andobscure the most useful

informationwithin a set of financial statements. They are therefore unsure as to the rationale for the implementation of a separate, or combined, integrated report.

Required:

(a) Prepare a consolidated statement of cash flow of Mukatasha Group using the indirect method for the year ending 30 September 2019 in accordance with the requirements of IAS 7 'Statement of cash flows'. (35 marks)

(b) Discuss the extent to which statements of cash flow provide stakeholders with useful information about an entity and whether this information would be improved by the entity introducing an Integrated Report. (5 marks)

[Total: 40 Marks]

SECTION B

Answer ANY Three (3) questions in this section.

QUESTION TWO

You are the Finance Manager of **Kasunga Plc**, a listed company based in Ndola which prepares financial statements in accordance with International Financial Reporting Standards (IFRSs). The Managing Director, who is not an accountant, has recently attended a business seminar in Kitwe at which financial reporting issues and the IASB's Conceptual Framework for Financial Reporting (2018)were discussed. The seminar was organised by the ZiCA Copperbelt Members Chapter. Followingthe seminar, she reviewed the financial statements of Kasunga Plc for the year ended 31 March 2020. The company is about to hold its annual general meeting with shareholders and the director based on this review wish to prepare for any potential technical questions which may be raised at the meeting. She has therefore prepared a series of technical queries relating to those statements, on which she requires your advice:

Technical Query One – Equity investments

I've been analysing equity investments and they appear to be being treated inconsistently in the financial statements. I have noted the following:

(a) We have a portfolio of equity investments which we use for the short-term investment of surplus cash. When we need cash for business purposes we sell some investments from this portfolio. The portfolio is measured at its fair value each year end. Any surpluses or deficits on re-measurement to fair value are recognised in investment income as part of the profit or loss for the period.

(b) We have two long-term equity investments in key suppliers which we have held for some time and have no intention of selling. These investments are also measured at fair value but changes in fair value are recognised as 'other comprehensive income'.

How can it be consistent to report changes in the fair values of our equity investments as different line items in the same financial statement? Please explain the measurement

requirements of the relevant international financial reporting standard. Additionally, what difference does it make to the company whether gains or losses are reported in other comprehensive income rather than as part of the profit or loss for the period?

(5 marks)

Technical Query Two–Claims on faulty products

During the year ended 31 March 2020, we supplied a customer with a product that turned out to be faulty. This led to the customer suffering financial loss and the customer has taken out a legal claim against us for the loss suffered. The claim has not yet been settled but it looks like we will have to make a payment of K48 million to settle the claim sometime early in June 2020. We have investigated the cause of the fault and it turns out that it relates to a defective component supplied to us by one of our suppliers. Our legal department intends to make a counter claim for K48 million against this supplier so overall we should get compensation. I assume nothing needs to be provided for here because we are covered? (5 marks)

Technical Query Three–Drilling machine and piece of land

Kasunga Plc has owned a drilling machine for the past six (6) years. The machine has been used on several projects, generating 23% of the company's total revenue. In recent years, the company has experienced unprecedented competition in the drilling business which has led to a drastic reduction in revenue from this business to about 7% of the total company revenue. This trend is expected to continue in the foreseeable future. Management is therefore, thinking of abandoning the drilling machine on 31 October 2020 and have thus classified it as 'held for sale' as at 31 March 2020. Further thecompany acquired a piece of land from Ndola City Council at a cost of K100,000on 1 April 2019. The company has by 31 March 2020, not decided what to do with this land. The land has a fair value of K110,000 at the year end. Please advise me how the drilling machine and a piece of land should be accounted for. (5 marks)

Technical Query Four- presentations and disclosures

I've been reviewing the statement of profit or loss and other comprehensive income and it appears to be in two sections. The first section appears to be entitled 'profit or loss' and the second 'other comprehensive income'. It appears that the tax charge is included in the 'profit or loss' section of the statement as there is no tax charge included in the 'other comprehensive income' section of the statement. I have a number of questions regarding this statement:

(a) How do we decide where to put a particular item of income or expenditure?

(b) Where does the tax relating to 'other comprehensive income' get shown?

(c) Do the above points have an impact on the computation of performance evaluation indicators which will be of interest to shareholders?

(d) I am confused over the nature of a reclassification adjustment and I wish advise on how the revised 2018 conceptual framework may address this issue?

(5 marks)

Required:

Advisethe Managing Director on the four technical queries raised with reference to relevant International Financial Reporting Standards. **[Total: 20 Marks]**

QUESTION THREE

Ebili Plc is a manufacturing entity headquartered in the Southern region of Zambia. The company is in the process of preparing financial statements for the year ended 31 December 2019. There are a number of transactions whose accounting treatment must be decided upon of which two are highlighted below.

Office Block Building
Ebili owns an office block building which it acquired 20 years ago (1 January 2000) at a cost of K20 million. The company had estimated the useful economic life of the building as 50 years (straight line depreciation with a nil residual value). EbiliPlc has been accounting for the building in accordance with the IAS 16 property Plant and Equipment Revaluation Model. The building was last revalued to a fair value of K10.2 million on 31 December 2017 (when its remaining useful economic life was 32 years). Arising from flooding caused by heavy rains during December 2018, a section of the building's foundation collapsed. Occupants were evacuated and the building is currently unoccupied. On 1 April 2019, ElibiPlc made a decision to sell the building. However, upon being advised by independent valuers that the building would only fetch a fair value of K9.9 million if sold in its current state, the directors have decided that the building should only be advertised for sale after undertaking repairs to remedy the collapsed foundation. The company has subsequently carried out the repairs at a cost of K1 million which were completed on 30 November 2019. The building's fair value after the repairs has risen to K13.1 million, though it has not yet been advertised for sale. Selling costs in form of agent commission is normally 5% of the selling price. The present value of future operating cash flows from continued use of the building was estimated at 31 December 2019 at K14.6 million. Assume that the building has never been impaired prior to 31 December 2019.

Ebili Plc has not yet charged any depreciation for the year to 31 December 2019 and is proposing to treat the building as a non current asset held for sale in accordance with IFRS 5 Non Current Assets Held for Sale and Discontinued Operations though the company is not sure if this is the correct accounting treatment. Directors are therefore seeking advice on the IFRS 5 requirements relating to non current assets held for sale and whether those requirements apply in this case. (10 marks)

Interest in Collaborate (Pvt) Limited
On 1 January 2019, EbiliPlc entered into an arrangement with a South African entity in which the two entities incorporated a separate legal entity Collaborate (Pvt) Limited to be based in the RSA. Collaborate (Pvt) Limited undertakes marketing consultancies for a range of customers in different industries within the Republic of South Africa (RSA) and other countries in the SADC region. Collaborate (Pvt) Limited was incorporated on 1 January 2019 with an initial equity capital of SAR (South African Rand) 10 million to which EbiliPlc contributed 50% with the South African partner contributing the remainder. EbiliPlc and the South African partner have joint control of Collaborate (Pvt) Limited. There has been no change in Collaborate's (Pvt) Limited's equity share capital since incorporation.

EbiliPlc'spolicy is to use the equity accounting method in accordance with IAS 27 Separate Financial Statements in respect of investments in associates and joint ventures.

The following is an extract from Collaborate (Pvt) Limited'sresults for the year to 31 December 2019:

	SAR'000
Operating Profit	650
Finance Costs	(50)
Profit Before Tax	600
Income Tax Expense	(80)
Profit For the Financial Year	520

Collaborate (Pvt) Limited does not have other comprehensive income for the year to 31 December 2019 and the company has not declared any dividends to date.

Spot exchange rates between Kwacha and SAR have moved as follows:

Date	Rate (Kwacha/SAR)
1 January 2019	0.90
31 December 2019	0.99
Average for the year ended 31 December 2019	0.95

The functional currency of EbiliPlc is Kwacha whilst that of Collaborate is SAR.

The directors of EbiliPlc are seeking advice on how to account for the investment in Collaborate (Pvt) Limited in the financial statements of Ebili Plc for the year to 31 December 2019, including extracts of amounts involved. (10 marks)

Required:

Advise the directors of Ebili Plc on how to address the issues raised above in accordance with applicable accounting standards. **[Total:20 Marks]**

QUESTION FOUR

Baba Plc is a leasing company that was incorporated 6 years ago. The company engaged in various leasing arrangements in the year to 31 December 2019 for which it needs advice on their treatment in its financial statements.

Arrangement One

On 1 April 2019, Baba Plc leased out an excavating machine to Maka Mine Plc for 4 years. The machine had a fair value of K1,240,000 at that date. The lease rentals were agreed at K200,000, K180,000, K160,000 and K52,000 in year 1, year 2, year 3 and year 4 respectively (Due 1 April each year, starting on 1 April 2019).

The machine was acquired by Baba Plc on 1 January 2019 at a cost of K1,200,000. It had an economic useful life of 8 years on that date. Baba Plc depreciates excavating machines on cost with nil scrap value. (11 marks)

Arrangement Two
On 1 October 2019 Baba Plc leased a building from Jaka Real Estates Limited. The lease period was 10 years while the building had an economic useful life of 50 years on that date. The lease has a fair value of K840,000 on 31 December 2019.

Annual lease rentals were agreed at K86,000 payable on 1 October of each year starting on 1 October 2019. The lease agreement had an implicit annual interest rate of 12%.

Baba Plc has a policy of revaluating all buildings every 31 December. (9 marks)

Required:
Advise Baba Plc on how the two arrangements should be treated in their financial statements for the year to 31 December 2019. **(Your answer should include relevant calculations).**

[Total: 20 Marks]

QUESTION FIVE

Saka Plc is a retailer of varioushardware products. The company has been in operational existence for over five (5) years. The directors of Saka Plc were concerned about the company's overall performance in 2018 accounting period attributable mainly to stiff competition faced from various competitors. The directors therefore implemented the following strategies in 2019 accounting period in order to improve the company's performance.

2019 Strategies:

(1) Maintained selling price but introduced cash discount of 10% on repeat purchases. They also introduced early settlement discount of 5%.
(2) Introduced revaluation of property to reflect their current worth.
(3) Froze salaries and wages increments for two years starting 2019.
(4) Set up a defined contribution benefit scheme for its employees.
(5) Improved its management of inventory through computerisation. Ten (10) computers were acquired and installed for this purpose.
(6) Disposed of old non – current assets through an auction sale.
(7) Started buying in bulk to take advantage of bulk purchase discounts.
(8) Increased dividends paid to equity shareholders to K320,000 in 2019 from K180,000 in 2018.

Other information
a) Fuel prices were increased by 10%
b) Electricity tariffs were increased by 60%

The following are the financial statements of Saka Plc for the year to 31 December 2019 and 31 December 2018.

Statement of profit or loss and other comprehensive income for the year ended 31 December:

	2019 K'000	2018 K'000
Revenue	7,603	6,336
Cost of sales	(2,419)	(1,901)
Gross profit	5,184	4,435
Other income - gain on disposal of non-current assets	1,152	-
Distribution cost	(1,692)	(1,109)
Administrative cost	(3,024)	(1,901)
Finance cost	(300)	(528)
Profit before tax	1,320	897
Taxation	(92)	(179)
Profit for the period	1,228	718
Other comprehensive income:		
Revaluation gain	720	-
Net actuarial gain	76	-
Total comprehensive Income	2,024	718

Statement of financial position as at 31 December:

	2019 K'000	2018 K'000
Assets		
Non-current assets		
Property, plant and equipment	3,637	4,469
Other intangible assets	726	915
	4,363	5,384
Current assets		
Inventory	1,188	317
Trade Receivable	648	494
Cash & cash equivalents	829	73
	2,665	884
Total Assets	**7,028**	**6,268**
Equity and liabilities		
Equity		
Equity shares of K4 each	920	920
Other components of equity	676	512
Retained earnings	1 852	944
Total Equity	**3,448**	**2,376**
Liabilities		
Non-current liabilities		

Employee benefits	749	-
Deferred Tax	309	412
Secured bank loan	1,500	2,641
	2 558	3,053
Current liabilities		
Trade payables	740	342
Taxation	57	99
Finance cost payable	225	398
	1,022	839
Total Liabilities	**3,580**	**3,892**
Total equity and liabilities	**7,028**	**6,268**

Required

Write a report to the directors that evaluates the impact of strategies introduced in 2019 on the position and performance of Saka Plc for the year to 31 December 2019. **(Your answer should include relevant calculations).**

[Total: 20 Marks]

END OF PAPER

Annuity Table

Present value of an annuity of 1 i.e. $\frac{1 - (1 + r)^{-n}}{r}$

Where r = discount rate
n = number of periods

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	1·970	1·942	1·913	1·886	1·859	1·833	1·808	1·783	1·759	1·736	2
3	2·941	2·884	2·829	2·775	2·723	2·673	2·624	2·577	2·531	2·487	3
4	3·902	3·808	3·717	3·630	3·546	3·465	3·387	3·312	3·240	3·170	4
5	4·853	4·713	4·580	4·452	4·329	4·212	4·100	3·993	3·890	3·791	5
6	5·795	5·601	5·417	5·242	5·076	4·917	4·767	4·623	4·486	4·355	6
7	6·728	6·472	6·230	6·002	5·786	5·582	5·389	5·206	5·033	4·868	7
8	7·652	7·325	7·020	6·733	6·463	6·210	5·971	5·747	5·535	5·335	8
9	8·566	8·162	7·786	7·435	7·108	6·802	6·515	6·247	5·995	5·759	9
10	9·471	8·983	8·530	8·111	7·722	7·360	7·024	6·710	6·418	6·145	10
11	10·37	9·787	9·253	8·760	8·306	7·887	7·499	7·139	6·805	6·495	11
12	11·26	10·58	9·954	9·385	8·863	8·384	7·943	7·536	7·161	6·814	12
13	12·13	11·35	10·63	9·986	9·394	8·853	8·358	7·904	7·487	7·103	13
14	13·00	12·11	11·30	10·56	9·899	9·295	8·745	8·244	7·786	7·367	14
15	13·87	12·85	11·94	11·12	10·38	9·712	9·108	8·559	8·061	7·606	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	1·713	1·690	1·668	1·647	1·626	1·605	1·585	1·566	1·547	1·528	2
3	2·444	2·402	2·361	2·322	2·283	2·246	2·210	2·174	2·140	2·106	3
4	3·102	3·037	2·974	2·914	2·855	2·798	2·743	2·690	2·639	2·589	4
5	3·696	3·605	3·517	3·433	3·352	3·274	3·199	3·127	3·058	2·991	5
6	4·231	4·111	3·998	3·889	3·784	3·685	3·589	3·498	3·410	3·326	6
7	4·712	4·564	4·423	4·288	4·160	4·039	3·922	3·812	3·706	3·605	7
8	5·146	4·968	4·799	4·639	4·487	4·344	4·207	4·078	3·954	3·837	8
9	5·537	5·328	5·132	4·946	4·772	4·607	4·451	4·303	4·163	4·031	9
10	5·889	5·650	5·426	5·216	5·019	4·833	4·659	4·494	4·339	4·192	10
11	6·207	5·938	5·687	5·453	5·234	5·029	4·836	4·656	4·486	4·327	11
12	6·492	6·194	5·918	5·660	5·421	5·197	4·988	4·793	4·611	4·439	12
13	6·750	6·424	6·122	5·842	5·583	5·342	5·118	4·910	4·715	4·533	13
14	6·982	6·628	6·302	6·002	5·724	5·468	5·229	5·008	4·802	4·611	14
15	7·191	6·811	6·462	6·142	5·847	5·575	5·324	5·092	4·876	4·675	15

Present Value Table

Present value of 1 i.e. $(1 + r)^{-n}$

Where r = discount rate
n = number of periods until payment

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	0·980	0·961	0·943	0·925	0·907	0·890	0·873	0·857	0·842	0·826	2
3	0·971	0·942	0·915	0·889	0·864	0·840	0·816	0·794	0·772	0·751	3
4	0·961	0·924	0·888	0·855	0·823	0·792	0·763	0·735	0·708	0·683	4
5	0·951	0·906	0·863	0·822	0·784	0·747	0·713	0·681	0·650	0·621	5
6	0·942	0·888	0·837	0·790	0·746	0·705	0·666	0·630	0·596	0·564	6
7	0·933	0·871	0·813	0·760	0·711	0·665	0·623	0·583	0·547	0·513	7
8	0·923	0·853	0·789	0·731	0·677	0·627	0·582	0·540	0·502	0·467	8
9	0·941	0·837	0·766	0·703	0·645	0·592	0·544	0·500	0·460	0·424	9
10	0·905	0·820	0·744	0·676	0·614	0·558	0·508	0·463	0·422	0·386	10
11	0·896	0·804	0·722	0·650	0·585	0·527	0·475	0·429	0·388	0·305	11
12	0·887	0·788	0·701	0·625	0·557	0·497	0·444	0·397	0·356	0·319	12
13	0·879	0·773	0·681	0·601	0·530	0·469	0·415	0·368	0·326	0·290	13
14	0·870	0·758	0·661	0·577	0·505	0·442	0·388	0·340	0·299	0·263	14
15	0·861	0·743	0·642	0·555	0·481	0·417	0·362	0·315	0·275	0·239	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	0·812	0·797	0·783	0·769	0·756	0·743	0·731	0·718	0·706	0·694	2
3	0·731	0·712	0·693	0·675	0·658	0·641	0·624	0·609	0·593	0·579	3
4	0·659	0·636	0·613	0·592	0·572	0·552	0·534	0·516	0·499	0·482	4
5	0·593	0·567	0·543	0·519	0·497	0·476	0·456	0·437	0·419	0·402	5
6	0·535	0·507	0·480	0·456	0·432	0·410	0·390	0·370	0·352	0·335	6
7	0·482	0·452	0·425	0·400	0·376	0·354	0·333	0·314	0·296	0·279	7
8	0·434	0·404	0·376	0·351	0·327	0·305	0·285	0·266	0·249	0·233	8
9	0·391	0·361	0·333	0·308	0·284	0·263	0·243	0·225	0·209	0·194	9
10	0·352	0·322	0·295	0·270	0·247	0·227	0·208	0·191	0·176	0·162	10
11	0·317	0·287	0·261	0·237	0·215	0·195	0·178	0·162	0·148	0·135	11
12	0·286	0·257	0·231	0·208	0·187	0·168	0·152	0·137	0·124	0·112	12
13	0·258	0·229	0·204	0·182	0·163	0·145	0·130	0·116	0·104	0·093	13
14	0·232	0·205	0·181	0·160	0·141	0·125	0·111	0·099	0·088	0·078	14
15	0·209	0·183	0·160	0·140	0·123	0·108	0·095	0·084	0·074	0·065	15

SUGGESTED SOLUTIONS

SOLUTION ONE

Mukatasha Group
Consolidated statement of cash flow for the year ended 30th September 2019.

	K'million	K'million
Cash flow from operating activities		
Profit before tax		1, 170
Adjustments for:		
Interest expense		70
Goodwill impairment loss W8	30	
Depreciation charge	540	
Share of associate profit		(180)
Other income		(500)
Defined benefit plan expense W5		36
		1,166
Decrease in inventories 272+46-64-244		10
Decrease in trade receivables 512+102-132-460		22
Decrease in other receivables		90
Decrease in trade payables 800+76-84-296		(496)
Cash generated from operations		792
Tax paid W9		(382)
Interest paid W10		(102)
Contribution paid – defined benefit plan		(30)
Net cash inflow from operating activities		278
Cash flow from investing activities		
Dividends from investment in associate W7	300	
Cash paid to acquire property, plant and equipment W6	(988)	
Proceeds from disposal of plant (80/20 x K72m)	288	
Cash paid to acquire Natasha Plc (1,260-36)	(1,224)	
Proceeds from disposal of Twalumba Plc (1,178-24)	1, 154	
Interest from other investment W4	39.2	
Proceeds from disposal of financial assets W4	150	
Intangible asset	(300)	
Cash paid to acquire shares in Zikomo Plc	(50)	
Net cash outflow from investing activities		(630.8)

Cash flow from financing activities

Dividends paid to non-controlling interest W1 (52)
Dividends paid W11 (48) Repayment of
12% loan notes 814-274-100 (440) Proceeds from issue of
shares 1,900-100+640-1560-280 600 Net cash inflow from
financing activities 60 Cash flow changes
in cash and cash equivalent (292.8) Non-
cash flow changes in cash & cash equivalents (12.4-11.6 w12) 0.8
Total changes in cash & cash equivalents (decrease) (292)
Opening cash and cash equivalent 332

Closing cash and cash equivalent 40

(b) Statements of cash flows provide valuable information to stakeholders on the financial adaptability of an entity. Cash flows are objective and verifiable and so are more easily understood than profits. Profits can be manipulated through the use of judgement or choice of a particular accounting policy. Operating cash flows are therefore useful at highlighting the differences between cash and profits. The cash generated from operations is a useful indication of the quality of the profits generated by
a business. Good quality profits will generate cash and increase the financial adaptability of an entity. Cash flow information will also have some predictive value. It may assist stakeholders in making judgements on the amount, timing and degree of
certainty on future cash flows.
Cash flow information should be used in conjunction with the rest of the financial statements. The adjustment of non-cash flow items within operating activities may not be easily understood. The classification of cash flows can be manipulated
between operating, investing and financing activities. It is important therefore not to examine the cash flow information in isolation. It is only through an analysis of the statement of financial position, statement of comprehensive income and notes,
together with cash flow, that a more comprehensive picture of the entity's position and performance develops.
It is true that International Financial Reporting Standards are extensive and their required disclosures very comprehensive.
This has led to criticism that the usefulness may be limited where the most relevant information is obscured by immaterial disclosures. An integrated reporting system would increase disclosure as well as imposing additional time and cost constraints
on the reporting entity. However, integrated reporting will provide stakeholders with valuable information which would not be immediately accessible from an entity's financial statements.
Financial statements are based on historical information and may lack predictive value. They are essential in corporate reporting, particularly for compliance purposes but do not provide meaningful information regarding business value. The primary purpose of an integrated report is to explain to providers of capital how the organisation generates value over time.
This is summarised through an examination of the key activities and outputs of the organisation whether they be financial, manufactured, intellectual, human, social or natural.
An integrated report seeks to examine the external environment which the entity operates within and to provide an insight into the entity's resources and relationships to generate value. It is principles based and should be driven by materiality, including how and to what extent the entity understands and responds to the needs of its stakeholders. This would

include an analysis of how the entity has performed within its business environment, together with a description of prospects and challenges for the future. It is this strategic direction which is lacking from a traditional set of financial statements and will be invaluable to stakeholders to make a more informed assessment of the organisation and its prospects.

Workings

W1 Non-controlling interests

	K'million
Opening balance	518
Other comprehensive income	164
Natasha Plc	320
Twalumba Plc 142+{10% x (1380-1300)}	(150)
Dividends paid (bal. fig)	(52)
Closing balance	800

W2 Disposal of 70% equity shares in Twalumba Plc

	K'million
Proceeds	1, 178
Fair value of retained interest	300
Non-controlling interest W1	150
Fair value of net assets at disposal:	
Tangible assets	(1,380)
Goodwill (1206+142)-1300	(48)
Gain on disposal	200

W3 Disposal of plant

		K'million
Proceeds	100/20 x K72m	360
Carrying amount		(200)
Profit on disposal		160

W4 Disposal of financial assets

	K'million
Proceeds (bal.fig)	150
Carrying amount	(50)
Profit on disposal	100

Therefore, Cash interest received = 500-200 (w2) -160(w3) -100(note iv) -0.8ie 0.5(24.8 -23.2) = K39.2million

W5 Defined benefit plan

	K'million
Opening balance	90
Net expense (bal.fig)	36
Net actuarial gain	0
Contribution paid	(30)
Closing balance	96

W6 Property, plant and equipment

		K'million
Opening balance		3,218
Revaluation surplus		74
Natasha Plc		1,560
Twalumba Plc	(1, 300)	
Disposal of plant		(200)
Depreciation charge		(540)
Cash paid (bal.fig)		988
Closing balance		3,800

W7 Investment in associate

	K'million
Opening balance	110
Twalumba Plc	300
Zikomo Plc	50
Statement of profit or loss	180
Dividends received (bal.fig)	(300)
Closing balance	340

W8 Goodwill

	K'million
Opening balance	196
Natasha Plc (1260+320)-1,520	60
Twalumba Plc (1206+142) -1,300	(48)
Impairment loss (bal.fig)	(30)
Closing balance	178

W9 Taxation

	K'million
Opening balances 218+240	458
Statement of Profit or loss	170
Natasha Plc 116+32	148
Twalumba Plc	(56)
Cash paid (bal.fig)	(382)
Closing balance 168+170	338

W10 Interest payable

	K'million
Opening balance	108
Statement of profit or loss	70
Cash paid (bal.fig)	(102)
Closing balance	76

W11 Retained earnings

K'million

Opening balance	312
Profit for period attributable to parent	836
Dividends paid (bal.fig)	(48)
Closing balance	1,100

W12 Translated amount (United States dollars account)

30th September 2018 K23.2 x $0.5 = K11.6 million

30th September 2019 K24.8 x $0.5 = K12.4 million

SOLUTION TWO

Technical Query One - Equity investments

Equity investments are financial assets and are subject to the recognition and measurement requirements of IFRS 9 – *Financial Instruments*.

IFRS 9 identifies three classes for financial assets; amortised cost (AC), fair value through other comprehensive income (FVTOCI) or fair value through profit or loss (FVTPL).

IFRS 9 states that the class of into which a particular financial asset is allocated depends on the business model for managing the financial assets and the contractual cash flows associated with those assets. ACcan only be used where the contractual cash flows consist solely of the receipt of interest and repayment of the principal sums outstanding. This does not apply to equity shares, so the AC method cannot be used.

The default category for measuring equity investments is at FVTPL. This is the method which has been used for the portfolio which has been held for the short-term investment of surplus cash. However, if an equity investment is not held for trading, it is possible to make an election on initialrecognition to measure the investment at FVTOCI. This election has been made in respect of the equity investments in two key suppliers which we have held for the long term and have no intention of selling.

The key difference between reporting a gain or loss as part of profit or loss or as part of other comprehensive income is that in the former case the gain or loss affects earnings per share, which is an important performance measure for listed entities.

Technical Query Two–Claims on faulty products

It is necessary to consider the two parts of this issue separately. The claim by our customer

needs to be recognised as a liability (provision) in the financial statements for the year ended

31 march 2020. IAS 37 – provisions, contingent liabilities and contingent assets – states that

a provision should be made when, at the reporting date:

(i) An entity has a present obligation arising out of a past event

(ii) There is a probable outflow of economic benefits

(iii) A reliable estimate can be made of the outflow.

All three of those conditions are satisfied here and so a provision of K48million, with a corresponding charge to profit or loss (income statement) is appropriate.
The counter claim against our supplier is a contingent asset. IAS 37 states that contingent assets should not be recognised until their realisation is virtually certain, but should be disclosed where their realisation is probable. This appears to be the situation we are in here. Therefore the contingent asset would be disclosed by way of note in the 2020 financial statements.

Technical Query Three–Drilling machine and piece of land

Drilling machine

IFRS 5 "Non-current assets held for sale and discontinued operations' requires an asset whose value will be realised through sale to be classified as held for sale as long as certain criteria are met. These include the following:

- The asset must be available for immediate sale in its present condition.
- Its sale must be highly probable.

For the sale to be highly probable,

- Management must be committed to a plan of sale.
- There must be an active programme to locate a buyer.
- The price of the asset should be reasonable in relation to its current fair value.
- The sale must be expected to take place within one year from the date of classification.

Conversely, an asset that is to be abandoned, except for a disposal group, should not be classified as held for sale. This is because its carrying amount will be recovered by continuing use.

The drilling machine should therefore not be classified as held for sale as it does not meet the recognition criteria. Its carrying value will be realised through continued use and not through sale. The company should continue accounting for the machine under IAS 16 'Property, plant and equipment'. In addition, the continued reduction in the revenue contribution of the asset is an indicator of impairment. The asset should therefore, be reviewed for impairment. If its carrying value turns out to be more than its recoverable value, it should be reduced to its recoverable amount and impairment loss taken to the statement of profit or loss.

Piece of land

The land acquired for use in business operations is shown as part of property, plant and equipment and accounted for under IAS 16 'Property, plant and equipment'. However, where an entity is yet to decide on its use, then it should be classified as investment property and accounted for under IAS 40 'Investment property'. The land will initially berecognised at K100, 000 and subsequently at K110, 000 to reflect its fair value at 31st March 2020. The increase in fair value of K10 million will be recognised as a gain in the statement of profit or loss. This is in accordance with the fair value model of IAS 40 'Investment property'. However, under the cost model of IAS40, the land will be carried at its cost of K100, 000 subject to impairment review. The land should not be revalued under this model.

Technical Query Four- Statement of profit or loss and other comprehensive income

Presentation and disclosure are **communication tools**. The framework discusses **concepts** that determine what information is included in the financial statements and **how** that information should be **presented and disclosed. The effective communication** of information in financial statements makes that information **relevant and contributes to the faithful representation** of an entity's financial position. Effective communication of information in financial statements requires:

- **Focusing** on presentation and disclosure **objectives and principles** rather than focusing on **rules**;
- Classifying information in a manner that **groups similar** items and **separates dissimilar** items; and
- **Aggregating information** in such a way that it is **not obscured** either by unnecessary **detail or by excessive** aggregation.

A **balance** is needed between:

- Giving entities the **flexibility** to provide relevant information that faithfully represents the entity's assets, liabilities, equity, income and expenses; and
- Requiring information that is **comparable**, both from period to period and across entities.

Effective communication in financial statements is also supported by considering the following **two principles**:

1. **Entity-specific information** is more useful than **standardized descriptions**; *For example, it is of no value to say that revenue in accordance with IFRS 15 is recognized when control is transferred. However, providing the* ***time of this transfer*** *in light of the activity and habitual contractual arrangements of the entity would be* ***more useful****.*
2. **Duplication** of information in different parts of the financial statements is usually **unnecessary** and can make financial statements **less understandable.**

However, in **exceptional circumstances** the IASB may decide that items arising from a **change in the current value** of an asset or liability are to be included in **other comprehensive income,** if **excluding** them from the statement of profit or loss enhances relevance and provides a more faithful representation. However, items measured on a **historical cost basis may not** be recorded in **other comprehensive income**.

The statement of statement of comprehensive income is newly described as **"statement of financial performance"**, however, the framework **does not specify** whether this statement should consist of a **single** statement or **two** statements, it only requires that a **total or subtotal** for profit or loss must be provided. It also notes that the **statement of profit or loss is the primary source** of information about an entity's **financial performance** for the reporting period and that only in **"exceptional circumstances**" the Board may decide that income or expenses are to be included in **other comprehensive income**. Notably, the framework **does not define profit or loss**, thus the question of what **goes into profit or loss or into other comprehensive income is still unanswered.**

The statement of profit or loss is the **primary source** of information about the entity's financial performance. As a **default /in principle**, all income and expenses should be

appropriately classified and included in the statement of profit or loss, **unless** doing so does not provide relevant information or a faithful representation of performance.

In **exceptional circumstances**, the Board may decide to exclude **some** income or expenses from the statement of profit or loss, and include those in **OCI**, for example, income or expenses arising from a change in the **current value** of an asset or liability. Conversely, in principle, any income and expenses included in OCI in one period should be **recycled** to the statement of profit or loss in a future period, provided that the **recycling results in more relevant and faithfully representative information** in the statement of profit or loss. If recycling **does not result** in such information, the Board may decide that income and expenses included in **OCI are not to be subsequently recycled**.

For other **comprehensive income, a second principle** states that these elements must be **reclassified** into the statement of profit or loss. However an exemption may be provided from this principle if, for example, there is no clear basis for identifying the period in which recycling to profit or loss would enhance the relevance and faithful representation of the information in that statement.
Note that currently*, the elements of* ***OCI that cannot be recycled*** *in P&L are: remeasurement adjustments on* ***fixed assets****, remeasurements or actuarial gains and losses on* ***defined benefit*** *plans and fair value changes to the* ***own credit risk*** *for liabilities recognized at fair value in profit or loss.*

In principle, items of OCI are **recycled to profit or loss in a future** period when this results in more **relevant information or a more faithful representation** of performance in the statement of profit or loss. The **revised Conceptual Framework does not** include **specific guidance** on how the Board will decide whether items **should be included in OCI**, or whether items should **not be subsequently recycled** to the statement of profit or loss. The Board **expects to take these decisions and explain its rationale when developing individual standards.**

SOLUTION THREE

Office Block Building

Accounting treatment of the building will depend on whether it qualifies as held for sale in accordance with IFRS 5 Non Current Assets Held for Sale and Discontinued Operations or not. From the point an asset qualifies as HFS, IFRS 5 becomes applicable. If the HFS requirements are not meet, the building will continue to primarily fall within the scope of IAS 16 property Plant and Equipment and IAS 36 Impairment of Assets where it is impaired.

HFS classification

In general, the following conditions must be met for an asset (or 'disposal group') to be classified as held for sale: [IFRS 5.6-8]

- management is committed to a plan to sell
- the asset is available for immediate sale
- an active programme to locate a buyer is initiated
- the sale is highly probable, within 12 months of classification as held for sale (subject to limited exceptions)
- the asset is being actively marketed for sale at a sales price reasonable in relation to its fair value
- actions required to complete the plan indicate that it is unlikely that plan will be significantly changed or withdrawn.

From the time occupants were evacuated from the building, it is clear that the bulding has not being available for immediate sale. Ebili management first desired to have the building repaired. Subsequent to the repairs, there is no active programme to locate a buyer or actively market the building for sale. In conclusion, the building does not qualify to be treated as held for sale. Ebili must therefore account for the building in accordance with IAS 16.

Application of IAS 16 and IAS 36

As no impairment has arisen on the building in the past, with a last revaluation at a fair value K10.2 million on 31.12.2017, the carrying amount of the buildingwill change as follows up to 31.12.2019:

	K'000
FV (carrying amount) b/d 1.1.2018	10,200
Less subsequent depreciation :	
y/e 31.12.2018 10200/32	(319)
Carrying amount reported 31.12.2018 or b/d 1.1.2019	9,881
Less subsequent depreciation :	
y/e 31.12.2019 9881/31	(319)
Carrying amount at 31.12.2019 before impairment loss	9,562
Impairment loss (see impairment review below)	-
Carrying amount at 31.12.2019 before revaluation	9,562
Revaluation gain/(loss)(balancing amount)	3,538

Faire Value to report as carrying amount in SFP at 31.12.2019	13,100

Working – impairment review at 31.12.2019;

Arising from the events subsequent to the flooding, it may appear in line with IAS 36 that an impairment review be carried out to assess whether the building has been impaired or not. We are told the building was not impaired prior to 31.12.2019. A review at 31.12.2019 is as follows:

		K'000	K'000
- Recoverable amount at 31.12.2019 is the higher of:			
▪ Fairvalue less costs to sale	95%X13.1	12,445	
▪ Value in use		14,600	
▪ Therefore recoverable amount is			14,600
- Carrrying amount at 31.12.2019 is			9,562

- Carrying amount is within the recoverable amount. Therefore the asset is not impaired at 31.12.2019.

However, since the company follows the IAS 16 revaluation model, the asset must be revalued if the fair value of 13.1 million is judged to be materially different from its carrying amount of K9.562 million giving a revaluation surplus of K3.538 million. With a cost model carrying amount of K12 million at 31.12.2019 (ie20-20/50X20). The revaluation surplus must be reported as follows:

- The amount of gain that restores the cost model carrying of the building amounting to K2.438 million must be reported in P/L for y/e 31.12.2019.
- The remainder of the gain amounting to K1.1 million will be reported in OCI.

The repair costs K1 million must be treated as subsequent expenditure to be charged in P/L for the y/e 31.12.2019.

Interest in Collaborate (Pvt) Limited

Ebili's policy is to use equity accounting in respect of its interests in associates and joint ventures in its separate financial statements as permitted in IAS27 Separate Financial Statements opposed to using the requirements of IFRS 9 Financial Instruments which primarily treats all investments regardless of level of control as mere financial assets in the investor's separate financial statements .Ebili will therefore report its interest in Collaborate as a non currentasset , 'Investment in Joint Venture', valued at cost plus share of post acquisition reserves. In SPLOCI, Ebili will report its share of Collaborate's profit for the year in P/L below operating profit but as part of PBT under the heading 'Share of Joint Venture's Profit for the year' and its share of Collaborate's OCI for the year in OCI under the heading 'Share of Joint Venture's OCI'.

Collaborate's financial statements will require translation, in line with IAS 21 Effects of Changes in Foreign Exchange Rates, from SAR to Kwacha prior to computing amounts to be reported by Ebili in its financial statements. The translations are as follows:

Translation of Collaborate' post acquisition results up to 31.12.2019:

	SAR'000	Rate(K/SAR)	K'000
Net Asset at 31.12.2019 (10000+520)	10,520	0.99	10,626
Less Net Assets at 1.1.2019	(10,000)	0.9	(11,111)

Total Comprehensive Income for the year	520		(485)
Profit for the year	520	0.95	547
Retranslation Differences (balance)	-		(1,032)
		520	
(485)			

A retranslation difference arises on translation of Collaborate's financial statements. Differences of retranslation of N.A of foreign operations are reported as OCI (items that are reclassified in P/L) in accordance with IAS 21 Effects of Changes in Foreign Exchange Rates.

Extracts from Ebili's financial statements for the year ended 31.12.2019 in respect of its interest in Collaborate will therefore be as follows:

	K'000
SPLOCI	
P/L	
Share of Joint Venture's Profit for the Year 50%X547	273.5
OCI – Items that are reclassified in P/L	
Share of Joint Venture's retranslation Differences 50%X(1032)	(516)
SFP	
Investment in Joint Venture (50%X10000/0.99-50%X485)	4,808

SOLUTION FOUR

Arrangement One

The treatment of this arrangement in the financial statements of Baba Plc depends on whether it is a finance lease or an operating lease arrangement. This is because IFRS 16 *'Leases'* requires lessors to classify lease arrangements into either finance lease or operating lease based on the provisions of the lease arrangements. Therefore, there is need to look at the terms of the arrangement to determine appropriate accounting treatment for the lease arrangement. The arrangement provides for a lease period of 4 years which is not substantial compared to the economic useful life of the excavator of 8 years. This indicates the existence of an operating lease arrangement. Being an operating lease, Baba Plc will recognise the excavating machine in its statement of financial position as at 31 December 2019 under non-current asset subject to depreciation and impairment. This gives K1,050,000**W1**. Depreciation charge of K150,000**W1** will be charged to the statement of profit or loss for the year ended 31 December 2019. Lease rental income will be recognised on straight line basis. This results in income of K148,000**W2** to be taken to statement of profit or loss. However, Baba Plc will recognise rental income for nine months of K111,000 (K148,000 x 9/12) in its statement of profit or loss for the year ended 31 December 2019. Further, Baba Plc will recognise amount over-paid by Maka Mine Plc of K89,000 (K200,000 – K111,000) under current liabilities in its statement of financial position as at 31 December 2019.

Arrangement Two

IFRS 16*'Leases'*providesa single lessee accounting model, requiring lessees to recognise assets and liabilities for all leases unless the lease term is 12 months or less or the underlying asset has a low value. Therefore, despite the lease period of 10 years not being substantial compared to the economic useful life of the building of 50 years, Baba Plc is still required to recognise a right-of-use asset and a lease liability.

The right-of-use asset is initially measured at the amount of the lease liability plus any initial direct costs incurred by the lessee. This amounts to K544, 208**W1**. The building will then be revalued to K840, 000. This is because Baba Plc has a policy of revaluing all its buildings. Revaluation gain of K309, 397.20**W1** will be taken to other comprehensive income in the statement of profit or loss and other comprehensive for the year ended 31 December 2019. In addition, depreciation charge and lease interest for the year of K13, 605.20 **W1**and K13, 746.24 **W2** respectively, will be charged to the statement of profit or loss for the year ended 31 December 2019.

Baba Plc will recognise lease liability of K44, 761.28 **W2** under current liabilities and K427, 192.96 (K471, 954.24 – K44, 761.28) **W2** under non – current liabilities in their statement of financial position as at 31 December 2019.

Workings:

Arrangement One

W1	**Non-current assets**	**K'000**
	Excavating machine	1 200.00
	Less: Depreciation (K1,200/8yrs)*1yr	(150.00)
	Carrying value	**1,050.00**

	W2 Lease rental income	**K'000**
	Year 1 rental	200.00
	Year 2 rental	180.00
	Year 3 rental	160.00
	Year 4 rental	52.00
	Total	**592.00**
	Annual income (K592/4yrs)	**148.00**

Arrangement Two

W1	**Non-current assets**	**K'000**
	Right of use asset (458, 208 + 86, 000)	544,208.00
	Less: Depreciation (K544,208/10yrs)*3/12months	(13,605.20)
	Carrying value before valuation	530,602.80
	Revaluation surplus (bal. fig)	309,397.20
	Revalued amount	**840,000.00**

W2	**Outstanding Lease Liability**	**K**
	PV of lease payment (K86,000 x 5.328*)	458,208.00
	Interest @12% *3/12months	13,746.24

471, 954.24

***cumulative present value discount factor for 9 years, since rentals made in advance

Current liability K86, 000 – K41, 238.72 (9/12 x 12% x 458, 208) = **K44, 761.28**

SOLUTION FIVE

To: The Directors – Saka Plc
From: Accountant
Date:
Subject: **Evaluation of the impact of strategies on the position and performance of Saka Plc**

1.0 Introduction

The evaluation of the impact of strategies introduced and implemented in 2019 on the position and performance of Saka Plc for the year ended 31 December 2019 is based on the information given and calculated ratios for two years.

2.0 Evaluation of position and performance

2.1 Profitability

Revenue has increased by 20%**W1**.This is mainly attributable to introduction of cash discount of 10% on repeat purchases.

Gross profit margin slightly reduced from 70% to 68% **W1**. Similarly, operating profit margin reduced from 22% to 21% **W1**. The decrease in gross profit margin could be attributed to increased direct cost of selling which must have offset any discounts enjoyed by Saka Plc from buying in bulk. The decrease in operating profit margin is mainly due to increase in distribution and administrative costs. Distribution cost has been adversely affected by an increase in cost of fuel and level of activity evidenced by increased sales. Administrative has been largely increased by a 60% upward adjustment to electricity tariffs, computerisation of inventory management, early settlement discount, increased storage cost of inventory as a consequence of buying in bulk and introduction of a defined benefit plan despite savings from frozen salaries' and wages' increments. Distribution cost and administrative cost increased by 53% and 59% respectively.

Moreover, recalculation of net operating profit, ignoring one off income from disposal of non – current assets of K1,152,000 in 2019 gives K468,000 in 2019. This will change net operating profit margin to 6% in 2019.

Return on capital employed has marginally increased from 26% to 27% **W1**. It seems revaluation gain, increase in operating profit and reduction in total assets, as result of their disposal, have almost cancelled out each other. Recalculated profit of K468,000 would however, show a material decrease in return on capital employed to 8% (K468,000/K6,006,000).

2.2 Liquidity and working capital

Current ratio has increased from 1.05 to 2.61**W2**. Quick ratio has also increased from 0.68 to 1.45 **W2**. The change in these ratios is mainly due to significant increase in inventory and cash and cash equivalent.Further, inventory turnover has increased from 61 days to 179 days. This is owing to bulk buying not being commensurate with the level of activity. This will increase risk of obsolescence for the goods.

Trade receivables' collection period has increased from 28 days to 31 days **W2**. This shows that early settlement discount has not yielded intended results.

Saka Plc's trade payables payment period has increased from 66 days to 112 days **W2**. This is attributable to the company's focus on taking advantage of bulk buying discount. This would increase cost of purchases in the long – run as suppliers would discontinue discounts offered to Saka Plc and/or sell goods to Saka Plc at inflated prices to reflect expected delays in payments.

2.3 Gearing Ratios

The gearing level in relative terms has reduced from 53% to 30%**(W3)** as can be seen from capital gearing ratios and from 111% to 44%**(W3)**. It seems Saka Plc used some the funds raised from disposal of non-current assets to settle K1,141,000 (K2,641,000 – K1,500,000) of its secured loan.

This has had the effect of increasing interest cover to 5.4 times from 2.7 times **(W3)**. However, using recalculated operating profit of K468,000 shows that interest cover has reduced from 2.7 times to 1.56 times (K468,000/K300,000) despite secured loan reducing by 43%.

2.4 Investor Ratios

Saka Plc's earnings per share has increased from K3.12 to K5.34 **(W4)**. This is attributable to an increase in the company's profitability arising from a gain on disposal of non-current assets of K1,152,000. Dividend per share increased to K1.39 from K0.78 **(W4).** The current dividend per share is not sustainable because of the worsened real profitability of the company.

3.0 Conclusion

The strategies introduced by the directors of Saka Plc have brought about short term and seeming not sustainable improvements in the company's profitability, liquidity, gearing and investors' ratios. The position and performance of the company has not improved in real terms. There is need therefore for the company to manage its costs and working capital well for it to continue in operational existence for the foreseeable future.

WORKINGS

	2019	2018
W1 Profitability Ratios		
Percentage increase in revenue = Change in revenue / Revenue for last year		
= (7,603 - 6,336) / 6,336	1,267.00 / 6,336.00	
	20%	
Return on capital employed = PBIT / CE = (1,320+300): (897+528) / (7,028-1,022): (6,268 -839)	1,620.00 / 6,006.00	1,425.00 / 5,429.00
	27%	**26%**
Operating profit margin = PBIT / Revenue = (1,320+300): (897+528) / 7,603 : 6,336	1,620.00 / 7,603.00	1,425.00 / 6,336.00
	21%	**22%**
Gross profit margin = GP = 5,184: 4,435	5,184.00	

		4,435.00
Revenue 7,603: 6,336	7,603.00	6,336.00
	68%	**70%**
Asset turnover = Revenue	7,603.00	6,336.00
Capital employed	6,006.00	5,429.00
	1.27	**1.17**
Total Expenses as a percentage of sales= Expenses	5,016.00	3,538.00
Revenue	7,603.00	6,336.00
	66%	**56%**

W2 Liquidity and working capital Ratios

Current ratio = Current assets	2,665.00	884.00
Current liabilities	1,022.00	839.00
	2.61	**1.05**
Quick ratio = Current assets - inventory	1,477.00	567.00
Current liabilities	1,022.00	839.00
	1.45	**0.68**
Inventory days = Inventory x 365 days	1,188 x 365	317 x 365
Cost of sales	2,419.00	1,901.00
	179 days	**61 days**
Receivable collection period = Trade receivables x 365 days	648 x 365	494 x 365
Revenue	7,603.00	6,336.00
	31 days	**28 days**
Payables payment period = Trade payables x 365 days	740 x 365	342 x 365
Cost of sales	2,419.00	1,901.00
	112 days	**66 days**

W3 Gearing Ratios

Capital gearing = <u>Prior charge capital x 100%</u>	1,500.00	2,641.00
Prior charge capital + Equity	4,948.00	5,017.00
	30%	**53%**
Debt to Equity ratio = <u>Debt x 100%</u>	1,500.00	2,641.00
Equity	3,448.00	2,376.00
	44%	**111%**
Interest cover = <u>PBIT</u>	1,620.00	1,425.00
Interest charges	300.00	528.00
	5.40	**2.70**
Percentage decrease in debt= <u>current debt-debt for last year</u>	(1,141.00)	
debt for last year	2,641.00	
	-43%	
Percentage decrease in interest= <u>current interest-interest for last year</u>	(228.00)	
interest for last year	528.00	
	-43%	

W4 Investor Ratios

Earnings per share = <u>Profits attributable to equity shareholders</u>	1,228.00	718.00
Weighted average number of shares	230.00	230.00
	5.34	**3.12**
Dividend cover = <u>Profits attributable to equity shareholders</u>	1,228.00	718.00
Dividends paid	320.00	180.00
	3.84	**3.99**
Dividends per share = <u>Dividends paid</u>	320.00	180.00
Number of shares	230.00	230.00
	1.39	**0.78**

END OF SUGGESTED SOLUTION

CA ZAMBIA PROGRAMME EXAMINATIONS

ADVISORY LEVEL

CA 3.2: ADVANCED AUDIT AND ASSURANCE

THURSDAY 17 DECEMBER 2020

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

INSTRUCTIONS TO CANDIDATES

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

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

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

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

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

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

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

8. Present legible and tidy work.

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

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

SECTION A

This question is compulsory and must be attempted

QUESTION ONE

The Twapenga Group of companies is in the transport industry. The company is in passenger and cargo transportation in Zambia and the COMESA region.

The group structure consists of a corporate Head Office based in Lusaka and two subsidiaries one located within Zambia and the other located in a neighboring country. Under the corporate head office there is a maintenance division which is responsible for fleet maintenance and it charges for the use of its services.

The local subsidiary is involved in the transportation of petroleum products and passenger transport whereas the foreign based subsidiary is in the transportation of petroleum products in that country.

Your firm of Chartered Accountants is auditor of the parent company and in the current year has been appointed group auditor of the Twapenga Group of companies. The local subsidiary operates independently and is audited by a different firm of auditors. The foreign subsidiary is audited by a locally based audit firm in that country. The country in which the foreign subsidiary is based does not have regulationsfor the accounting profession and there is no mandatory requirement for accountants to follow international financial reporting standards (IFRS). The foreign subsidiary is considered a significant component from the point of view of the group.

The parent company is responsible for the preparation of the consolidated financial statements.

Due to stiff competition in the transport sector, the group is facing serious liquidity problems.

At a recent board of Director's meeting, a number of major decisions were made as follows:

1. The parent company should concentrate on managing the group and offering corporate head office services and sell the maintenance division.
2. The fleet maintenance division should be sold off within the next one year and all staff under this department will be laid off and paid their separation packages.
3. In line with legislation with regards to the environment the company wishes auditors of financial statements to perform social and environmental audits. This is in order to give assurance that the company meets the social and environmental targets that it sets for itself.
4. As part of its diversification strategy, the parent company will purchase 30% of shares in a property development company in Zambia.

During the planning stage of the audit of the financial statements of Twapenga Group of companies, you establish the following information:

1. The board of directors approved that 0.5% of the group profits should be ploughed back into the communities in which it operates as part of its social responsibility.
2. The company annually undertakes to sponsor, to a local university, an agreed number of male and female vulnerable children.

3. In line with its philosophy of not causing harm to staff and the environment, the company does not wish to cause injury and harm to staff and cause any damage to the environment through its activities.It wishes to limit the extent of contamination to the environment that it can cause through spillages of petroleum products.
4. The company realizes the risk that goes with the transportation of hazardous products and it does not want to be involved in road traffic accidents. To this effect, all the company drivers undergo a defensive driving course annually in order to reduce the risk associated with the transportation of hazardous products.

You have been assigned to the audit of the consolidated financial statements of the Twapenga Group of Companies as Audit Manager.

At the end of the audit you have been presented with draft financial statements which comprise the Profit or Loss and Other Comprehensive Income, the Statement of Financial Position and the related notes and disclosures. In addition to the financial statements, management of Twapenga Group of Companies have presented you with the Chairman's statement, the report of directors and the summary of key figures for the past ten years.

Required:

(a) Identify and explain six (6) audit risks in the audit of the Twapenga Group financial statements. (9 marks)

(b) Suggest suitable audit responses for each of the risks identified in (a) above. (6 marks)

(c) Suggest four (4) audit procedures that should be carried out with regards to the intended sale of the maintenance division of Twapenga Group of Companies. (6 marks)

(d) Describe the work that your firm will carry out on the financial statements of the significant foreign component. (3 marks)

(e) Discuss the audit work that should be carried out with regards to the information contained in the Chairman's report and the report of the directors stating the impact on the audit report. (6 marks)

(f) (i) Suggest and explain suitable key performance indicators that you expect to find in the social and environmental audit of the Twapenga Group of Companies. (4 marks)

(ii) For each of the key performance indicators suggested in (i) above state and explain the audit evidence you expect to find. (6 marks)

[Total: 40 Marks]

SECTION B

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

QUESTION TWO

(a) You are the Training Manager in your firm of Chartered Accountants. You have arranged a day's workshop for newly recruited audit assistants.

One of the audit assistants wishes to know the difference between an Emphasis of Matter paragraph and an Other matter paragraph.

Required:

(i) Define an Emphasis of Matter paragraph and explain its impact on the Opinion and the audit report giving two (2) examples of the use of such a paragraph. (6 marks)

(ii) Define an Other matter paragraph and explain its impact on the Opinion and the audit report giving two (2) examples of the use of such a paragraph. (4 marks)

(b) The Zambian Government has identified ten development zones around the country. The objective is that the Government wishes to take development to less developed areas in each province.

To finance this development, itobtained a twenty year development loan from the World Bank for infrastructure development in development zones.

The government is encouraging business houses to be established in these development zones while it constructs roads and infrastructure for housing Government offices. In an effort to encourage private investment, the Government is giving revenue grants to interested business men and women. One of the conditions of the grant is that local labour should be engaged in any construction works and if this is not done, the grant is repayable. Failure to which Government will take legal action.

Manga Hardware Ltd runs a small hardware shop in a development zone in North Western Province. The company wishes to expand its business and build a shopping complex which will house a bigger shop and the remaining space will be let to other people wishing to set up businesses.

Manga Hardware Ltd has obtained a three year loan of K500million for the construction of the shopping complex. The loan is subject to 2% annual interest and the company has adopted a policy of capitalizing the interest on the loan.
The company has been given a revenue grant of 10% of the estimated cost of constructing the shopping complex.

You are the audit manager in charge of the audit of the financial statements of Manga Hardware Ltd for the year ended 31 December 2019.

Required:

(i) Discuss the audit risk and recommend three (3) audit procedures to perform on the borrowing costs of Manga Hardware Ltd. (5 marks)

(ii) Discuss the audit risk with regards to the revenue grant of K50 million and recommend three (3) audit procedures to perform on the revenue grant. (5 marks)

[Total: 20 Marks]

QUESTION THREE

(a) You are about to commence the audit of Kabari Ltd a company that employs over two hundred employees.

You are going to carry out the audit of the payroll of Kabari Ltd. The payroll system is computerized. The company uses payroll software which it bought off the shelf.

There has been an increase in competing for clients in the audit profession. The large audit firms have embarked on strategies aimed at reducing audit costs in order to remain competitive.

One strategy that has gained momentum is the use of computer assisted audit techniques (CAATs) by the audit firm. There has been a noted increase in the use of audit software and test data in the performance of audits.

You would like to make use of computer assisted audit techniques (CAATs) in the audit of the payroll of Kabari Ltd.

Required:

(i) Explain the meaning of audit software and illustrate its use in the audit of Kabari Ltd. (3 marks)

(ii) Explain the meaning of test data and illustrate its use in the audit of the financial statements of Kabari Ltd. (3 marks)

(b) You are the Audit Manager in your firm of chartered accountants. You are responsible for ensuring that ethical matters are followed in the audit of all your assurance clients.

The working papers for four (4) of your firm's audit clients have been presented to your for review.

The following information relates to the four clients:

1. Fox Plc. is a listed company whose shares are listed on the local securities exchange. Fox Plc. has been an audit client of your firm for the last ten (10) years and Fransisca has been the Engagement Partner during this period.

Peter,Fransisca's husband inherited 10% shares in Fox Plc. from his father four (4) years ago. Fox Plc. is a successful company and declares dividends annually.

2. Inkpot Ltd is a micro financial institution which gives loans to government employees only. Your firm of chartered accountants has been appointed auditor of Inkpot Ltd in the current year. Previously the company was audited by a different firm of auditors.

   Your firm accepted the offer to be auditor of Inkpot Ltd despite refusal by the management of Inkpot Ltd that you contact the previous auditors.

   Two (2) of the audit team members on the audit of Inkpot Ltd have been offered loans from Inkpot Ltd on terms that are more favorable than thosegiven togovernmentemployees.

3. Your firm has been auditor of Machipisa Stores for the past two (2) years. The audit reports issued for the two years have been unmodified.

   During the course of the current year audit, you have discovered a fraud involving an amount of K50million and the amount is material to the financial statements. Management has refused to adjust the financial statements in view of the fraud.

   You have decided to modify the current year audit opinion as a result. At a recent board meeting of Machipisa Stores, the board resolved to take legal action against your firm for not detecting the fraud unless you do not modify the opinion.

4. Kings Manufacturing Plc. is a large manufacturing company which has been an audit client of your firm for many years. The income your firm gets from Kings Manufacturing Plc. accounts for 20% of the firm's total income.

   During the current audit, the Audit Senior has discovered that there has been a fraud regarding under declaration of profits in the tax returns. This has resulted in material under payments of tax liabilities.

   The Audit Senior reported this matter to you and he suggested that this matter should be reported to the tax authorities.

   You consulted the Engagement Partner who suggested that the matter should not be reported because the firm risks losing a client who contributes substantially to the firms income. The Engagement Partner suggested that the matter be left to him and he would discuss it with the Chief Executive Officer who is his close friend.

Required:

(i) Comment on the ethical and other professional issues in each of the four (4) issues raised above, clearly outlining the threat and its significance. (8 marks)

(ii) Suggest suitable safeguards or actions that should be taken to mitigate the threats in each of the four (4) clients. (6 marks)

[Total: 20 Marks]

QUESTION FOUR

You are a Senior Audit Manager in Jaggly Accountants, a firm of chartered accountants. During a weekly meeting to review progress on a number of audit assignments involving financial statements for the year ended 31 December 2018, the Partners requested you to consider how Jaggly Accountants should react to the following situations:

1. A newly recruited Auditor who was recently included as part of the engagement team for the final audit of Luna Ltd, which started a week ago has stated that:

   "The tax department in Jaggly Accountants is responsible for the tax affairs of Luna Ltd. The documentation on planning indicates that the Audit Supervisor consulted Jaggly Accountants' tax department in order to understand the company's future tax plans. This is unethical and should not appear in the documentation since manipulation of the deferred tax figure will affect the actual tax position. The Zambia Revenue Authority (ZRA) will question this conduct and possibly institute a tax audit or investigation which may embarrass Jaggly Accountants."

2. The Audit Manager responsible for the audit of Muna Ltd, a milling company, which is nearing completion has been informed that Muna Ltd bought a second hand Lathe Machine at a price of K1 million, and paid an agent who facilitated the transaction a fee of K900,000. The normal agents' fee is 5% of the gross value. No audit work has been performed on this transaction.

3. The Audit Senior has prepared the draft audit plan for the audit of the financial statements for Puna Plc and the following is an extract on risk of assessment:

Audit risk

A press cutting on 16 January 2019 indicated that a customer had commenced legal action against Puna Plc for an accident which happened four (4) days ago. This accident was caused by one of its drivers while delivering goods to the customer's premises which caused significant damage to the receiving bay. The customer is demanding K2 million. There is a risk that a provision has not been set up for this legal suit as required by ISA 37 *Provisions, Contingent Liabilities and Contingent Assets.* Profits may be understated and provisions overstated.

Audit response

The Audit Senior needs to establish the full details through discussion with those charged with governance and should corroborate the findings to the press cutting where necessary. The claimed K2 million should be compared to the actual provision included in the financial statements to ensure it is reasonable.

Required:

(a) Discuss the statement made by the new auditor regarding the final audit of Luna Ltd. (4 marks)

(b) Recommend the audit work to be performed on the purchase of the second hand Lathe Machine in Muna Ltd. (8 marks)

(c) Evaluate the appropriateness of the contents in the extract on risk assessment in the Puna Plc audit. (8 marks)

[Total: 20 Marks]

QUESTION FIVE

Bwezi Ltd, a Zambian retail company, was formed by three individuals who are also the directors of the company. They have no accounting background and get performance bonuses every year based on profit. The directors think that the review stage of an audit is a mere waste of time meant to justify high audit fees.

You are the Audit Manager in Jackeline Associates responsible for the audit of Bwezi Ltd and you are currently reviewing the working papers. The draft accounts for the year ended 31 March 2019 show profit before tax of K4.5 million (2018 – K3.9 million), and total assets of K18 million (2018 – K12 million).

The following issues are outstanding and have been left for your attention:

1. On 15 March 2018, Bwezi Ltd spent K700,000 on employees' computer training courses. Employees are now able to work quickly and in April 2018, the company noticed a reduction of K40,000 in overtime and this is expected to continue for the next two (2) years. Directors have charged the computer training cost to the statement of profit or loss, disregarding the expected future economic benefits. (4 marks)

2. Bwezi Ltd sold items of property, plant and equipment on 1 December 2018. The carrying amount and the sale proceeds were K905,000 and K850,000 respectively. The loss on disposal has been netted off against "other income". (3 marks)

3. Bwezi Ltd values inventory at the lower of cost and net realizable value. Inventory mainly consists of goods held for sale. Cost is computed by deducting the gross profit margin from the selling price of inventory. When computing net realizable, an allowance is made for any future markdowns to be made on inventory. (4 marks)

4. A provision amount as at 31 March 2019 has been calculated relating to changes in management structures, using a discount rate of 8%. However, the directors are not willing to adjust the draft accounts for a further liability of K2.2 million if the company's weighted average cost of capital of 15% is used. (4 marks)

The Directors of Bwezi Ltd have written to the Engagement Partner requesting that a meeting should be held before the audit report is signed, since the Audit Supervisor mentioned that the audit opinion could be modified.

Required:

(a) Explain, with reasons, how the Engagement Partner should respond to the directors' request that a meeting should be held before the audit report is signed. (3 marks)

(b) Comment on the matters to be considered in each of the four (4) issues whenundertaking your review of audit working papers and financial statements of Bwezi Ltd. (15 marks)

(The split of the mark allocation is shown in the question).

(c) Advise the directors on the relevance of the review stage of an audit. (2 marks)

[Total: 20 Marks]

END OF PAPER

SUGGESTED SOLUTIONS

SOLUTION ONE

a) **Audit risks in the audit of Twapenga Group:**

1. **Risk of causing injury or death to people:**
The company is in the business of passenger transport and the transportation of petroleum products. There is a risk of accidents occurring resulting in the injury or death of people. This could lead to the company being sued for compensation.
Litigation against the company could result in provisions being misstated in the financial statements.

2. **Risk of theft of product:**
The nature of petroleum products is such that it can easily be stolen in transit and this may result in in-transit losses which the company will be liable to pay for. In an effort to hide these losses, there is a risk that losses will not be reported accurately in order to hide any losses arising from theft.

   There is a risk that the financial statements may be materially misstated in that in-transit recoverable losses may be understated. The company may be liable to claims by the oil company in future and these losses may not have been provided for.

3. **The component auditors are different from the group auditors:**
There is a risk that material undetected misstatements may be contained in the consolidated financial statements because the component auditors are different from the group auditors.

   The consolidated financial statements will contain figures on the components which the group auditors will not have audited.

4. **Lack of regulation of accountants in the country of the foreign subsidiary:**
The lack of regulation of accountants in the country where the foreign subsidiary is based poses a risk that the audit of the foreign subsidiary has not been audited using best auditing practices. This could result in a risk that material misstatements exist in financial statements of the foreign component subsidiary.

   The figures in the financial statements of foreign subsidiary which form part of the consolidated financial statements may be misstated which could result in the misstatement of the consolidated financial statements.

5. **Foreign subsidiary not reporting in accordance with IFRS:**
The country in which the foreign subsidiary is based does not require that financial statements should be prepared in accordance with the International Financial Reporting Standards.

Non-compliance with the IFRS may result in the consolidated financial statements being misstated. Any adjustments to the financial statements of the foreign subsidiary may not have been carried out correctly resulting in the financial statements being misstated.

6. **Incorrect consolidation process:**
   The parent company is responsible for the consolidation of the financial statements and the components. If this is incorrectly carried out, it may result in the misstatement of the consolidated financial statements.

7. **Accounting for the disposal of the maintenance division:**
   There is a risk that the accounting for the maintenance division which is up for sale was not correctly done by the parent company. This may result in a material misstatement of the consolidated financial statements.

8. **Related party transactions:**
   The parent company and the two subsidiaries are related parties. There is a risk that related party transactions are not appropriately dealt with in the financial statements.

   This is with regards to elimination of intragroup transactions which may not be correctly accounted for. This is likely to arise because of the maintenance done by the maintenance division and charged to the subsidiaries that use the service.

9. **Acquisition of 30% shares in a property development company:**
   A 30% shareholding in the property development company is an investment in an associate and should be accounted for in accordance with IAS *28 Investments in associates and joint ventures.*

   There is a risk that the consolidated financial statements may be misstated due to the fact that the acquisition of 30% shares may have been treated differently for example as a mere investment rather than as an associate.

10. **Other information contained in the financial statements:**
    The draft financial statements of the consolidated financial statements contain the Chairman's statement, the report of the directors and the ten year financial records. These comprise the other information contained in the financial statements.

    There is a risk that the other information may be inconsistent with the financial statements and this may result in the financial statements being misstated.

b) Audit procedures in response to the risks in (a)

1. **Risk of causing injury or death to people:**

The response to the risk of being sued and provisions being understated will include;

- Evaluating the systems that the company puts in place with regards to reporting accidents and confirm that they are adequate.
- Discuss with the company legal counsel if any and find out whether there is any legal case against the company arising from an accident.
- Obtain written representations from management confirming the existence or non-existence of legal cases against the company.

2. **Risk of theft of product:**
    - Compare the previous year in-transit losses to the losses recorded in the current year.
    - Enquire from management and those charged with government on any instances of fraud arising from theft of products in transit.
    - Review the correspondence between the oil company and the client and look out for any information regarding losses in-transit.

3. **The component auditors are different from the group auditors:**
   Evaluate the qualifications and competences of the component auditors. Review the working papers of the component auditors and determine the quality of the work carried out.

4. **Lack of regulation of accountants in the country of the foreign subsidiary:**
   Evaluate the adherence of the component auditors to professional ethics. Carry out audit procedures on areas where risk of material misstatement is considered high, since the component is considered as a significant component.

5. **Foreign subsidiary not reporting in accordance with IFRS:**
   Review the workings and the restatement of the financial statements of the foreign subsidiary in order to ensure that the amendments are in line with applicable accounting standards.

6. **Incorrect consolidation process:**
   Review the consolidation workings that have been prepared by the parent company.
   In reviewing the consolidation workings, ensure that this has been done in accordance with relevant accounting standards.

7. **Intended disposal of the maintenance division of the company:**
   There is a risk that the accounting for the intended sale of the maintenance division may not be in accordance with IFRS 5 *Non-current assets held for sale and discontinued operations.*

   The standard requires that such assets should be disclosed separately and not doing so may result in a material misstatement of the financial statements.

8. **Related party transactions:**
    - Enquire from management on details of related parties of the Twapenga Group of Companies.
    - Obtain written representations from management confirming that they have disclosed to the auditors all related party relationships.
    - Review the draft financial statements and confirm that related party relationships have been disclosed together with the transactions with related parties.

9. **Acquisition of 30% shares in a property development company:**
    - Review minutes of the board of directors authorizing the purchase of shares in the property development company.
    - Examine the share certificate for the shares purchased in the property development company.
    - Carry out a search at the registrar of companies to establish the issued share capital of the property development company and confirm that the shares purchased by the Twapenga Group is 30% of the shares of the property development company.

10. **Other information contained in the financial statements:**
    - Read through the other information contained in the Chairman's report, the report of directors and the ten year financial records and look out for any inconsistences with the financial statements.
    - Review the other information and establish any inconsistences with the knowledge that we have gained through the audit.

c) Audit procedures on the intended sale of the maintenance division:

- Read through the board minutes where the decision to dispose of the division would have been made.
- Evaluate and confirm that the assets of the division intended for sale are separately identifiable in accordance with IFRS 5
- Evaluate and confirm that it is highly probable that the sale will take place by:
    - Obtaining evidence of management's commitment to sell the division.
    - Confirm if Twapenga Group of Companies is actively looking for a buyer of the maintenance division.
    - Enquire from management and establish if the division will be expected to be sold within the next one year.
- If the maintenance division qualifies to be an asset held for sell, review the draft financial statements and ensure the assets are reclassified as held for sale per IFRS 5
- Review the calculation used in determining the value of the assets held for sale.
- Ensure that the assets held for sale should not be depreciated in accordance with IFRS 5

d) Work of group auditors on foreign subsidiary:

The foreign subsidiary is a significant subsidiary according to the question. The group auditors have a duty to obtain sufficient appropriate evidence on the financial statements of significant subsidiaries.

ISA 600 *Special considerations – audits of group financial statements (including the work of component auditors)*gives guidance on group audits.

According to the information given, the foreign subsidiary is a significant component. According to the auditing standards, the group auditors are required to be involved in the work of the component auditor.

The involvement of the group auditors will include the following:

- Meeting with the management of the component in order to obtain an understanding of the component and its environment.
- Review the audit strategy and audit plan of the component auditor including reviewing the documentation of the work of the component auditor of any identified significant risks.
- Carrying out risk assessment procedures in order to identify and assess the risk of material misstatement at the component level and respond as appropriate.
- Discuss with the component auditor the susceptibility of the component to fraud and error.
- The group auditors may wish to perform a full audit on the significant component based on the component materiality level.

e) Audit work with regards other information:

ISA 720 (Revised) *The Auditor's responsibilities relating to other information* sets out the requirements of the auditor with regards to other information.

The auditor will:

- Read the other information contained in the Chairman's statement and the report of the directors and consider whether there is material inconsistence between the other information and the financial statements.
- In the event that there are material inconsistences between the other information and the financial statements to respond as appropriate and discuss with those charged with governance.
- Having read the other information, consider whether there are inconsistences between the other information and our knowledge that the firm has obtained during the audit.
- To report in the auditor's report in accordance with ISA 720 with regards to responsibilities on other information in a separate paragraph headed 'Other information'.

f) i. Key performance indicators in Twapenga Group of companies:
Social KPIs:

1. % of profits ploughed back in the communities per year – The Company has committed itself to give back to the communities 0.5% of its annual profits as part of its social responsibility.
2. Number of female student sponsored to university per year – in order to measure whether the company meets its annual targets of female students it committed itself to sponsor.
   Number of male students sponsored per year – in order to measure the plan with actual performance.

Environmental KPIs:

1. Number of work related injuries per year – this should be the number of injuries recorded in the year which will be compared with the planned injuries which could range from zero to whatever realistic number management may determine.
2. Number of spillages of petroleum products carried per year or per 1000 Kms – This is aimed at measuring the actual spillages that occurred. The expectation is that this number should be declining. The actual will be compared with the planned number of spillages.
3. Number of accidents per year to measure the actual accident rate with the planned rate.

ii. Audit evidence expected for each KPI:

1. **KPIs on social responsibility:**
   % of profits spent on social responsibility:
   - The budget for the year under review for social responsibility
   - Minutes of the meeting at which % was agreed and authorized
   - Information related to actual expenditure on social responsibility

   Number of female candidates enrolled per annum:

   - A record of the female students that have been sponsored by Twapenga Group of Companies.
   - Documentation of payment of fees to the local university.
   - Board minutes setting the number of female students that will be sponsored annually.

   Number of male students sponsored:

   - A record of the male students that have been sponsored by Twapenga.
   - Documentation of payment of fees to the local university.
   - Board minutes setting the number of male students that will be sponsored annually.
2. **KPIs on social responsibility:**
   Number of work related injuries per year:
   - Register of injuries recorded during the year.
   - Reporting procedure used by staff to report injuries.

- Record of targets set by management at the start of the year

Number of spillages:
- Record of the target number of spillages
- System for reporting and recording spillages

Number of accidents:
- Target number of accidents per year.
- Reported and recorded number of accidents in the year.

SOLUTION TWO

a) i. Definition of Emphasis of Matter Paragraph:

An emphasis of matter paragraph is a paragraph that the auditor may use in the auditor's report to emphasize matters that are correctly accounted for and disclosed in the financial statements. It is used to disclose matters that the auditor feels are of such importance that they need to make mention of them in the auditor's report.

Impact of the Emphasis of Matter Paragraph on audit report:

The Emphasis of matter paragraph is used when the auditor's opinion is unmodified and it is not a modification of the opinion of the auditor. On the other hand, the Emphasis of Matter paragraph is not part of a standard unmodified report and its inclusion results in the auditor's report being modified.

[Up to 2 marks for relevant points on impact of EOM of opinion/report]

Examples of matters that can be included in the Emphasis of Matter Paragraph:

- The outcome of a legal case that is not concluded at the period end.
- Any early application of accounting standards by the client company which has an adverse effect on the financial statements.
- A major catastrophe which has an adverse effect on the financial position of the client company.

ii. Definition of Other matter paragraph:

The Other matter paragraph is used by the auditor to bring to the attention of users of financial statements matters that need not be disclosed in the financial statements but the auditor feels they are of such importance that he should make mention of them in the auditor's report.

Impact of the Other matter paragraph on the opinion and report:

The inclusion of an Other matter paragraph does not result in the opinion being modified. It is not part of a standard unmodified report and as a result its inclusion results in the report being modified.

Examples of matters than can be included in the Other matter paragraph:

- Where the prior year financial statements were audited by a predecessor auditor.
- Where this is the first audit of the financial statements of the client company and the prior year financial statements were not audited.

b) i. Audit risk regarding borrowing costs:

The audit risk in the audit of Manga Hardware Ltd with regards to the figure of borrowing costs is that the treatment of the borrowing costs may not be in line with the provisions of IAS 23 *Borrowing Costs.* The standard requires that

the borrowing costs on qualifying assets should be capitalized in the period incurred and should not be expensed. The risk in the case at hand is that Manga hardware Ltd writes off against income the borrowing costs instead of capitalizing them as part of the cost of constructing the shopping complex.

Audit procedures – borrowing costs:

- Confirm that the asset in question is a qualifying asset in accordance with IAS 23 *Borrowing Costs*.
- Review the loan agreement and confirm that the rate of interest is 2%.
- Recomputed of the borrowing costs for the current year.
- Ensure that the disclosure of the borrowing costs in the financial statements are adequate and in accordance with the provisions of IAS 23 *Borrowing Costs.*
- Verify payment of interest through verification to payment records (bank statements) and the loan agreement documents
- Ensure that interest is directly attributable to the construction of the shopping complex.

ii. Audit risk regarding the revenue grant:

The audit risk with regards to the revenue grant receivable from government is that the accounting treatment of the grant may not be in line with the provisions of IAS 20 *Accounting for Government Grants and Disclosure of Government Assistance*.

The grant from government is of a revenue nature for use in paying for labour locally recruited. Since the amount is received at commencement of the project, the grant amount should be treated as a deferred income and credited to income statement annually to offset the payments of wages.

There is also a risk that the company will not comply with the grant conditions which can result in the grant being repayable.

Audit procedures – Revenue grant:

- Review the grant agreement and determine the grant conditions.
- For a sample of payments for wages verify that the employees being paid for are local employees in accordance with the grant conditions.
- Confirm receipt of the grant amount and trace to the cash book and ensure accounted for as a deferred income.
- Agree amount transferred to the Profit or loss account and ensure related to wages payment to locally recruited employees.

SOLUTION THREE

a) i. Meaning of audit software:

Audit software is a form of Computer Assisted Audit Techniques used by the auditor to perform audit procedures that would have been performed by the auditor manually.

Use of audit software in the audit of the financial statements of Kabari Ltd:

- The extraction of samples for testing under payroll tests can be done by the use of audit software. The auditors do not test 100% of the transactions and an unbiased sample can be extracted using audit software.
- The computation of net pay for staff can be checked by the use of audit software. The software can re-perform the calculations made by the payroll applications.

ii. Meaning of test data:

Test data is data developed by the auditor requiring that it be processed in a client computer application with a view to test whether the system is processing data the way it should be. Test data is also used to test the effectiveness of the controls in place in a computer system.

Possible use of test data in the audit of the payroll system of Kabari Ltd:

- Testing the payroll system of Kabari Ltd by trying to process payroll for a fictitious employee number and confirming that the system will reject this.
- Trying to process employee not electronically authorized by the Human Resource Manager and confirm whether control works and the system rejects.
- Testing access controls by trying to access payroll application using invalid password.

b) i. Ethical and professional issues:

Fox Plc:

There are two ethical issues in this case.

Firstly, Francisca has been Engagement Partner on the audit of Fox Plc. for ten years. This results in a long association with the client and could give rise to a familiarity threat to the firm.

Through the long association with the same client, there is a threat that Fransisca may lose objectivity in the performance of her work. This is a significant threat to objectivity and it is necessary that suitable safeguards are applied to reduce the threat to acceptable levels.

The second threat in this case is that of the husband to Francisca who inherited shares in Fox Plc. from his father. Francisca has a self-interest threat in her husband's holding of shares in a client company. She benefits from any dividends that the husband receives and this can result in a threat to the objectivity of Fransisca. Ethical guidance provides that a member of the assurance team or their immediate family member should have no financial interest in a client company.

Inkpot Ltd:
The firm has been appointed auditor of Inkpot in the current year. A professional requirement is that when a firm is appointed to be auditor of a new client, there is need to communicate with the outgoing audit firm. Communication can only be done if the prospective client give permission to the incoming auditors to communicate with the outgoing auditors.

In the case at hand, Inkpot Ltd has denied the firm permission to communicate with the outgoing auditors. This is a significant matter which cannot be ignored by the proposed auditors.

According to the information given, Inkpot Ltd is only supposed to give loans to government employees. The fact that loans at more favorable terms have been given to audit team members is probably meant to influence the way that they will perform the audit. This has the potential to impact on the objectivity of the two audit team members. The giving of loans to people not qualifying to get loans may be aimed at influencing the people concerned.

Machipisa Stores:
It is not the duty of auditors to prevent and detect fraud in a client company. The threat by the board of Machipisa stores to take legal action against the auditors for not discovering a fraud gives rise to an intimidation threat. The auditors will not be independent because of the fear of being sued and also losing an audit client.

This is a significant threat for which suitable safeguards should be put in place by the audit firm.

Kings Manufacturing Plc:
There are three ethical issues to consider in the audit of Kings Manufacturing Plc.

In the first instance, 20% of the total income of the firm comes from the fees charged to Kings Manufacturing Plc. This means that the firm is reliant on this client and this is above the 15% fee income from one client of an audit firm. This reliance on this client gives rise to a self-interest threat to the firm because the firm would not like to lose a client of this size as it will impact on the firm's income. The firm would not like to lose this client and will do everything possible to retain the client and in so doing the firm and audit team members will lose objectivity.

In the second instance, there is a fraud that has taken place in Kings Manufacturing Plc which has come to the attention of the audit team. The response of the Audit Engagement Partner is not appropriate under the circumstances. There is an ethical issue of confidentiality in this situation whereby auditors are not supposed to disclose to third parties information that comes to their attention without the permission of the client. The ethical guidance gives exceptions to the general rule on confidentiality and this is the one that the firm should follow in this case.

Lastly the fact that the Chief Executive Officer of Kings Manufacturing Plc is a close friend of the Engagement Partner poses a familiarity and self-interest threat. This can result in the Engagement Partner not acting objectively in dealing with the issue at hand.

ii. Suitable safeguards or action to mitigate threats:

Fox Plc:

With regards to the first threat to independence of long association of Fransisca with Fox Plc., she should be rotated and someone else should be made Engagement Partner of fox Plc. The firm should have policies in place whereby partners are rotated to avoid the threat of long association.

Another safeguard that may be put in place is that the audit working paper of Fox Plc. could be reviewed by an independent partner who was not involved in the audit of Fox Plc.

With regards to the shares that Francisca's husband inherited from his father is a concern, as long as Fransisca remains engagement partner, the husband should sell the share that he inherited.

Inkpot Ltd:

The following safeguards should be put in place by the audit firm in order to reduce the threats to acceptable levels or eliminate the threats altogether.

To the extent that Inkpot Ltd has denied the firm to communicate with the outgoing auditors, the firm should decline appointment as auditors of Inkpot Ltd.

With regards to the offer to two audit team members to get loans at favorable terms, the two audit team members should decline and not take the loans.

Machipisa Stores:

In response to the threat of litigation against the firm, it will be necessary for the firm to reevaluate the integrity of management. This is a case of real intimidation where the client has threatened to take legal action unless the current year audit opinion is unmodified.

The firm may consider resigning from the audit engagement. Issuing an unmodified opinion for fear of litigation would not be correct. If the auditors

resign they will have the right to speak and be heard at the annual general meeting at which they can give reasons of their resignation.

Kings Manufacturing Plc.

The following safeguards should be put in place to mitigate the ethical threats in the scenario.

In response to the first threat of overreliance on one client, the firm should take measures that will reduce the income from Kings Manufacturing Plc. This could be done by increasing the client base and get more clients which will reduce the overall share of fee income from Kings Manufacturing Plc.

We are not told in the question whether or not the firm also offers non-audit services to Kings Manufacturing Plc. If this is the case, the firm may have to decide which service it wishes to continue offering to Kings Manufacturing Plc. and give up the other one.

In response to the second threat, the firm should follow the ethical guidance with regards exceptions to the confidentiality principle. In this case the firm will not be in breach of the ethical principle if it reported the matter to the relevant authorities.

With regards to the friendship between the Engagement Partner and the Chief Executive Officer of Kings Manufacturing Plc, the Engagement Partner should be rotated and replaced with someone who is not close with the Chief Executive Officer. Quality control reviews by a partner who was not involved in the audit could be an appropriate safeguard.

(NB. The answers to parts ((i) and (ii) above could have been combined as Q3 (b) (i)/ (ii) with safeguards being shown immediately below the ethical matter)

SOLUTION FOUR

(a) **Luna Ltd – Statement by the newly recruited Auditor**

As part of the planning process, if the client receives tax services from the firm, the auditor should consult the tax department as to the company's future tax plans, to ascertain whether they expect a deferred tax liability to arise. This will assist any analytical procedures they carry out on deferred tax provision. Hence, there is nothing wrong with the consultation.

Manipulating the deferred tax figure will not affect the actual tax position. The Zambia Revenue Authority (ZRA) cannot institute a tax audit or investigation for an item which has no impact on the actual tax remittances. This is simply an accounting issue, even if a deferred tax charge is recognized in the statement of profit or loss before dividends.

(b) **Muna Ltd – Audit procedures on acquisition of secondhand lathe:**

The following audit procedures will be performed on the purchase of the second hand lathe by Muna Ltd:

- Confirm that the purchase was authorized be reviewing the minutes of the meeting at which authorization was granted.
- Confirm the rights to the machine by confirmation that it is used by Muna Ltd.
- Conform that the machine has been recorded in the non-current asset register by reviewing the register.
- Review the depreciation policy of Muna Ltd and ensure that the policy has been followed.
- Obtain the calculations for depreciation and recalculate for mathematical accuracy.
- Confirm that the amount that is capitalized with regards the purchase only includes the capital element of K1 million and that the agent fee is expensed against income.

(c) **Puna Plc – Evaluation of the extract on risk assessment**

The structure of the proposed extract on risk assessment is correct as it gives the audit risk and the audit response. However, the contents are misleading in the following respects:

- Accounting Standard – the appropriate accounting standard is IAS 37 not ISA 37. Such minor errors must be avoided at all costs as it can be indicative of lack of attention to detail which could eventually impact on quality. The engagement team need to be guided properly. In fact the more relevant accounting standard is IAS 10 *Events after the Reporting Period.*
- Classification of the event – the event does not qualify as a provision as there is no liability as at 31 December 2019. It is a non-adjusting event which is indicative of conditions that arose after the reporting period. However, disclosure of a contingent liability may be made in the financial statements if non-disclosure hinder the user's ability to make decisions based on the financial statements.

- Profit understated and liabilities overstated – this is incorrect if a provision is involved. The opposite is true if no provision is not made, profit will be overstated while liabilities will be understated. The competence of the Audit Senior is questionable.
- Discussion with those charged with governance – this is a management issue and the discussion should be held with management. Those charged with governance should only be considered if there is no agreement with management.

SOLUTION FIVE

(a) **Response to directors' request for a meeting:**

If it is correct that Jackeline Associates expects that the audit opinion will be modified, then they must communicate the circumstances surrounding the modification with those charged with governance as guided by ISA 705 (Revised) *Modifications to Opinion in the Independent Auditor's Report.* This is in order to:

- Give those charged with governance notice of the modification and the reasons for it
- Confirm the auditor's understanding with those charged with governance of the facts of any matters giving rise to modifications, and to confirm matters on which the auditor and those charged with those charged with governance disagree
- Give those charged with governance a chance to provide the auditor with further information and explanations before the auditor's report is issued.

In addition, it is a specific requirement of ISA 260 (Revised) *Communication with Those Charged with Governance* that any 'significant difficulties' encountered be communicated with those charged with governance and this includes any matters that lead to a modified auditor's report being issued.

Hence, the directors' request for a meeting must be granted.

(b) **Matters to consider**

(1) **Computer training** – the matters to consider include the following:

- Materiality – the cost of computer training of K700, 000 is 15.6% (700,000/4,500,000 X 100%) and is material to the statement of profit or loss. It is also material to the statement of financial position at 3.9% (700,000/18,000,000 X 100%) of total assets.
- Accounting treatment – IAS 16 *Property, Plant and Equipment* states that the costs of training staff should always be treated as an expense, as they do not meet the definition of an asset, which requires that the entity has control of the asset. This is very unlikely to be the case with training costs, as the staff will probably have the right to leave the company, meaning that Bwezi Ltd would not receive any subsequent economic benefit from having trained them. The accounting treatment used by the directors is therefore correct.
- Impact on audit opinion – since the accounting treatment is correct, the opinion will be unmodified.

(2) **Sale of items of property, plant and equipment** – the matters to consider include the following:

- Materiality – the loss on disposal of K55, 000 is immaterial to the statement of profit or loss at 1.2% (55,000/4,500,000 X 100%) of profit before tax.

- Accounting treatment – IAS 16 gives guidance in this area. The loss should be shown separately in the statement of profit or loss and other comprehensive income. The netting off is incorrect.
- Impact on audit opinion – since the amount involved is immaterial, the audit opinion will be unmodified.

(3) **Inventory valuation** – the matters to consider include the following:

- Materiality – since Bwezi Ltd is a retail company, inventory is normally material to the financial statements.
- Accounting treatment – IAS 2 *Inventories* gives guidance in this area. The methods used in allocating costs to inventory need to be selected with a view to providing the fairest possible approximation to the expenditure actually incurred in bringing the product to its present location and condition. The practice of retail outlets using selling price less normal gross profit margin is given as an example of an acceptable method of approximating to cost. Records must be kept of mark-ups and any subsequent mark-downs, to ensure that the calculation still gives an approximate to cost.
- Impact on audit opinion – since the method used is acceptable by IAS 2, the audit opinion will be unmodified.

(4) **Provision** – the matters to consider include the following:

- Materiality – The further liability of K2.2 million is 48.9% (2.2/4.5 X 100%) of profit before tax and 12.2% (2.2/18 X 100%) of total assets and is therefore very material to the financial statements.
- Accounting treatment – IAS 37 *Provisions, Contingent Liabilities and Contingent Assets* gives guidance in this area. The appropriate discount rate to use is the weighted average cost of capital which is 15%. The adjustment therefore ought to be made. If it is not made, the profits will be overstated while the liabilities will be understated significantly.
- Impact on audit opinion – since the further liability is likely to be both material and pervasive, an adverse opinion will be appropriate.

(c) **Advise on the relevance of the review stage of an audit**

The review of the financial statements, in conjunction with the conclusions drawn from the other audit evidence obtained, is relevant since it 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 auditors should consider whether the financial statements make "sense" in view of their knowledge of the entity's business and with the results of their audit procedures, and the manner of disclosure is fair.

END OF SUGGESTED SOLUTION

CA ZAMBIA PROGRAMME EXAMINATIONS

ADVISORY LEVEL

CA 3.3: STRATEGIC BUSINESS ANALYSIS

WEDNESDAY 16 DECEMBER 2020

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

INSTRUCTIONS TO CANDIDATES

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

2. This paper is divided into TWO (2) sections:
   Section A: One (1) Compulsory question.
   Section B: There are four (4) questions. Attempt any three (3) questions.

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

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

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

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

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

8. Present legible and tidy work.

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

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

SECTION A

This is compulsory and must be attempted.

<u>QUESTION ONE</u>– (COMPULSORY)

AXA: Creating the New CR Metrics

A global leader in the insurance and asset management business, AXA had risen to the top ranks in terms of corporate responsibility (CR) as well. In 2014, the French-based insurer led the industry on a number of corporate social responsibility and sustainability indexes. Not content to rest on these laurels, AXA transferred its CR team from the department that included the Communications function to a newly created department combining the Strategy, CR, and Public Affairs functions together, to further integrate CR into the core of the business.

AXA's business had grown rapidly over the previous decades. The company was formed in the 1980s through the merger of a few mid-sized French insurance firms. From the beginning, AXA's CEO Claude Bébéar aspired to build the first global insurance brand. The company made a series of acquisitions in the 1990s, including companies in the United States, Europe, Africa, and Asia. AXA was hailed in the business press for savvy deal-making. The company took over struggling franchises and utilizing its strong balance sheet, technical expertise and abilities in product innovation, managed to turn around their acquisitions. Over time, AXA also branded the companies under the AXA banner, assembling a global brand piece by piece. While Henri de Castries replaced Bébéar as CEO in 2000 and the company faced economic headwinds, AXA continued to produce strong returns.

In 2010, the company announced *Ambition AXA,* a five-year strategic plan to grow the company. The plan called for harvesting slow-growing businesses in mature markets, investing in emerging markets, and reducing the company's overall cost of operations. Under the strategy, AXA made significant acquisitions and deals in Asia, Africa and Latin America. The company became the leading foreign insurance provider in China and a player in the Indian market. By 2014, AXA employed 157,000 people across the globe, serviced over 100 million clients, enjoyed a €50 billion market cap, and managed over €1,000 billion in assets. According to Interbrand, AXA's was the leading global brand name in insurance, and also the leading "green" insurance brand.

Throughout its growth, AXA's leadership had maintained an interest in corporate social responsibility, and many AXA employees believed that CR was in the DNA of the organization. During 1980s, Bébéar set up a number of organizations to bring business leaders together to tackle social problems and engage in philanthropy. Inside AXA in 1990, the company created AXA Atout Coeur ("Hearts in Action") to encourage and support community engagement by employees, and in 2001 it established the Group's first "sustainable development" function.

But it wasn't until 2008 that the company created a formal CR strategy. Following an internal study that argued that corporate responsibility was a key strategic area for the company to pursue, AXA's first global CR action plan was launched. Under the direction of Alice Steenland, AXA's CR team created a proprietary CR metric for the company, which was adapted for each of the company's major operating activities. This metric allowed AXA leadership to assess the company's CR work and provided a framework for individual units to formulate their own CR goals. The CR team's work also helped AXA become more visible within the larger CR community and led to the company's success on ratings metrics constructed by various outside organizations.

In September of 2014, the CR team's success led AXA leadership to transfer it from the department that included the Communications function to the department comprised of the Strategy and Public Affairs functions. This new integrated department was baptized "Strategy, Sustainability, and Public Affairs." The reorganization inspired a reconsideration of how AXA monitored and measured its CR efforts. The metrics Steenland and her group had constructed were adapted from outside ratings agencies, notably using the Dow Jones Sustainability Index methodology created for investors. As part of the company's strategy apparatus, Steenland and her team were now looking to create new CR metrics that tied CR work more closely to AXA's operations and growth. To do so, Steenland would have to identify CR issues of particular concern to the company, examine how addressing these CR issues would add value to the company (e.g. by fostering innovation, by reducing costs), and then create metrics that would capture a business unit's success or failure in addressing the CR issue.

Creating new metrics was a tall order, but would be another step to establishing CR inside AXA. Eventually, the company aspired to produce an "integrated report" that would define the Group's next strategy for the 2020 time horizon, measured by a set of metrics reflecting

in an integrated way the financial, but also the social and environmental, value created by the company.

Adopted from: Jaan Elias, Jean Rosenthal, Todd Cort, David Bach, and Greg MacDonald, "AXA: Creating the New CR Metrics," Yale SOM Case 101-15, March 11, 2015

Required:

(a) Analyze the corporate social responsibility strategies adopted by AXA insurance company (15 marks)

(b) Discuss some of the merits of corporate responsibility which made the AXA Company to grow. (15 marks)

(c) Institutional investors such as Pension funds, Insurance companies and Venture capital organization fulfil desirable roles in the financial industry. However they also have undesirable consequences as well. Discuss some of the challenges in managing these businesses. (10 marks)

[TOTAL: 40 Marks]

SECTION B

Answer Any Three (3) from the following Questions.

QUESTION TWO

"No one can manage a risk without first being aware that it exists." This was the common phrase at the seminar Mr. J. Chimumbwa picked from the workshop he attended at Garden Court Hotel. The Commissioner General from Zambia Revenue Authority (ZRA) was always on point to stress to the participants the importance of risk management. The commissioner went on to say"…..Organisations must be able to view and react to the risks they face in different ways. How an organization approaches risk depends on the risk appetite, risk attitude and capacity to bear the risk. It was very obvious that most companies have folded in cold hands because managers could not understand business risks as they are making strategic plans. This has led to low revenue collection on the government part……"The workshop was attended by company Directors and financial experts from all business sectors. Being a director for Northern region of the country in charge of Copperbelt, Muchinga, Northwestern, and Northern provinces, Mr. Chimumbwa attended the workshop with his Finance Manager. It is obvious that this information from the workshop must be cascaded down to all the branch managers.

Required:

(a) Advise on any four (4) sources of risk in business (8 marks)

(b) Risk response can be linked into the severity vs. frequency and also the organization's appetite for risk taking. Use the appropriate model to provide options for managing risks. (12 marks)

[Total: 20 Marks]

QUESTION THREE

Technology change has been a major hallmark of economic development. An interesting and important component of this technical change process has been the rapid evaluation of the Internet, which has facilitated communication linkages and networks worldwide. The expansion of this electronic network has been explosive over the past decade and has formed the beginning to revolutionalize the way in which business functions compete*[Daly et al 1998]*.

Mr. Percy Mweenzehas risen to the rank of finance manager through long service and hard work in the company that manufactures wooden furniture. The concept of new Tax systems

by ZRA has been a challenge and he feels the old manual returns were very accurate and cost effective. Computers are expensive and the application software needed will be another cost for the company. Due to non-compliance to government demands on the use of the electronic tax system, Mr. Percy has been sanctioned by ZRA.

Required:

(a) Strategic information is used to plan the objectives of the organization. The system includes Executive information system(EIS), Management Information System (MIS) and DecisionSupport Systems (DSS). With the aid of a diagram, draw a model of a typical EIS and outline some of its features. (10 marks)

(b) By using Porters five forces, give a clear understanding to Mr. Percy how information system can be used by the company to create a competitive advantage (10 marks)

[Total: 20 Marks]

<u>QUESTION FOUR</u>

Having been in business for less than 5 years, Syscom ltd under the new management is planning to place its foot in DR Congo. The new Management team led by Mr. George Mutakela has placed an ambitious strategy to double the sales and capture more than 50% of the total regional market share.Business managers have agreed study the regional markets and the report on the table is that most of countries in the region might have some political and economical instability. Despite this, the management team leader believes that by implementing a proper business strategic plan, the company can take advantage of the political instability to capture the new market.

Required

(a) Use the appropriate model to conduct the macro environmental analysis on behalf of Syscom Ltd and justify the importance of the model in strategic planning.

(14 marks)

(b) Discuss the three main strategic management elements. (6 marks)

[Total: 20 Marks]

QUESTION FIVE

Mrs.Matakalajust received her gratuity from her employers. With the news of ZAFFICO a Zambian company floating its shares at the stock market, she has developed interest in the shares and how she can invest her money. Her husband has just brought the news that ObedixInc the company he works for has declared a dividend of K2.00 per share and has cost of equity of 15% for the year 2019 after merging with another company from Asia called Ginex ltd. Despite overvaluation companies during merging, the two companies made a significant improvement in the management of the assets. In the same year Zambia Sugar Plc declared a dividend of K2.00 per share with the cost of equity of 20%.

(a) Describe any five (5) problems associated with mergers and acquisitions. (10 marks)

(b) Advise with estimates the value of one share if there is no growth in dividend and when there is a constant growth in dividend of 6% per annum for ObedixInc Company. (10 marks)

[Total: 20 Marks]

END OF PAPER

SUGGESTED SOLUTIONS

SECTION A

SOLUTION ONE

(a) Analyze some of the corporate social responsibilities strategy adopted by AXA insurance company

i. The company created a corporate social responsibility Metric to allow leaders to assess the companies CR work and provide framework for individual units.
ii. The CR team was formed and it included the Public Affairs functions for effective communications
iii. A number of organizations brought together to take social problems
iv. In 1990 the company created the "Hearts of Action" to encourage and support community engagement by employees
v. In 2001 the company established the groups first sustainable development function towards CR.

(b) Discuss some of the merits which of corporate responsibility which made the AXA Company to grow.

There are a number of reasons why a corporate social responsibility can be beneficial to the business

i. Increasing Customer expectation and other stakeholders that the business will act in a socially responsible manner. This makes customers to buy from a responsible source.
ii. Brand name- businesses that are seen to be socially responsible build their brand reputation and this increases their sales
iii. Trading opportunities- firms that have a good CR creates increasing trading partners or support from locals
iv. Access to staff- the way the firms perceived to be treating their employees may affect their ability to attract staff. A firm that retains quality staff may be able to have competitive strategy.

v. Investment and Funding- a firm's reputation may affect its ability to access funds or attract financing.

vi. Sustainable Business- many firms with good CR operates for longer years in business that those with no or less CR concerns.

(c) Institutional investors such as Pension funds, Insurance companies and Venture capital organization fulfil desirable roles in the financial industry. However they also have undesirable consequences as well. Discuss some of the challenges in managing these businesses.

i. Excessive market influence:

A competitive capital market should not have any one investor with a bigger market share to influence the prices

ii. Playing safe:

Many institutions tend to avoid shares which seen to be speculative as they feel they have a duty to their customer to invest in blue chip shares.

iii. Short-term speculation:

Fund managers usually seek short term speculative gains. However, institutional investors have become so influential that they are less able to divest from companies without suffering a substantial loss in order to liquidate their holdings.

iv. Lack of power of investors:

Investors in investment and pension funds cannot directly influence the policy of companies in which their funds invest, since they do not hold shares themselves and cannot hold the company accountable at general meetings.

v. Information Cost:

Managers use a lot of different sources of information, their agency cost becomes higher in total because they have to track the performance of all investments that the funds makes.

SOLUTION TWO

(a) Advise on some of the sources of risk in business

i- **Environmental Risk:** Risks coming from the impact of the organization in the natural environment. Variables such as pollution and floods can in the long term cause some profound changes in the business.

ii- **Economic Risk:** Assumptions about the economic environment may be incorrect, and the organization may be adversely affected as a result.

iii- **Financial Risk:** A business can be affected by changes in interest rates, economic climate, gearing, bad debts, liquidity, and insolvency.

iv- **Product Risk:** Revenues from products fall because of product failure on the market due to lose of market.

(b) Risk response can be linked into the severity vs. frequency and also the organization's appetite for risk taking. Use the appropriate model to provide options for managing risks.

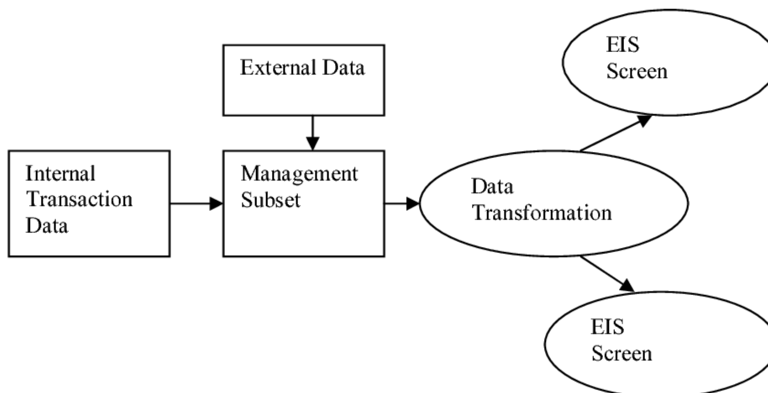
The TARA Model

Severity			
		Low	High
Frequency	Low	**Accept:** Risk are not significant, keep under view, but costs of dealing with risks unlikely to be worth the benefits	**Transfer:** Insure or implement contingency plans. Reduction of severity of risk will minimize insurance premiums
	High	**Reduce or control:** Take some action, e.g. enhanced control systems to detect problems or contingency plans to reduce the impact.	**Avoid or Abandon** Take immediate action, e.g. changing major suppliers or abandon the activities

SOLUTION THREE

(a) Strategic information is used to plan the objectives of the organization. The system includes Executive information system(EIS), Management Information System (MIS) and Decision Support Systems (DSS). With the aid of diagram, draw a model of a typical EIS and outline some of its features.

Executive Information System (EIS) model.



EIS features:

- Flexibility
- Quick response to time
- Sophisticated data analysis and modeling tools

(b) By using Porters five forces, give a clear understanding to Mr. Percy how information system can be used by the company to create a competitive advantage

The following can the used to create a competitive advantage using Porters five forces:

Potential entrants:- Technology can reduce the labor cost of manufacturing and speed up the production process so that substantial economies of scale can be created. This can lift entry barriers from new entrants.

Suppliers: Investing in good IT system with a robust data base which can store and scan suppliers can assist to increase competition among suppliers and reduce the bargaining power.

Customers: Marketing data can be store in the data base. This information can be used to analyze and be used to improve the target market effort and hence reduce customer bargaining power.

Substitutes: The organization can reduce threats from substitutes by developing a wedsite and an in-store product database that allows customers to analyze and compare products on offer.

Industry rivalry: organization can have competitive advantage either by Cost leadership, Differentiation and Focus. Information System can help the organization on Cost reduction, differentiation through provision of websites and help to focus activities to trade on two different brands on internet.

SOLUTION FOUR

(a) Use the appropriate model to conduct the macro environmental analysis on behalf of Syscom Ltd and justify the importance of the model in strategic planning

Solution:

The use of the PESTEL analysis model will be appropriate as the company is making a strategic plane:

- **Political environment** analysis will help to understand government policies on business and the whole economy. Variables includes Country stability
- **Economical environment** analysis will explore the economic activities in terms of particular variables such as inflation, tax and exchange rates are ratting in the economy.
- **Socio-cultural environment:** this features the social trends and peoples beliefs and attitudes.
- **Technological environment:** the technology backbone used in the country to support the business.
- **Ecological or environmental protection:** The government policy and customer demand on products that appear to be environmentally friendly
- **Legal Environment:** Consideration of all forms of legal regulations in each country on business conduct.

(b) Discus the three main strategic management elements.

1- **Strategic Position.** Understanding the organization environment, capabilities and shareholders influence,

2- **Strategic Choice.** Decisions being made at corporate and business level units.

3- **Strategic implementation.** Putting into action the strategy adopted by the organization. It includes, structuring, Enabling and change.

SOLUTION FIVE

(a) Explain some of the problems associated with mergers and acquisitions.

Solution:

i- Cost- they might be too expensive, especially if resisted by the directors of the target company.

ii- Customers- customers of the target company may resent a sudden takeover and consider going to other suppliers for their goods.

iii- Incompatibility- in general, different systems of operations might create indigestion and management overload in the acquired company.

iv- Asymmetric information highlights the fact that acquisitions market for companies is rarely efficient. The existing management knows more about the company than the purchaser. This can lead to overvaluation.

v- Poor success record of acquisition. Takeovers benefit the shareholders of the acquired company often more than the acquirer.

(b) Advice with estimates the value of one share if there is no growth in dividend and when there is a constant growth in dividend of 6% per annum for ObedixInc Company.

Solution

i- No growth:

Po=2.00/0.15=K13.33 per share

ii- Constant growth of 6%

Po = (2 x 1.06)/ (0.15 – 0.06) = K23.56 per share

END OF PAPER

CHARTERED ACCOUNTANT ZAMBIA

ADVISORY LEVEL – PUBLIC PRACTICE ROUTE

CA 3.4: ADVANCED TAXATION

THURSDAY 17 DECEMBER 2020

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

INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading and planning time. Use it to study the examination paper carefully so that you understand what to do in each question. DO NOT write in your answer booklet during this TIME.
2. This paper is divided into TWO (2) sections:

   Section A: ONE Compulsory Question.
   Section B: FOUR (4) Optional Questions. Attempt any THREE (3) questions from Section B.
3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name **MUST** not appear anywhere on your answer booklet.
4. Do NOT write in pencil (except for graphs and diagrams).
5. **Cell phone**s are **NOT** allowed in the examination room.
6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.
7. All workings must be done in the answer booklet.
8. Present legible and tidy work.
9. Graph paper (if required) is provided at the end of the answer booklet.
10. A Taxation table is provided from page 2 to page 6 of the question paper.

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

Taxation table

Income Tax

Standard personal income tax rates

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

Income from farming for individuals

K1 to K39,600	first K39,600	0%
Over K39,600		10%

Company Income Tax rates

On income from manufacturing and other	35%
On income from farming	10%
On income of Banks and other Financial Institutions	35%
On income from mineral processing	30%
On income from mining operations	30%
On income from manufacture of products made out of copper cathodes	15%

Mineral Royalty

Mineral Royalty on Copper

Range of Norm Price	Mineral Royalty Rate
Less than US$4,500	5.5% of norm value
From US$4,500 to less than US$6,000	6.5% of norm value
From US$6,000 to less than US$7,500	7.5% of norm value
From US$7,500 to less than US$9,000	8.5% of norm value
From US$9,000 and above	10% of norm value

Mineral Royalty on other minerals

Type of mineral	Mineral Royalty Rate
Base Metals (Other than Copper, Cobalt and Vanadium)	5% of norm value
Cobalt and Vanadium	8% of norm value
Energy and Industrial Minerals	5% of gross value
Gemstones	6% of gross value
Precious Metals	6% of norm value

Capital Allowances

Implements, plant and machinery and commercial vehicles:

Wear and Tear Allowance –	Plant used normally	25%
	Used in Manufacturing and Leasing	50%
	Used in farming and agro-processing	100%
	Used in mining operations	20%

Non- commercial vehicles

Wear and Tear Allowance	20%

Industrial Buildings:

Wear and Tear Allowance	5%
Initial Allowance	10%
Investment Allowance	10%

Low Cost Housing **(Cost up to K20,000)**

Wear and Tear Allowance	10%
Initial Allowance	10%

Commercial Buildings

Wear and Tear Allowance	2%

Farming Allowances

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

Presumptive Taxes

Turnover Tax 4%

Presumptive Tax for Transporters

Seating capacity	**Tax per annum**	**Tax per day**
	K	K
From 64 passengers and over	10,800	29.60
From 50 to 63 passengers	9,000	24.70
From 36 to 49 passengers	7,200	19.70
From 22 to 35 passengers	5,400	14.80
From 18 to 21 passengers	3,600	9.90
From 12 to 17 passengers	1,800	4.90
Less than 12 passengers and taxis	900	2.40

Property Transfer Tax

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

Value Added Tax

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

Customs and Excise duties on used motor vehicles

	Aged below 5	**Aged 5 years and**

	years		over	
Motor vehicles for the transport of ten or more persons, including the driver	**Customs duty**	**Excise duty**	**Customs duty**	**Excise duty**
	K	**K**	**K**	**K**
Sitting capacity of 10 but not exceeding 14 persons including the driver	17,778	22,223	8,889	11,112
Sitting capacity exceeding 14 but not exceeding 32 persons	38,924	0	13,840	0
Sitting capacity of 33 but not exceeding 44 persons	86,497	0	19,462	0
Sitting capacity exceeding 44 persons	108,121	0	43,248	0

	Aged below 5 years		**Aged 5 years and over**	
Motor cars and other motor vehicles principally designed for the transport of persons including station wagons and racing cars	**Customs duty**	**Excise duty**	**Customs duty**	**Excise duty**
	K	**K**	**K**	**K**
Sedans				
cylinder capacity not exceeding 1000 cc	12,490	10,824	7,136	6,185
Cylinder capacity exceeding 1000 cc but not exceeding 1500 cc	16,058	13,917	8,564	7,422
Cylinder capacity exceeding 1500 cc but not exceeding 2500 cc	16,545	21,508	8,423	10,950
Cylinder capacity exceeding 2500 cc but not exceeding 3000 cc	18,049	23,463	10,528	13,687
Cylinder capacity exceeding 3000 cc	22,561	29,329	12,032	15,642
Hatchbacks				
cylinder capacity not exceeding 1000 cc	10,705	9,278	7,136	6,185
Cylinder capacity exceeding 1000 cc but not exceeding 1500 cc	14,274	12,371	8,564	7,422
Cylinder capacity exceeding 1500 cc but not exceeding 2500 cc	15,041	19,553	8,423	10,950
Cylinder capacity exceeding 2500 cc but not exceeding 3000 cc	16,545	21,508	10,523	13,687
Cylinder capacity exceeding 3000 cc	19,553	25,419	12,032	15,642
Station wagons				
cylinder capacity not exceeding 2500 cc	16,545	21,508	9,024	11,731
Cylinder capacity exceeding 2500 cc but not exceeding 3000 cc	18,049	23,463	13,357	17,598
Cylinder capacity exceeding 3000 cc but not exceeding 2500 cc	22,561	29,329	18,049	23,463
SUVs				
Cylinder capacity not exceeding 2500 cc	21,057	27,374	9,024	11,732
Cylinder capacity exceeding 2500 cc but not exceeding 3000 cc	24,065	31,284	13,357	17,598
Cylinder capacity exceeding 3000 cc	28,577	37,150	18,049	23,463
	Aged below 5		**Aged 5 years and**	

Motor vehicles for the transport of goods -with compression-ignition internal combustion piston engine (diesel or semi-diesel):	years		over	
	Customs duty	Excise duty	Customs duty	Excise duty
	K	K	K	K
Single cab				
GVW exceeding 1.0 tonne but not exceeding 1.5 tonnes	21,926	9,501	8,770	3,801
GVW exceeding 1.5 tonnes but not exceeding 3.0 tonnes	26,311	11,402	15,348	6,651
GVW exceeding 3.0 tonnes but not exceeding 5.0 tonnes	30,697	13,302	17,541	7,601
Double cabs GVW exceeding 3 tonnes but not exceeding 5 tonnes	30,274	0	24,119	10,452
Double cabs GVW exceeding 3.0 tonnes but not exceeding 5.0 tonnes, **with spark ignition internal combustion piston engine**	30,697	13,302	24,119	10,452
Panel Vans				
GVW exceeding 1.0 tonne but not exceeding 1.5 tonnes	15,348	6,651	8,770	3,801
GVW exceeding 1.5 tonnes but not exceeding 3.0 tonnes	17,541	7,601	15,348	6,651
GVW exceeding 3.0 tonnes but not exceeding 5.0 tonnes	21,926	9,501	17,541	7,601
Trucks				
GVW up to 2 tonnes	21,926	9,501	10,963	4,751
GVW exceeding 2.0 tonnes but not exceeding 5.0 tonnes	28,504	12,352	13,156	5,701
GVW exceeding 5.0 tonnes but not exceeding 10.0 tonnes	24,724	18,955	10,817	8,293
GVW exceeding 10.0 tonnes but not exceeding 20.0 tonnes	30,905	23,694	11,744	9,004
GVW exceeding 20 tonnes	51,898	0	19,461	0
GVW exceeding 20 tonnes, **with spark ignition internal combustion piston engine**	37,086	28,432	13,907	10,662

Surtax

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

Customs and Excise on New Motor vehicles

Duty rates on:

1. **Motor cars and other motor vehicles (including station wagons) principally designed for the transport of less than ten persons, including the driver:**

Customs Duty:

Percentage of Value for Duty Purposes	30%
Minimum Specific Customs Duty	K6,000

Excise Duty:

Percentage of Value for Duty Purposes for Excise Duty Purposes	
Cylinder capacity of 1500 cc and less	20%
Cylinder Capacity of more than 1500 cc	30%

2. Pick-ups and trucks/lorries with gross weight not exceeding 20 tones:

Customs Duty

Percentage of Value for Duty Purposes	15%
Minimum specific Customs Duty	K6,000

Excise Duty:

Percentage of Value for Duty Purposes for Excise Duty Purposes	10%

3. Buses/coaches for the transport of more than ten persons

Customs Duty:

Percentage of Value for Duty Purposes	15%
Minimum Specific Customs Duty	K6,000

Excise Duty:

Percentage of Value for Duty Purposes for Excise Duty Purposes	
Seating Capacity of 16 persons and less	25%
Seating Capacity of 16 persons and more	0%

4. **Trucks/lorries with gross weight exceeding 20 tonnes**

Customs Duty:

Percentage of Value for Duty Purposes	15%

Excise Duty:

Percentage of Value for Duty Purposes for Excise Duty Purposes	0%

SECTION A

This question is compulsory and must be attempted

QUESTION ONE (COMPULSORY)

You are the Tax Manager in a firm of Chartered Accountants and you are dealing with the tax affairs of your two (2) clients; Mukuku Plc and the Western Mining Corporation Plc for the year ended 31 December 2020.

Mukuku Plc

Mukuku Plc is a Zambian resident company engaged in farming. The Chief Executive Officer of Mukukuplc is Daniel Longwe, who is credited with the success the company has been enjoying in the recent past. Daniel has informed you that the company has just received notification that the ZRA will be conducting a tax audit of the affairs of the company soon. Heis confused as he is not sure whether a tax audit amounts to a tax investigation. He is also keen to know the main types of tax defaults which may be discovered during a tax audit.

During the year 2019,Daniel spear headed the successful acquisition of a 70% stake in Eastfruit, an agro-processing company resident in a country known as Eastland. The currency of Eastland is the Eastland dollar (E$). During the year ended 31 December 2020, Mukuku Plc sold 2,300 tonnes of its agricultural produce to Eastfruit Ltd at a transfer price of K300 per tonne. This amount was included in the sales revenue of Mukuku Plc for the year ended 31 December 2020. The average open market value of the agricultural produce was K420 per tonne throughout the year 2020.

Mukuku Plc also borrowed K800,000 from its subsidiary, Eastfruit Ltd, at an interest rate of 16% per annum on 1 January 2020. The interest expense for the year has been paid and charged to the statement of profit or loss of Mukuku Plc for the year ended 31 December 2020. The total interest expense was determined to be less than 10% of the Tax Earnings Before Interest, Tax, Depreciation and Amortisation (Tax EBITDA). The arm's length borrowing rate was 11% per annum on 1 January 2020.

Mukuku Plc prepares its financial statements to 31 December each year. For the year ended 31 December 2020, MukukuPlc's tax adjusted business profit was K980,000. This profit figure is before adjustments in relation to the transactions between Mukuku Plc and Eastfruit Ltd, but after all the relevant adjustments for tax purposes have been made. The provisional income tax paid by the company during the tax year 2020 amounted to K76,150.

Mukuku Plc received a dividend of E$11,900 from Eastfruit Ltd on 31 December 2020. This dividend was net of withholding tax deducted in Eastland at a rate of 20%. This dividend has not been included in the statement of profit or loss of Mukuku Plc for the year.There is no double taxation convention between Zambia and Eastland. When computing Zambian Income Tax payable, credit is available against the Zambian Tax charge for any foreign tax paid. The Bank of Zambia exchange rate averaged K14.40 per E$1 during the year ended 31 December 2020, which the Commissioner General approved.

WESTERN MINING CORPORATION PLC

Western Mining Corporation (WMC) Plc is a Zambian resident company engaged in mining activities. The company extracts copper and cobalt. WMC Plc holds 52% of the issued equity share capital of NMC Plc a metal fabrication company resident in a country known as

Democratic Republic of Islands (DRI). The statement of profit or loss for WMC Plc for the year ended 31 December 2020 was as follows:

	Note	K
Revenue	1	71,560,800
Cost of sales	2	(42,936,480)
Gross profit		28,624,320
Operating expenses	3	(5,700,000)
Profit before interest & tax		22,924,320
Interest expenses	4	(7,400,420)
Other income	5	860,000
Profit before tax		16,383,900
Income tax expense	6	(5,215,170)
Profit for the year		11,168,730

The following additional information is relevant:

1. The revenue in the statement of profit or loss comprises K12,560,800 from sales of cobalt and K59,000,000 from sales of copper. The amounts shown in the statement of profit or loss is the norm value for the purposes of mineral royalty tax. The copper and cobalt prices averaged US$6,800 and US$12,000 per tonne respectively during the year ended 31 December 2020.

2. Included within cost of sales is the mineral royalty tax paid by the company during the year which was computed correctly and paid on the relevant due dates. Also included within cost of sales, are depreciation and amortization expenses amounting to K1,100,000 and K430,000 respectively. The balance of the cost of sales represents the costs incurred in extracting copper and cobalt and processing the minerals into a saleable state.

3. Included in operating expenses is entertaining suppliers K400,000, salaries and wages K4,100,000 and a penalty for failure to comply with health and safety regulations K160,000. The balance consists of revenue expenses which are all allowable for tax purposes.

4. Interest expenses were incurred on loans in issue from banks and other financial institutions which are not related to WMC Plc.

5. Other income include dividends of K800,000 and rental income from Zambian properties of K60,000. The dividends were received from WMC Plc's subsidiary resident in DRI. Dividends are taxed at a rate of 20% in DRI. The actual amounts received are shown in the statement of profit or loss.

6. The income tax expense shown in the statement of profit or loss represents the provisional income tax paid during the tax year 2020.

7. During the year ended 31 December 2020 the company constructed a link road within the mine township at a cost of K1,800,000 and a community school at a cost of K3,000,000. These costs have not been included in the statement of profit or loss shown above.

8. **Implements, plant and machinery, and buildings**

At 1 January 2020, the company's office building had an income tax value of K2,400,000. It wa constructed by Zambian constractors at a cost of 4,000,000.

All the implements, plant and machinery held at 1 January 2020 had been written down completely for capital allowances purposes.

Assets acquired from local suppliers in Zambia during the tax year 2020 were as follows:

		Cost
		K
10 January 2020	Mining equipment	3,500,000
	Toyota Landcruiser Prado	400,000
	Haulage truck	1,300,000

The Toyota Land Cruiser Pradecar is used by the Chief Finance Officer on personal to holder basis. It has a cylinder capacity of 3,000 cc and Chief Finance Officer's private usage in the motor car is estimated to be 40%.

9. There is no double taxation convention between Zambia and the Democratic Republic of Islands (DRI). Credit is available against Zambian tax charge for any foreign tax paid when computing the Zambian income tax.

Required:

(a) In relation to Mukuku Plc:

(i) Advise Daniel as to whether a tax audit amounts to a tax investigation. (2 marks)

(ii) Advise Daniel of the three (3) main types of defaults which may be uncovered during a tax audit conducted on the tax affairs of Mukuku Plc. (6 marks)

(iii) Advise the directors of Mukuku Plc of the amount of income tax payable by the company for the tax year 2020. (10 marks)

(b) In relation to Western Mining Corporation Plc :

(i) Advise the Directors of the rules that will govern the deduction of interest expense when computing taxable profit for Western Mining Corporation Plc. (3 marks)

(ii) Compute the taxable mining profit for the tax year 2020. You must explain your treatment of interest paid. (13 marks)

(iii) Compute the amount of company income tax payable for the tax year 2020. (6 marks)

[Total: 40 Marks]

SECTION B

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

QUESTION TWO

You should assume that today is 20 December 2019 and that the taxation rules applicable to the tax year 2020 apply throughout.

Kanyama and Chinyama wish to commence in business running a manufacturing business. They wish to obtain taxation advice to enable them decide whether to trade through a partnership or through a company. Once they have obtained this advice, they will register the appropriate business and commence to trade on 1 January 2020.

Their business is expected to produce an annual turnover of K1,400,000 whether it is run as a partnership or as a company. The business will acquire two Toyota motor cars each with a cylinder capacity of 1,600cc for use by Kanyama and Chinyama at a cost of K150,000 each. Each motor car will be for both business and private use. Private mileage will be 40% of the total mileage done in each motor car.

Partnership

If the business is run as a partnership, Kanyama will draw an annual partnership salary of K260,000 while Chinyama will draw an annual partnership salary of K280,000. National Pension Scheme Authority (NAPSA) contributions will not be payable under this option. The balance of the profits or losses will be shared in the ratio 3:5 between Kanyama and Chinyama respectively. The net profit as per accounts is expected to be K675,000, before deducting payments to Kanyama and Chinyama. All the other expenses that will be incurred and deducted in arriving at the net profit figure of K675,000 are allowable expenses for taxation purposes.

Company

If the business is run as a company, the company will be called Nyama Ltd. Kanyama and Chinyama will be the only shareholders and full-time working directors in the company. Kanyama will draw annual gross director's emoluments of K260,000, while Chinyama will draw annual gross director' s emoluments of K280,000. NAPSA contributions will be payable where applicable both by each director and Nyama Ltd at the rate 5% of the relevant earnings. The net profit as per accounts is expected to be K675,000, before deducting payments to Kanyama and Chinyama. All the other expenses that will be incurred and deducted in arriving at the net profit figure of K675,000 are allowable expenses for taxation purposes. If the business is run as a company, the two motor cars will be personal to holder cars for the Kanyama and Chinyama.

NAPSA Earnings threshold

The annual NAPSA earnings threshold for the year ending 31 December 2020 is K275,904.

Required:

(a) Assuming the business is run as partnership, compute the income tax payable by Kanyama and Chinyama. (5 marks)

(b) Assuming the business is run as a limited company compute the:

  (i) Employees' NAPSA contributionspayable by Kanyama and Chinyama in the tax year 2020. (2 marks)

  (ii) Income tax payable by Kanyama andChinyama in the tax year 2020. (3 marks)

  (iii) Company income tax payable by Nyama Ltd for the tax year 2020. (5 marks)

(c) Advise Kanyama and Chinyama, from a taxation point of view, on how they should run their proposed business. (5 marks)

[Total: 20 Marks]

QUESTION THREE

You should assume that today is 1 December 2019 and that the taxation rules applicable to the tax year 2020 apply throughout.

DMK plc is a VAT registered Zambian resident manufacturing company which is listed on the LuSE. The directors of the company intends to buy manufacturing equipment on 1 January 2020 at a cost of K1,832,800 (VAT inclusive). The directors now wish to know the taxation implications of the following finance options the it is considering to use to finance the acquistion:

(i) Issue of bonds to raise the required finance at a coupon rate of 20% per annum incurring issue costs of K36,500. The proceeds from issue of the bonds will then be used to purchase the equipment outright.

(ii) Acquire the equipment under a four year finance lease whose terms requires the company to pay annual lease rentals of K708,000 in arrears, with implicit interest of 20% per annum.

(iii) Acquire the equipment under an operating lease. The terms of the lease are that the company will be required to pay annual lease rentals of K549,840 with the lease agreement being renewable at the end of each year.

(iv) Issue of shares to raise the required finance. The proceeds of the issue will then be used to purchase the equipment outright. The share issue costs are expected to be K54,900.

Required:

(a) State any six (6) tax incentives that are available to companies such as DMK Plc which are engaged in manufacturing operations. (6 marks)

(b) Advise the Directors of DMK plc, using appropriate supporting calculations, of the income tax and value added tax implications of each of the above options. (14 marks)

[Total: 20 Marks]

QUESTION FOUR

You are employed in a Tax practice and you are dealing with the tax affairs of GoldrichBank Zambia Ltd, a client of your firm. Goldrich Bank Zambia Ltd is a 100% owned subsidiary of Goldrich Bank International, a multinational financial institution based in a foreign country. Goldrich Bank Zambia Ltd is planning to introduce a share option scheme for its employees in the near future. The directors have heard that there are tax benefits if a share option scheme operated by a company is approved for tax purposes and as such are keen to know the procedure to be followed for such a scheme to be approved and the tax benefits that will arise for the company once approval for the scheme is obtained.

You have further been provided with the following summarised statement of profit or loss for Goldrich Bank Zambia Ltdfor the year ended 31 December 2020:

GOLDRICH BANK ZAMBIA LTD
STATEMENT OF PROFIT OR LOSS FOR THE YEAR ENDED 31 DECEMBER 2020

	K'000
Interest income	103,200
Interest expense	(61,300)
Net interest income	41,900
Provision for loan losses (note 2)	(5,500)
Net interest income after provision for loan losses	36,400
Non-interest income (note 3)	14,700
Net interest and other income	51,100
Non-interest expenses (Note 4)	(34,800)
Income before taxes	16,300
Taxation (Note 5)	(5,800)
Income after tax	10,500

The following additional information is available:

(1) **Interest income**

The total withholding tax deducted at source from the interest which is subjected to withholding tax at source was K2,796,000.

(2) **Interest expense**

This represents interest of K25,500,000 paid on customer deposits, interest of K15,580,000 paid to other banks and financial institutions not related to Goldrich Bank Zambia Ltd, and interest on late payment of income tax of K220,000. The balance relates to interest amounting to K20,000,000 paid on a five year loan of K100 million obtained by Goldrich Bank Zambia Ltd in January 2020, from its foreign based parent entity Goldrich Bank International . The parent company charged Goldrich Bank Zambia Ltd interest of 20% per annum on this loan. The commercial rate of interest on loans of this type in the country in which the parent entity is based, is 5% per annum.

(3) **Provision for loan losses**

Provision for loan losses comprises an increase in general provision of loan losses amounting to K2,350,000, increase in specific provision of loan losses of K1,150,000, loan losses written off during the year of K2,500,000 and loan losses previously written-off recovered during the year amounting to K500,000.

(4) **Non-interest income**

This comprises dividend income amounting to K1,200,000 (gross), income from letting of property amounting to K2,800,000 (gross), foreign exchange gains of K4,500,000 (out of which K1,500,000 were unrealised) and fees from foreign exchange transactions of K6,200,000.

(5) **Non-interest expenses**

Non-interest expenses include depreciation charges of K290,000, employee's salaries of K26,920,000, entertainment expenditure for employees of K18,500, penalties for late payment of income tax of K56,000, legal costs for recovery of loans K70,000, donations of K150,000 to approved public benefit organisations and legal fees of K120,000 in connection with the acquisition of land. The balance comprises miscellaneous allowable general business expenses.

(5) **Taxation**

The figure for taxation in the statement of profit or loss above represents the provisional company Income Tax paid by the company in respect of the charge year 2020.

(6) **Implements plant and equipment**

There were no implements, plant and machinery qualifying for capital allowances at 1 January 2020, however, during the year, the company incurred expenditure amounting to K2,500,000 on the construction of new buildings for its branches and further incurred expenditure of K460,000 on office equipment for the new branches.

Required:

(a) In relation to the share option scheme that Goldrich Bank Zambia Ltdis planning to introduce:

(i) Advise the directors of the procedure the bank should follow to have the share option scheme approved for tax purposes. (3 marks)

(ii) Explain any four conditions that must be met for the scheme to be approved for tax purposes. (4 marks)

(iii) Advise the directors of the tax benefits for Goldrich Bank Zambia Ltdof having the scheme approved for tax purposes. (3 marks)

(b) Calculate the company income tax payable by Goldrich Bank Zambia Ltd for the tax year 2020. (10 marks)

[Total: 20 Marks]

<u>QUESTION FIVE</u>

Background

You are the Tax Manager in a firm of Chartered Accountants and you have been presented with the following information relating to one of your clients, Kawechi Limited:

Kawechi Limited is a Zambian resident private company engaged in farming. The company's issued capital is 20,000 K1 ordinary shares which is owned by Kaweza and Chisele in the holding of 60% and 40% respectively. The company prepares its financial statements annually to 31 December. Kaweza is employed by Kawechi Limited as the Chief Executive Officer at an annual salary of K500,000. Chisele is neither an employee nor a director of Kawechi Limited.

The following information is also available:

(1) During the year ended 31 December 2020 Kawechi Limited paid rentals on behalf of Kaweza and Chisele amounting to K32,000 and K40,000 respectively.

(2) Throughout the tax year 2020, Kaweza and Chisele were provided with personal-to-holder cars. Kaweza's car has a cylinder capacity of 3200cc and was acquired at a cost of K270,000 by Kawechi Limited. Chisele's car has a cylinder capacity of 2900cc and was acquired at a cost of K230,000 by Kawechi Limited. The maintenance costs for these cars amounted to K12,000 and K15,000 for Kaweza's car and Chisele's car respectively which Kawechi Limited paid during the year ended 31 December 2020.

Future plans

The company has been successful since its incorporation in 2016, and as a result it has grown significantly. Kaweza and Chisele now intend to list Kawechi Limited's shares on the Lusaka Securities Exchange (LuSE) on 1 March 2021 and subsequently sale part of their shares to the general public. Share issue costs are anticipated to be K10,000.
Kaweza and Chisele are seeking tax advice in relation to the above matters.

Required:

(a) Explain toKaweza and Chisele what constitutes a loan to an effective shareholder and the tax implications of the company being deemed to have made a loan to an effective shareholder. (5 marks)

(b) Advise Kaweza and Chisele of the taxation implications, for both themselves as individuals and for Kawechi Limited, arising from payment of rentals by Kawechi Limited on their behalf. Your answer should be supported by appropriate relevant calculations where applicable. (5 marks)

(c) Advise Kaweza and Chisele of the tax implications, for both themselves as individuals and for Kawechi Limited, arising from the provision of personal-to-holder motor cars to Kaweza and Chisele and payment of motor car expenses by Kawechi Limited.

(6 marks)

(d) Advise Kaweza and Chisele of the tax implications arising from listing of shares on the Lusaka Securities Exchange and subsequent sale of their shares to the general public. (4 marks)

[Total: 20 Marks]

END OF PAPER

SUGGESTED SOLUTIONS

SOLUTION ONE

(a) (i) Tax Audit

A tax audit is the examination of a tax return, a declaration of liability or a repayment claim, a statement of liability to stamp duty, or the compliance of a business with tax and duty legislation, whose main objective is to establish the correct level of tax liability. Any tax payer can be a subject of a tax audit.

A tax investigation on the other hand is carried out purely because some tax evasion or tax fraud has been reported or being suspected in connection with a tax payer. It may also be carried out where a taxpayer carrying on business consistently reports losses, as on financial grounds, a business that is in a position of perpetual loss would not be a going a concern.

(ii) Deliberate behaviour

Deliberate behaviour involves a breach of a tax obligation where there is intent on the part of the taxpayer and so does not qualify as careless behaviour. Examples of deliberate behaviour include failure to maintain books and records, omission of transactions from the books and records, providing false or misleading information.

Careless behaviour without significant consequences

Carelessness in this context refers to a failure to take reasonable care. Significant consequences refers to the amount of tax underpaid as the result of the tax payer failing to take reasonable care when discharging tax obligations.

With Careless behaviour without significant consequences, the amount of tax underpaid by the tax payer as a result of not taking reasonable care when discharging tax obligations is insignificant with reference to the correct tax payable for the relevant period.

This category relates to defaults of a minor nature that are discovered during a tax audit, for example, computational errors and inadequate adjustments for personal expenditure in the statement of profit or loss and other comprehensive income.

Careless behaviour with significant consequences

Significant consequences applies where the tax underpaid as a result of the tax payer failing to take reasonable care when discharging tax liabilities, is significant with reference to the correct tax payable for the relevant period.

Examples of careless behaviour include failure to take advice, neglecting to categorise expenditure into allowable and disallowable categories for tax purposes, insufficient standard of record keeping in the business and so on.

(ii) MUKUKU PLC

COMPUTATION OF INCOME TAX PAYABLE FOR THE TAX YEAR 2020

	K	K
Marks		
Business profits		980,000
Add:		
Transfer pricing adjustments		
Sale of goods to Eastfruit Ltd		
(K420 - K300) x 2,300 tonnes	276,000	
Loan from Eastfruit Ltd		
(16% - 11%) x K800,000	40,000	
		316,000
Taxable farming profits		1,296,000
Other income		
Foreign dividends (E$11,900 x 100/80 x K14.40)		214,200
Total taxable income		1,510,200

Computation	
Farming income: K1,296,000 @10%	129,600
Non-farming income: K214,200 @35%	74,970
Income tax liability	204,570
Less:	
Double taxation relief (W)	(42,840)
Provisional income tax paid	(76,150)
Income tax payable	85,580

Workings

Double taxation relief on dividends

Foreign tax paid: K214,200 x 20% = K42,840

Zambian tax: K214,200 x 35% = K74,970

The double taxation relief is K42,840 which is the lower of Zambian tax charge.

(b) (i) Tax Treatment of interest

Interest expense incurred on loans, except loans used to acquire or construct non-current assets, is an allowable expense when computing the taxable business profits of the company.

The amount of interest to be allowed is restricted to 30% of tax earnings before interest, tax, depreciation and amortization (Tax EBITDA). The interest in excess of 30% of Tax EBITDA is disallowed and carried forward to the next tax year.

If the amount of finance costs in WMC Plc's statement of profit or loss exceed30% of the amount of Tax EBITDA, only an amount that is equal to 30% of the Tax EBITDA will be tax allowed in the tax year 2020. The excess interest will be carried forward for set off in the computation of taxable profit for the following tax year.

(1 mark per valid point up to 3 marks)

(ii) WMC PLC

COMPUTATION OF TAXABLE MINNING PROFIT FOR THE TAX YEAR 2020

	K	K
Marks		
Profit before tax		16,383,900
Add:		
Mineral royalty tax:		
Cobalt: K12,560,800 x 8%	1,004,864	
Copper: K59,000,000 x 7.5%	4,425,000	
Depreciation	1,100,000	
Amortization	430,000	
Entertaining suppliers	400,000	
Penalty- failure to comply with safety laws	160,000	
Interest expense	7,400,420	
Personal-to-holder car benefit	40,000	
		14,960,284
		31,344,184
Less:		
Foreign dividends	800,000	
Rental income	60,000	
		(860,000)
Tax EBITDA		30,484,184
Less:		
Interest (W1 and explanation)	7,400,420	
Capital allowances (W2)	2,080,000	
		(9,480,420)
Taxable mining profits		21,003,764

Workings

1. Tax allowable interest = 30% x Tax EBITDA

   = 30% x K30,484,184

   = K9,145,255

   Explanation:

   The whole amount of interest paid of K7,400,420 is tax allowed because it is less than 30% of the Tax Earnings Before Interest, Tax, Depreciation and Amortisation.

2. Capital allowances

	K
Link Roads: K1,800,000 x 20%	360,000
Community school: K3,000,000 x 20%	600,000

Mining equipment: K3,500,000 x 20%	700,000
Office buildings: K4,000,000 x 2%	80,000
Toyota Prado car: K400,000 x 20%	80,000
Haulage trucks: K1,300,000 x 20%	260,000
Total capital allowances	2,080,000

(iii) WMC PLC

COMPANY INCOME TAX COMPUTATION FOR THE TAX YEAR 2020

Taxable mining profits	21,003,764
Add:	
Foreign dividends (K800,000 x 100/80)	1,000,000
Total taxable income	22,003,764
Computation	
Mining income: K21,003,764 x 30%	6,301,129
Non-mining income: K1,000,000 x 35%	350,000
Income tax liability	6,651,129
Less:	
Double taxation relief (working)	(200,000)
Provisional income tax paid	(5,215,170)
Income tax payable	1,235,959

Workings

(1) Double taxation relief

Foreign tax paid: K1,000,000 x 20% = K200,000

Zambian tax: K1,000,000 x 35% = K350,000

The double taxation relief is K200,000 which is the lower of the Zambian tax charge.

SOLUTION TWO

(a) COMPUTATION OF TAXABLE FINAL TAXABLE PROFIT

	K
Net profit as per accounts	675,000
Less capital allowances	
Motor cars (K150,000 x 20%) x 60% x 2	(36,000)
	639,000

COMPUTATION OF TAXABLE FINAL INCOME TAX PAYABLE FOR THE TAX YEAR 2020

	Total	Kanyama	Chinyama
	K	K	K
Partnership salaries	540,000	260,000	280,000
Balance (3:5)	99,000	37,125	61,875
Taxable profit	639,000	297,125	341,875
Income Tax			
On the first K74,400		9,960	9,960
On the excess:			
(K222,275/ K267,475 x 37.5%)		83,552	100,303
Income tax payable		93,512	110,263

(b) (i) COMPUTATION OF EMPLOYEE' S NAPSA CONTRIBUTIONS AND NHISCs

Kanyama

Employee's NAPSA contribution

K260,000 x 5% = K13,000

Chinyama

Employee's NAPSA contribution

K275,904 x 5% = K13,795

(ii) INCOME TAX COMPUTATIONS FOR THE TAX YEAR 2020

	Kanyama	Chinyama
	K	K
Gross emoluments	260,000	280,000
Income Tax payable		
On the first K74,400	9,960	9,960
On the balance:		
(K185,600/K205,600 x 37.5%)	69,600	77,100
Income Tax payable	79,560	87,060

(iii) COMPANY INCOME TAX COMPUTATION FOR THE TAX YEAR 2020

	K	K
Tax adjusted profit		675,000
Add motor car benefits		
Kanyama's motor car	18,000	
Chinyama's motor car	18,000	

		36,000
		711,000
Less allowable deductions:		
Director's emoluments:		
Kanyama's emoluments	260,000	
Chinyama's emoluments	280,000	
		(540,000)
Employer's NAPSA contributions:		
Kanyama's (K260,000 x 5%)	13,000	
Chinyama's (K275,904 x 5%)	13,795	
		(26,795)
Capital allowances:		
Kanyama's motor car		
(20% x K150,000)	30,000	
Chinyama's motor car		
(20% x K150,000)	30,000	
		(60,000)
Taxable profit		84,205
Company income tax payable		
35% x K92,805		29,472

(c) CALCULATION OF NET INCOME UNDER EACH ALTERNATIVE

	Partnership	Company
	K	
Profit	675,000	675,000
Employee's NAPSA contributions	-	(26,795)
Employer's NAPSA contribution	-	(26,795)
Personal Income Tax		
- Kanayama	93,512	79,560
- Chinyama	110,263	87,060
Company Income Tax		(27,582)
Net income	571,424	446,408

It will be beneficial to run the business as partnership as this option gives the highest net income.

SOLUTION THREE

(a) Tax incentive for business engaged in manufacturing:

(1) Refund of Zambian VAT on export of Zambian products by non – resident businesses under the Commercial Exporters Scheme.
(2) Guaranteed input tax claim for two years prior to commencement of production.
(3) Income from chemical manufacturing of fertilizers is taxed at a reduced rate of 10%.
(4) Capital allowances on industrial buildings used for the purposes of manufacturing shall be entitled to a deduction of 10% in case of low cost housing and 5% for other industrial buildings.
(5) Persons who incur capital expenditure on an industrial building are entitled to claim a deduction called Initial Allowance at 10% of the cost incurred in the charge year in which the industrial building is first brought into use.
(6) Any person who incurs capital expenditure on an industrial building is entitled to an investment allowance at 10% of such expenditure in the first year that the building is used for manufacturing purposes.
(7) Import Duty on PVC lining and eyelets used in the manufacture of shoes has been reduced to 5%.
(8) Import Duty on semi refined wax and cerechlor used in the manufacture of paint, and on tapioca starch with dextrose powder which is used in the manufacture of biscuits has been reduced to 15%.
(9) Suspension of Import Duty on machinery, equipment and capital goods for Assembling of motor vehicles, trailers, motorcycles and import of bicycles
(10) Duty on various textile machinery has been reduced to 0% and all woven fabrics of polyester imported for further processing, all imported sewing threads and grey fabrics has duty reduced to 0%.
(11) Reduced Import Duty to 5% on the following inputs used in manufacturing:

- Crude Coconut (copra) oil
- Plates Sheets, film, foil and strip of unsaturated polyesters

(b) Taxation implications of the financing options

i) Issue of bonds

(1) The input VAT incurred on the purchase of the equipment will be recoverable and this will amount to:

K1,832,800 x 4/29 = K252,800.

(2) The bond issue costs of K36,500 will not be allowed when computing the taxable business profits of the company as the bonds will be for capital purposes.

(3) The interest payable on the bonds will not be an allowable expense when computing the taxable business profit of the company because the loan was used to finance the purchase of a non-current asset.

The disallowed interest will amount to:

(K1,832,800 + 36,500) x 20% = K373,860

(4) Capital allowances at a rate of 50% will be claimable on the VAT exclusive cost of the equipment and these will amount to:

(K1,832,800) x 25/29 x 50% = K790,000.

ii) Finance lease

(1) Finance lease interest will be an allowable expense when computing the taxable business profits of the company.

(2) Input VAT incurred on the cost of the equipment will be recoverable and this will amount to.

K1,832,800 x 4/29 = K252,800.

(3) Capital allowances at a rate of 50% will be claimable on the VAT exclusive cost of the equipment and these will amount to:

(K1,832,800) x 25/29 x 50% = K790,000.

iii) Operating lease

(1) DMK plc will not claim capital allowances as the lessor continues to claim the capital allowance on the leased equipment. DMK cannot claim any capital allowances in respect of the leased equipment.
(2) For tax purposes, DMK will be able to claim lease rentals as allowable deductions when computing taxable profits.
(3) Input VAT on lease rentals will be recoverable.

iv) **Issue of shares**

(1) The input VAT incurred on the purchase of the equipment will be recoverable and this will amount to:

K1,832,800 x 4/29 = K252,800.

(2) The share issue costs of K36,500 will not be allowed when computing the taxable business profits of the company.

(3) The dividends payable on shares will not be an allowable expense when computing the taxable business profit of the company.

(4) Capital allowances at a rate of 50% will be claimable on the VAT exclusive cost of the equipment and these will amount to.

(K1,832,800) x 25/29 x 50% = K790,000.

SOLUTION FOUR

(a) (i) Procedure for approval of share option scheme

(1) The procedure for the approval of a share option scheme starts with the bank preparing the constitution and scheme rules, whilst referring to the conditions for approval.
(2) Once these have been prepared, the company must make an application for approval to the Commissioner General. The application must be in writing and must be accompanied by copies of the constitution and scheme rules.
(3) Upon receiving the application, the Commissioner General reviews the constitution and scheme rules to determine whether all the conditions for approval have been satisfied.
(4) The Commissioner General would then grant the approval and communicate in writing that the scheme has been approved, stating the tax year from which the approval applies for the first time. Where the Commissioner General does not grant the approval, he still communicates to the applicant in writing and the company may later re-apply.

(ii) Conditions for approval of share option scheme

For the Commissioner General to approve a share option scheme, the following requirements must be met:

(1) The scheme must be established in Zambia and the employer must be carrying on business wholly or partly in Zambia.
(2) The scheme should provide for the participation of all eligible employees (including directors).
(3) An employee participating in the scheme should not acquire more than one fifth (20%) of the shares to be issued under the scheme.
(4) Only ordinary shares of the company may participate in the scheme.
(5) The scheme entitles an employee to acquire a set number of shares at a fixed price.
(6) The employee must be restricted to a set period of time to use an option to buy shares.
(7) The employees must be citizens or permanent residents of Zambia regardless of where they perform their duties.

(1 mark for each valid point up to a maximum of 4 marks)

(ii) The tax benefits of operating approved share option scheme for Goldrich BankZambia Ltd will be:

(1) The costs the bank will incur in setting up and operating the scheme will be tax deductible.
(2) There is no property transfer tax on the shares transferred under the scheme.

(3) The income of the scheme is not chargeable to income tax

(1 mark for each valid point up to a maximum of 4 marks)

(b) GOLDRICH BANK ZAMBIA LTD

COMPUTATION OF TAXABLE PROFIT

	K'000	K'000
Income before taxes		16,300
Add:		
Interest on late payment of income tax	220	
Excessive interest charge on loan from parent		
(20% - 5%) x K100 million	15,000	
Increase in general provision	2,350	
Depreciation	290	
Penalties for late payment of income tax	56	
Legal fees for acquisition of land	410	
		18,326
		34,626
Less:		
Dividends	1,200	
Rental income	2,800	
Unrealised exchange gains	1,500	
Capital allowances on:		
- Commercial building		
(K2,500,000 x 2%)	50	
- Office furniture		
(K460,000 x 25%)	115	
		(5,665)
Taxable income		28,961

COMPUTATION OF TAXABLE BUSINESS PROFIT

	K
Company income tax	
(K28,961,000 × 35%)	10,136,350
Less:	
WHT on interest income	(2,796,000)
Provisional income tax	(5,800,000)
Income tax payable	6,540,350

SOLUTION FIVE

(a) A loan to an effective shareholder constitute any of the following:

(1) The amount of money advanced to a shareholder
(2) The extent of credit facilities provided to a shareholder
(3) The difference between the cost of providing any benefit or advantage and the amount paid for such benefit or advantage when provided whether the benefit is convertible into cash or not
(4) The difference between the open market value of an asset transferred and the amount paid for that asset at the date of transfer if an asset is transferred to an effective shareholder.

Tax implications of making a loan to an effective shareholder:

If a company makes a loan to an effective shareholder the company must pay tax on that loan which is calculated as an amount equal to the difference between the amount of the grossed up equivalent of the loan at a rate of 37.5% and the actual amount of the loan.

(b) Payment of rentals on behalf of Kaweza and Chisele

(1) The amount of rentals paid on behalf of Kaweza who is an employee and a director of KawechiLimited will be treated as the taxable emolument of Kaweza which is taxable together with other benefits under the pay as you earn system.
(2) The company will be allowed to deduct the rentals paid on behalf of Kaweza when computing the taxable business profits of the company.
(3) The company will be deemed to have made a loan to an effective shareholder for payment of rentals on behalf of Chisele who is neither an employee nor a director of Kawechi Limited.
(4) The company will be required to pay income tax, without assessment, equivalent to 37.5% of the grossed up amount of the rentals.
(5) The amount of income tax payable will amount to:

K40,000 x 37.5/62.5 = K24,000.

(c) Provision of motor cars to Kaweza and Chisele

(1) Provision of a motor car to Kaweza is a benefit in kind which is not taxable on the employee. This will not give rise to any additional income tax payable for Kaweza.
(2) The company will be disallowed a personal-to-holder car benefit of K40,000 when computing the taxable business profit for providing Kaweza with a personal to holder car.

(3) The company will be able to claim capital allowances on the cost of the motor car provided to Kaweza at a rate of 20%. I.e K270,000 x 20% = K54,000. The company will also be allowed the cost of maintaining Kaweza's car as a deduction when computing the taxable business profit.

(4) Provision of motor car to Chisele who is neither an employee nor a director will be deemed to be a loan to an effective shareholder. The company will, therefore, be required to pay income tax without assessment on the grossed up amount of the motor car.

(5) Payment of motor car running expenses on behalf of Chisele constitutes a loan to an effective shareholder. The company will therefore be required to pay income tax without assessment on the grossed up amount of the maintenance expenses.

(6) The amount of income tax payable by the company will amount to:
(K230,000 + K15,000) x 37.5/62.5 = K147,000.

(d) The following are the tax implications arising from listing of shares

(1) The costs incurred on listing and issue of shares will not be allowed on the company when computing the taxable business profits.

(2) On listing of shares the company is entitled to a 2% discount in the year of listing only. This means that in the year of listing the company will pay income tax at a rate of 8% (10% - 2%).

(3) If the company offersat least one third of its issued shares to indigenous Zambians, the company will be entitled to an additional 5% discount. This discount is available for as long as the indigenous Zambians hold at least one third of the company's issued shares. This means that in the year of listing and issue of shares the company will be charged to income tax at a rate of 3% (10% - 2% - 5%), and subsequently the rate will be 5% (10% - 5%).

(4) On transfer of shares there will be no property transfer tax to be charged because transfer of shares listed on the Lusaka Securities Exchange (LuSE) is exempt for PTT.

END OF SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

ADVISORY LEVEL

CA 3.5: ADVANCED MANAGEMENT ACCOUNTING

TUESDAY 15 DECEMBER 2020

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

INSTRUCTIONS TO CANDIDATES

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

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

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

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

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

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

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

8. Present legible and tidy work.

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

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

SECTION A

This question is compulsory and must be attempted

QUESTION ONE

Amabooks Ltd (AL) is a small family run bookshop chain based in the capital city. It was first opened in 1991 and currently trades from more than 10 shops, on high streets, shopping malls and university campuses throughout the country. These shops rely almost exclusively on the sale of books for their revenue. Most customers are local residents, governments departments who buy regularly and tourists (during a limited season in the year). Its reputation is built upon the motivated staff members. AL has always been proud of their wide range of stock, a policy adopted to attract a wide range of customers with a wide diversity of tastes in literature. If customers cannot find the book they are looking for, AL will search on their behalf and source the book at no extra cost to the customer. The management team sees this as being a major advantage over their larger rivals.

Retail bookstores have changed radically in the country over recent years. Large national and international bookstores have gained control over the industry. This has been achieved through acquisition of smaller independent bookshops and through diversification into new products (magazines, music, computer games and food). In spite of this, many customers still seem to prefer the more unique, individual stores. Many independent, small bookstores continue to operate successfully by focusing on local needs and ensuring a high quality of customer service.

Many of the surviving smaller bookstores are finding it difficult to defend themselves against the marketing techniques being used by the larger chains. A number of smaller bookstores have started to sell music, newspapers and magazines and even offer refreshments inside the store. This seems to reflect the general trend to move away from the reliance on the sale of books only. In addition, many of the larger retail bookstores now offer Internet sales through their websites and mail order delivery. Smaller independent bookstores are finding it hard to compete against this.

Customers in the country regard the AL stores highly, yet sales have fallen steadily over the past three years. Most of its current individual customers (70%) are over 35 years. All of its stores have a manager and assistants. These have considerable expertise in the book market and the stocks held by AL. On average, there are two (2) assistants per store. The company is seen to be traditional. Few of the current staff, apart from the younger family members, however, are not interested in new developments and are very reluctant to change.

The company has recently obtained three (3) major supply contracts from virtual companies and the top management has felt that the time is appropriate for them to convert its existing information system into a new one and to integrate all its office activities. One of the main objectives of taking this exercise is to maintain continuity of business plans even while continuing the progress towards e-governance.

There is little political influence in the industry, apart from the recent change in pricing regulations. This has allowed the sale of books in any retail business at a price determined by that business. There is a general disquiet in the industry about the dominance of large overseas chains entering the domestic market and selling at discounted prices. The industry itself continues to expand with the number of new bookstores openings increasing each

year. The main growth in sales in these stores appears however, to be coming from the sale of music, magazines, computer games and in-store food and drink outlets. The market is moving towards younger consumers who want more than just to browse books quietly in a bookstore. These customers also want to listen to music, be able to read magazines or have something to eat. The industry calls this "the complete shopping experience". All of the large chains have their own websites and on-line catalogue services. This allows customers to browse and order books, music and a variety of other related merchandise from the comfort of their homes.

In December 2019, a national research was carried out in order to compare AL against its national competitors (a total of 15 companies operate in the industry; 10 of which belong to international companies).Other details of the findings from the national research are summarized in Appendix 1, 2 and 3.

Required:

(a) Using PESTEL, analyse the retail book industry, clearly identify the areas of main concern for AL. (10 marks)

(b) Explain the implementation strategies that may be used to change from an old system to a new system. (10 marks)

(c) Assess the performance of AL against the other competitors in the national market. (16 Marks)

(d) Identify from (c) above, the critical success factor/s, which should become the focus of attention at AL. (4 marks)

[Total: 40 Marks]

Appendix 1

	Amabooks			**National Competitors**
	2017	**2018**	**2019**	**2019**
	K'000	K'000	K'000	K'000
Sales Revenue	2,160	2,040	1,836	51,750
Total Operating costs	1,740	1,713	1,677	37,260
Net profit	420	327	159	14,490
Staff costs	699	735	771	7,080
Marketing costs	69	84	117	7,500
Refurbishment costs	18	18	18	3,600
Technology costs*	*18	*27	*45	6,000

* Technology costs consist mainly of expenditures for stand-alone personal computers, software to record stock and electronic cash registers.

Appendix 2

	Amabooks	**National Competitors**

	2017	2018	2019	2019
Sales make-up %				
Books	97	93	90	54
Magazines/stationery products	-	2	7	14
Music	-	-	-	22
Other (food/novelty items/toys)	3	5	3	10

Appendix 3

	Amabooks			National Competitors
	2017	**2018**	**2019**	**2019**
Individual customer profile:				
0 – 20 years	3	3	6	24
21 – 30 years	27	21	27	153
31 – 40 years	54	60	57	81
41 – 50 years	153	138	150	30
51 + years	63	78	60	12
Customer per week	2,820	2,754	2,520	51,750

SECTION B
Attempt any THREE (3) questions in this section.
QUESTION TWO

People Empowerment (PE) is a charitable organisation, whose primary objective is to meet the accommodation needs of persons within its locality. It identifies the needs in the local communities and finances the building of houses for its clients at low cost. The organization operates mostly in under developed countries.

Rent-a-house (RAH) is a profit-seeking organisation which provides rented accommodation to the public. Income and Expenditure accounts for the year ended 31 March 2019 were as follows:

	PE	RAH
	K'000	K'000
Rent received	**4,774**	**5,000**
Less:		
Staff and management costs	900	1,240
Major repairs and planned maintenance	1,365	404
Daily repairs	957	255
Sundry operating costs	611	470
Net interest payable and other similar charges	1,052	1,500
Total costs	**4,885**	**3,869**
Operating (deficit)/surplus	**(111)**	**1,131**

Operating information in respect of the year ended 31 March 2019 was as follows:

(1) Planned maintenance and major repairs undertaken:

	PE		RAH	
Nature of work	**Number of properties**	**Cost per property**	**Number of properties**	**Cost per property**
		K		K
Miscellaneous construction work	40	2,500	-	-
Fitted kitchen replacements (all are the same size)	180	5,220	20	10,440
Heating upgrades/replacements	30	3,000	-	-
Replacement sets of windows and doors for 3 bedroomed properties	200	8,000	50	12,000

All expenditure on planned maintenance and major repairs may be regarded as revenue expenditure.

(2) Property and rental information:

	PE		RAH	
Size of property	**Number of properties**	**Rent payable per week (K)**	**Number of properties**	**Rent payable per week (K)**
1 bedroom	80	40	40	90
2 bedrooms	160	45	80	101
3 bedrooms	500	50	280	130
4 bedrooms	160	70	nil	170

(3) Staff salaries were payable as follows:

PE		RAH	
Number of staff	**Salary(K) per staff member per annum**	**Number of staff**	**Salary(K) per staff member per annum**
2	70,000	40	100,000
2	50,000	80	70,000
3	40,000	280	40,000
18	30,000	-	-

(4) Day-to-day repairs information:

Classification	**PE**		**RAH**
	Number of repairs undertaken	Total cost of repairs (K)	Number of repairs undertaken
Emergency	1,920	268,800	640
Urgent	3,760	451,200	1,504
Non-urgent	2040	236,640	408

Each repair undertaken by RAH costs the same irrespective of the classification of repair.

Required:

(a) Evaluate how the management of PE could measure the 'value for money' of its service provision during the year ended 31 March 2019. (7 marks)

(b) (i) Identify two (2) performance measures in relation to EACH of the following

Dimensions of performance measurement that could be used by the management of PE when comparing its operating performance for the year ended 31 March 2019 with that of the previous year:

- Flexibility
- Service quality. (2 marks)

(ii) Calculate and comment on three (3) performance measures relating to 'cost and efficiency' that could be utilized by the management of PE when comparing its operating performance against that achieved by RAH. (6 marks)

(c) Explain why differing objectives make it difficult for the management of PE to compare its operating and financial performance with that of RAH, and comment on additional information that would assist in the appraisal of the operating and financial performance of RAH for the year ended 31 March 2019. (5 marks)

[Total: 20 Marks]

QUESTION THREE

Achimwene Group (AG) is a company that operates several business units which are treated as divisions. Each division is headed by a Manager whose performance is assessed on short term performance of the division.

B Division, which is part of the AG, is considering an investment opportunity to which the followingestimated information relates:

(1) An initial investment of K4,500,000 in equipment at the beginning of year 1 will be depreciated on a straight-line basis over a three-year period with a nil residual value at the end of year 3.

(2) Net operating cash inflows in each of years 1 to 3 will be K1,250,000, K1,850,000 and K2,700,000 respectively.

(3) The management accountant of B Division has estimated that a suitable cost of capital is 10% for this kind of investment.

(4) A bonus scheme which is based on short-term performance evaluation system is in operation in all divisions within AG based on the residual income of a project.

During the last Board meeting for AG, one of the directors commented that it is high time that the company changed its focus from short to long term and consider a change to put more emphasis on the non–financial factors of performance measures. He added, many companies are adopting the Balance scorecard for performance measurement, and in my view three (3) of the four (4) critical success factors under the Balanced scorecard relate to non-financial measures. This tells us just how important non-financial measures are to the success of a business.

Required:

(a) Calculate the Net Present Value and Residual Income for Division B's investment opportunity. (6 marks)

(b) Comment on the values obtained (above) in reconciling the short-term and long-term decision views likely to be adopted by division B management regarding the viability of the proposed investment. (4 marks)

(c) Discuss the statement that the company should focus more on long term non-financial measures as opposed to short term financial measures of performance.
(10 marks)
[Total: 20 Marks]

QUESTION FOUR

Russell Robberts (RR) Ltd has decentralised its operations into autonomous product divisions. All divisionalmanagers are responsible for all aspects of the operations of their divisions, including revenue,expenditure, the financing and acquisition of assets, and general cash management. Head office,nevertheless, reserves the right to make such changes on a division as it deems necessary.

The performance of divisions and of divisional managers is measured on the basis of their return oninvestment (ROI) before taxation.

Division A was set up in 2010 and is managed by Clifford Rangarirai. It is required to produce a rate of returnof 20% per year. Division B has been in existence for 20 years and is managed by Rudo Gwinyai. Division Bsells a much older product and is in a less risky line of business, the required rate of return is only 16%.The company's average cost of capital on the same basis is 18%.

Both Clifford and Rudo were appointed on 1 January 2017 on four year service contracts. Asthese contracts will shortly be due for renewal, the performance of these two managers over their firstthree years of employment is being evaluated in order to determine the need for revision of theremuneration clauses in their contracts.

The financial results of the two divisions for the years 2017 to 2019 are given below:

	Division A			Division B		
	2017 K'000	2018 K'000	2019 K'000	2017 K'000	2018 K'000	2019 K'000
Estimated industry sales	10,000	15,000	17,000	31,000	34,000	42,000
Division Sales	**1,100**	**1,700**	**3,350**	**3,300**	**3,500**	**3,600**
Direct labour	165	240	430	730	720	790
Direct materials	110	160	320	370	480	510
Plant, equipment depreciation	50	68	97	6	6	7
Plant leases	22	41	54	-	-	13
Factory rent	-	-	-	20	20	20
Maintenance and repairs	35	38	52	115	130	142
Energy costs	50	79	112	70	80	81
Indirect production overheads	100	142	205	377	369	372
Research and development	63	67	89	15	10	12
Advertising, sales promotion	78	81	147	193	211	215
Other committed costs	178	231	349	699	714	620
Other managed costs	104	113	315	330	310	298
Head office allocated costs	110	340	840	330	350	360
Total costs	**1,065**	**1,600**	**3,010**	**3,255**	**3,400**	**3,440**

Net profit	**35**	**100**	**340**	**45**	**100**	**160**
	Division A			Division B		
	2017 K'000	2018 K'000	2019 K'000	2017 K'000	2018 K'000	2019 K'000
Assets employed						
Fixed (net book value)	1,000	1,400	1,800	100	90	94
Current	1,000	1,000	1,600	900	930	866
Total Assets	**2,000**	**2,400**	**3,400**	**1,000**	**1,020**	**960**
Liabilities						
Long-term loans	180	920	1,120	-	-	-
Current	70	140	340	100	120	160
Total Liabilities	**250**	**1,060**	**1,460**	**100**	**120**	**160**
Return on net investment	**4%**	**15%**	**35%**	**10%**	**22%**	**40%**

Required:

(a) Evaluate the appropriateness of using both return on investment (ROI) and residual income (RI) as the measure of division and management performance in RR. (8 marks)

(b) Assess the performance of the two divisions. (8 marks)

(c) Discuss the need for different performance measures for division and manager performance evaluation. (4 marks)

[Total: 20 Marks]

QUESTION FIVE

Kashuta Events (KE) Ltd is an events management company established in 2010 by Jones Phiri. The company arranges entertainment events for corporate clients,such as visits to major sporting events, the theatre and opera, as well as dinners, lunches and formal receptions. KE is normally busiest in the last quarter of the year with activities slumping to the lowest in the first quarter. KE'scustomers are very demanding, and the entertainment services they require vary considerably. Arrangements areoften altered at a late stage, due to changing requirements of the client or even, in the case of sporting events,unexpected weather conditions.

Clients expect a very high quality of service. Some clients approach KE to arrange an event specifically for them.

However, for major sporting events, KE sells tickets and then either hires a hospitality suite or erects a marqueeto provide customers with high-quality meals before, during and after the event. For these events, advertising costscan be high.

Cash flows are often a critical problem for KE, because it usually has to pay for tickets and venues well in advanceof receiving payment from clients.

It is also important for KE that each individual event should be profitable. Despite wanting high quality, clients areoften reluctant to pay high prices and negotiate with KE's representatives to obtain the best deal they can get.

Representatives may therefore be asked to reduce the quoted price, or provide more in the entertainment package:prices are commonly negotiated and agreed on the spot at meetings between KE representatives and clients.

For major sporting events, KE buys a block of tickets which it then tries to sell within an entertainment package.

Sometimes it is unable to sell all the tickets. On other occasions demand is strong, and KE then tries to obtainadditional tickets to sell.

You have recently joined KE as senior management accountant, having previously workedfor a water pumps manufacturer, HO2. You are aware of significant differences between KE and the company where you worked before.

Required:

(a) Discuss how the accounting information requirements of KE will differ significantly from those in a manufacturing company such as HO2. (10 marks)

(b) Discuss how an information technology (IT) system that provides instant access for management and representatives to a central database can help to improve the quality of information available and the performance of KE. (10 marks)

[Total: 20 Marks]

END OF PAPER

Modified Internal Rate of Return

$$MIRR = \left[\frac{PV_R}{PV_I}\right]^{\frac{1}{n}}\left(1 + r_e\right) - 1$$

The Black-Scholes option pricing model

$$c = P_a N(d_1) - P_e N(d_2) e^{-rt}$$

Where:

$$d_1 = \frac{\ln(P_a / P_e) + (r + 0.5s^2)t}{s\sqrt{t}}$$

$$d_2 = d_1 - s\sqrt{t}$$

The Put Call Parity relationship

$$p = c - P_a + P_e e^{-rt}$$

Present Value Table

Present value of 1 i.e. $(1 + r)^{-n}$

Where r = discount rate
n = number of periods until payment

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	0·980	0·961	0·943	0·925	0·907	0·890	0·873	0·857	0·842	0·826	2
3	0·971	0·942	0·915	0·889	0·864	0·840	0·816	0·794	0·772	0·751	3
4	0·961	0·924	0·888	0·855	0·823	0·792	0·763	0·735	0·708	0·683	4
5	0·951	0·906	0·863	0·822	0·784	0·747	0·713	0·681	0·650	0·621	5
6	0·942	0·888	0·837	0·790	0·746	0·705	0·666	0·630	0·596	0·564	6
7	0·933	0·871	0·813	0·760	0·711	0·665	0·623	0·583	0·547	0·513	7
8	0·923	0·853	0·789	0·731	0·677	0·627	0·582	0·540	0·502	0·467	8
9	0·941	0·837	0·766	0·703	0·645	0·592	0·544	0·500	0·460	0·424	9
10	0·905	0·820	0·744	0·676	0·614	0·558	0·508	0·463	0·422	0·386	10
11	0·896	0·804	0·722	0·650	0·585	0·527	0·475	0·429	0·388	0·305	11
12	0·887	0·788	0·701	0·625	0·557	0·497	0·444	0·397	0·356	0·319	12
13	0·879	0·773	0·681	0·601	0·530	0·469	0·415	0·368	0·326	0·290	13
14	0·870	0·758	0·661	0·577	0·505	0·442	0·388	0·340	0·299	0·263	14
15	0·861	0·743	0·642	0·555	0·481	0·417	0·362	0·315	0·275	0·239	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	0·812	0·797	0·783	0·769	0·756	0·743	0·731	0·718	0·706	0·694	2
3	0·731	0·712	0·693	0·675	0·658	0·641	0·624	0·609	0·593	0·579	3
4	0·659	0·636	0·613	0·592	0·572	0·552	0·534	0·516	0·499	0·482	4
5	0·593	0·567	0·543	0·519	0·497	0·476	0·456	0·437	0·419	0·402	5
6	0·535	0·507	0·480	0·456	0·432	0·410	0·390	0·370	0·352	0·335	6
7	0·482	0·452	0·425	0·400	0·376	0·354	0·333	0·314	0·296	0·279	7
8	0·434	0·404	0·376	0·351	0·327	0·305	0·285	0·266	0·249	0·233	8
9	0·391	0·361	0·333	0·308	0·284	0·263	0·243	0·225	0·209	0·194	9
10	0·352	0·322	0·295	0·270	0·247	0·227	0·208	0·191	0·176	0·162	10
11	0·317	0·287	0·261	0·237	0·215	0·195	0·178	0·162	0·148	0·135	11
12	0·286	0·257	0·231	0·208	0·187	0·168	0·152	0·137	0·124	0·112	12
13	0·258	0·229	0·204	0·182	0·163	0·145	0·130	0·116	0·104	0·093	13
14	0·232	0·205	0·181	0·160	0·141	0·125	0·111	0·099	0·088	0·078	14
15	0·209	0·183	0·160	0·140	0·123	0·108	0·095	0·084	0·074	0·065	15

SUGGESTED SOLUTIONS

SOLUTION ONE

(a) Environmental analysis (PESTEL)

Political/Legal
Recent changes to pricing regulations have allowed the discount selling of books by any retailer. This is an area of concern for AL. They will face increased competition and are likely to earn reduced margins on book sales in order to remain price competitive.

Economic
The health and cycle of the economy will have a direct impact on the retail book industry. Consumers typically allocate part of their disposable income to leisure activities, which includes books. AL will feel the negative effects more significantly in a slow economy where disposable incomes are declining. In a slow economy, consumers are more price sensitive and will seek the lowest price available. In a booming economy, AL will fare better as price sensitivity may not be the primary consideration.

Social
The trend in the industry, particularly from the larger new competitors, is towards expanding the market by attracting younger customers (less than 30 years of age). This is an area of concern for AL as the majority of its current customers are over 35 years of age.
Attracting these new, younger customers may be difficult due to the traditional image of AL. These customers not only demand a different shopping environment, but also require complementary products. Again, AL must consider whether they are able to attract these customers with new products and an updated shop image.

Technological
Books are a particularly easy product to sell via a catalogue system or by electronic commerce, as they are relatively low in value, easy to deliver and easy to market. Younger customers are more likely to use electronic methods of purchasing and reviewing books. In order to enter this type of selling environment, AL will need to invest in technology, which can be a barrier to entry in gaining market share among the younger consumer.

This is an area of concern for AL, as the investment in technology may not noticeably impact sales to their current target customers. However, in order to try and gain new customers, this may be the only way. A positive implication is that setting up a AL website in order to market and promote the business need not be expensive and it could be used as a very effective marketing tool.

(b) Change strategies

The popular implementation strategies that may be used to convert an old system into new system are described as follows:

1. **Direct Implementation / Abrupt Change-Over**: This is achieved through an abrupt takeover – an all or no approach. With this strategy, the changeover is done in one operation, completely replacing the old system in one go. This usually takes place on a set date, often after a break in production or a holiday period so that time can be used to get the hardware and software for the new system installed without causing too much disruption.
2. **Phased Changeover:** With this strategy, implementation can be staged with conversion to the new system taking place gradually. For example, some new files may be converted and used by employees whilst other files continue to be used on the old system i.e. the new is brought in stages (phases). If a phase is successful then the next phase is started, eventually leading to the final phase when the new system fully replaces the old one.
3. **Pilot Changeover:** With this strategy, the new system replaces the old one in one operation but only on a small scale. Any errors can be rectified or further beneficial changes can be introduced and replicated throughout the whole system in good time with the least disruption. For example - it might be tried out in one branch of the company or in one location. If successful then the pilot is extended until it eventually replaces the old system completely.
4. **Parallel Changeover:** This is considered as the most secure method with both systems running in parallel over an introductory period. The old system remains fully operational while the new systems come online. With this strategy, the old and the new system are both used alongside each other, both being able to operate independently. If all goes well, the old system is stopped and new system carries on as the only system.

(c) Competitive assessment

Performance indicators

	2017	2018	2019	Competitors
Net profit to sales %	19%	16%	9%	28%
Staff costs as % of total costs	27%	28.5%	29%	11.5%
Marketing costs as % of total costs	3%	3%	4%	12%
Refurbishment costs	0.7%	0.7%	0.7%	6%
Technology costs	0.7%	1%	2%	10%

Alternative approach:

Performance indicators

	2017	2018	2019	Competitors
Net profit to sales %	19%	16%	9%	28%
Staff costs as % of total costs	40%	43%	46%	19%
Marketing costs as % of total costs	4%	5%	7%	20%
Refurbishment costs	1%	1%	1%	10%
Technology costs	1%	1.5%	2.7%	16%

Profitability analysis

AL' profitability has been steadily declining for the last three years. The reason for the decline is two-fold, declining sales due to competitive price pressure and increased operating costs. In the most recent year presented, AL' profitability margin was only 50% that of its competitors.

Cost analysis

- Staff costs are the largest percentage of total costs and have been steadily increasing over the three years. Employees are likely to expect higher wages for loyalty and experience. Competitors' staff costs on the other hand are significantly lower in proportion to total costs. This may be caused by employing part-time staff with much less experience and knowledge. Therefore, they are likely to be paid less. In addition, competitors are likely to have a higher customer to staff ratio.
- AL' marketing costs are very low, despite increasing from 4% to 7% of total costs in the three years under review. AL relies on repeat business and local word of mouth in order to generate sales. Competitors spend a substantially higher portion of their sales on marketing activities. However, this is not surprising as most competitors are new to the area and need to generate awareness of themselves in the initial few years.
- AL's current allocation for refurbishment costs is very low. Competitors' refurbishment costs may be higher due to newer stores being fitted out from scratch. However, if AL management considers updating their traditional shop image, these costs may dramatically increase.
- Technology costs are also very low compared to competitors. AL has invested in personal computers and cash registers, but they have not invested in internet technology. Competitors are likely to be investing in the internet and e-commerce facilities.

Turnover analysis

- Nearly all of AL's revenue is generated through book sales, while competitors generated only 54% of their revenue from book sales. Competitors are more likely able to compete effectively against large stationery shops and music outlets than AL as they will have economics of scale and centralized purchasing departments. For AL, a move into alternative products is likely to be very expensive.

- AL could however try selling basic refreshments, testing the strategy on customers in one or two shops, depending on whether the facilities exist to do so. Again, this may be costly in the short term to set up (appropriate equipment, facilities, storage, health and safety considerations).

Customer profile

- For AL, 70% of customers are over 40 compared to local competition, where only 14% of customers are over 40.
- A market opportunity may exist for AL as the over 40s market is likely to be more affluent with a higher proportion of disposable income available for leisure items. In addition, they may be more interested in books, the quality of service and the personal attention than music, stationery and other ancillary products. AL must perform market research to assess the needs of this particular customer group.

- At the same time, AL cannot afford to ignore the needs of the younger market currently at 28% AL's customers are between 20 – 40, and 78% of competitors' customers are in this age range. There is a large market potential here, and AL must assess these populations' needs if it is to increase its share of this group.
- A worrying trend in customer numbers has been to decline in customer numbers per week over the three years. In addition, the numbers of customers compared to the average per competitor is less than half (on average each competitor store has 900 customers per week). This pattern must be investigated to assess whether this is due to ineffective marketing, poor layout of stores, poor image or different products sold.

(d) Critical success factors

AL must assess exactly what they must do right in order to succeed and be competitive against the new and larger competitors.

In such a competitive market, AL must identify the customer group which they can satisfy better than their rivals, and they must clearly identify the product and service requirements desired by that customer group.

It would appear that AL must address the needs of the 40+ consumers , but they must also ensure that they sell the books/ products/ shopping experience that this group expect.

AL must develop a level of competence and service to this group that competitive advantage is achieved. This may require changes to stocks, store layout, in store facilities (reading areas, coffee shops), marketing policies.

SOLUTION TWO

(a) The term 'value for money' is often used to refer to economy, efficiency and effectiveness. Value for money audits can be undertaken in order to assess whether value for money has in fact been achieved. In order for such an audit to be effective the objectives of PE would need to be clearly understood by those undertaking the audit.

Economy

The management of PE could attempt to measure the value for money of its operating activities in terms of economy, efficiency and effectiveness. Economy is only concerned with inputs acquired by PE, and is achieved by obtaining those inputs at the lowest acceptable cost. For example, the prices at which with the replacement fitted kitchens are purchased (K5,220) could be compared with those obtainable from other vendors in order to assess whether the lowest acceptable cost is being achieved for the required level of quality. It is important that the management of PE realise that economy is measured by reference to quality of resource inputs. They need to recognise that the purchase of poor quality materials and inferior services represents 'false economy'.

Efficiency

Efficiency is focussed upon output, for example, maximizing output for a given level of input. For example with regard to the placement fitted kitchens, PE could use the tendering process in an attempt to maximise the number of fitted kitchens that would be installed for a given amount of money by the contractor awarded the tender. Efficiency is measured by the ratio of output to input. The ratio is not used in an absolute sense but in a relative sense and can be improved in four ways:

- By increasing output for the same input.
- By increasing output by a greater proportion than the proportionate increase in input.
- By decreasing input for the same output; and
- By decreasing input by a greater proportion than the decrease in output.

The denominator (input) is often measured in monetary terms whilst the numerator (output) can be measured in either monetary amounts or physical units, e.g. per property.

Effectiveness

Effectiveness is focussed upon the achievement of objectives. A not for profit organisation will invariably have a number of objectives. For example PE may have the following objectives:

- To meet housing needs.
- To provide quality well-managed homes.
- To provide the services that clients want.
- To provide an effective care and repair service.
- To support the communities within which it operates.

The management of PE should be mindful that the three performancemeasures require individual consideration since for example, the degreeto which effectiveness is achieved gives no indication about how muchwas spent to achieve it.

The management of PE should also recognise that these performancemeasures may conflict with one another. For example, during the year PE incurred expenditure amounting to K939,600 in respect of 180 replacementfitted kitchens. If PE had purchased the same replacement kitchen unitsas RAH, then PE would only have been able to refit 90 properties(K939,600/K10,440). Hence, the efficiency ratio of inputs to outputswould have been halved. However, the purchase of replacement kitchenunits at a cost of K10,440 might have resulted in a higher level ofeffectiveness being achieved through factors such as the longer life ofthe replacement kitchen units, higher quality fixtures and fittings, andenhanced aesthetic 'appeal' to residents.

The management of PE should also give consideration tobenchmarking against other similar charities whose primary objective isthe provision of accommodation to the communities in which they operate.Benchmarking is probably the most significant recent development inmeasuring the performance of not-for-profit organisations. Themanagement of charities such as PE would be far more willing to shareinformation about performance with similar organisations for theirmutual benefit, than the management of many profit-seeking organizations who often view the sharing of information as a commercial threat. Forexample, the management of PE could attempt to establish whether K5,220 is the 'norm' in respect of the cost of a replacement fitted kitchenincurred by similar nonprofit-seeking organisations.

(b)

(i)**Service quality**

The time required in order to undertake repairs of an emergency nature, after notification of the requirement by a tenant.
The staff employed by PE' friendliness could be measured via the completion of questionnaires by tenants.

Flexibility
Mean waiting time for a house to become available to a tenant.
Mean waiting time to re-house a tenant in a different sized house after receipt of a request from a tenant.
(ii)The management of PE could use the following performance measures:

Cost and efficiency

	PE	**RAH**
The mean cost per week, per house on management	K19.22	K59.62
The mean cost per week, per house on general repairs	K20.44	K12.26

Notes/ comments:

(1)The mean cost per week per house is calculated by dividing the amount of staff and management costs by the number of properties held by each of the respective organisations. Although the same number of staff, (25), is employed by each organisation,

staff costs incurred by RAH are 37.7% higher than those of PE. This could result from different pay structures and management policies regarding remuneration that are likely to be employed within a profit seeking organisation such as RAH.

(2)PE currently pays, on average, K140 foreach emergency repair, K120 for each urgent repair and K116 for each non-urgent repair. RAH has benefited from the fact that each repair undertaken by RAH costs the same (i.e.K100), irrespective of the classification of repair. This might be a result of a contractual arrangement with a subcontractor that each repair undertaken is charged at the same fee in return for guaranteed business volumes for the subcontractor. If this were the case, then PE would benefit from entering into such an arrangement for the supply of repair services.

Note: other ratios and relevant comments would have been acceptable.

(c)The primary objective of any commercial organisation such as RAH is to maximise profit. Management may take a short or long-term view regarding the ways in which they seek to achieve this objective. Management may have to choose between available options, each of which might help them to achieve this objective. However, whilst many decisions may have to be made, the objective remains clear and identifiable.

The management of RAH will most probably be concerned with the provision of high quality accommodation in order to generate higher revenues and profits. The management of RAH are probably trying to appeal to those who are willing to pay high rents for high quality accommodation. The fact that replacement fitted kitchens and replacement windows and doors purchased by RAH cost 100% and 50% respectively, more than those purchased by PE may be an indication of this.

The objectives of not-for-profit organisations such as PE canvary significantly. PE's primary objective is 'to meet the accommodation needs of persons within its locality'. This might distil down to ensuring that any person, who is in need of accommodation, is in fact provided for.

The absence of a profit measure makes it more difficult to measure whether objectives are in fact being achieved. It is difficult to judge whether non-quantitative objectives such as meeting accommodation needs of people have been met. This does not mean however, that such an assessment should be placed on the 'too difficult pile'and left unattended. A number of suitable measures need to be devised by the management accountant in order to assess the extent to which non-quantitative objectives have been met.

The management of PE would probably be better served in comparing the performance of their organisation with a similar non-profit seeking organisation that provides accommodation to meet the needs of society.

Additional information that would assist in appraising the performance of RAH during the year ended 31 March 2019 includes the following:

- Estimates of the financial effects of changes in demand for different levels of rents charged.
- Estimates of the financial effects of changes in demand for different costs/quality levels of accommodation provision.
- A detailed analysis of net interest payable of K1, 500,000.
- A detailed analysis of sundry operating costs K470, 000.
- Management accounts for the current and prior years.

- Budget information for 2019, 2020 and, if available, 2021.

It would also be useful to have details regarding the location ofthe properties held by RAH. It is quite conceivable that the houses heldby RAH are situated in a sought after area. Benchmarking with a 'best practice' organisation from within the private sector would be of much assistance in the appraisal of the operating and financial performance of RAH.

SOLUTION THREE

Part (a)

	Year 0	Year 1	Year 2	Year 3
	K'000	K'000	K'000	K'000
Net cash inflow	(4500)	1,250	1,850	2,700
DF@10%	1.000	0.909	0.826	0.751
Present values	(4,500)	1,136.25	1,528.1	2,027.7

NPV = K192,050

	Year 1	Year 2	Year 3
	K'000	K'000	K'000
Net cash inflow	1,250	1,850	2,700
Less: Depreciation	(1,500)	(1,500)	(1,500)
Profit/(loss)	(250)	350	1,200
Less: cost of capital (at 10% of wdv)	(450)	(300)	(150)
RI	(700)	50	1,050

Part (b)

A positive NPV of K192,050 indicates that the performance is acceptable over the three-year life of the proposal.
The RI shows a negative value of K700,000 in year 1. This is likely to lead to its rejection by the management of B Division because they participate in a bonus scheme that is based on short-term performance evaluation.

The short-term focus on performance evaluation might lead to the rejection of investment opportunities such as the one under consideration which would be detrimental to the AG. Management of the AG should give immediate consideration to changing the focus of the bonus scheme. The comment by one of the directors at the last Board meeting is indicative of the challenge of divisional managers focusing on short term performance measures at the expense of long term shareholder value.

Part (c)
The use of non-financial performance indicators (NFPIs) has become more widespread during recent years to assess performance in organisations. This is largely attributable to the fact that many important aspects of organisational performance cannot be measured in purely financial terms. It follows that if performance measures are restricted to financial measures alone then many important non-financial aspects of organisational performance may be ignored.
Furthermore there is a widely held view that 'what gets measured gets done' and if performance measures are restricted to financial measures alone then the focus of managers will be myopic and consequently they may be motivated by the wrong stimuli. In the past the important measure of performance have been financial in nature, with little or in extreme cases no focus whatsoever, being given to other important aspects of performance. Many commentators have argued that financial measures encourage short-termism to the detriment of the longer-term prospects of organisations.

Many NFPIs are 'lead indicators' insofar as they give an indication of likely future financial performance and therefore their measurement might reveal problems which might be addressed by management in time to take remedial action.
Skill and care must be exercised by management in the selection of NFPIs given the vast number of potential NFPIs in order to avoid an 'information overload' which could be damaging to an organisation.

The increasing attention given to NFPIs was a key factor in the development of Kaplan and Norton's 'balanced scorecard' which proposed that business performance is reviewed from four perspectives, these are:
The financial perspective – How does an organisation appear to the shareholders?
The customer perspective – How does an organisation appear to the customers?
The internal business perspective – What must an organisation excel at?
The innovation and learning perspective – Can an organisation continue to improve and create value?
For each of the four perspectives goals and measures will need to be defined – typically five measures for each perspective.
The goals and measures are designed to focus attention on important factors and precipitate improved organisational performance.
The internal logic of the balanced scorecard is that goal-setting originates with customers. Then an organisation must determine what it must excel at in order to satisfy customer expectations. The innovation and learning perspective contains goals which relate to how an organisation will maintain progress and develop its processes, products and services. The results from these three perspectives will be mirrored in the financial perspective.

The directors will need to agree the 'vision' of the organisational strategy with middle management and to ensure that the vision is also shared by all employees within the organisation thereby creating an 'understood environment'. The creation of such an environment should ensure that sufficient attention is focused on all important factors within the organisation's environment which will lead to higher levels of profitability.

SOLUTION FOUR

(a) Appropriateness of ROI for divisional and management performance

(i) Appropriateness of ROI

The ROI is regarded as being of only limited use in appraising the performance of a divisionor a manager. As a relative measure it may be a useful calculation when appraising profit centres but not, as here, investment centres. Limitations arise for the following reasons.

1) Its use is inconsistent with a firm's probable aim of profit maximising, since divisions will wish to maximise profits relative to capital employed rather than in absolute terms.
2) It can lead to under-investment, since ROCE can be improved not only by increasing profit but by reducing capital employed.
3) There can be problems due to inconsistency in asset or profit measurement as illustrated by points 1, 2 and 6 below.
4) Behavioural problems may result for a lack of control over figures used.

The example shown can be used to illustrate these points.

(1) Division A has leased plant as well as purchasing plant. Division B has no leased asset, making a comparison difficult.
(2) B has rented its premises, whereas A owns its property.
(3) Head office costs have been allocated, though the basis is not specified. These costs are presumably not controllable by the division and do not necessarily reflect the true value of the services or benefits received.
(4) The use of net book value for fixed assets may encourage under-investment. B'sassets would appear to be, on average, older and it is not clear whether consistent depreciation policies have been adopted or whether "assets employed" represents year-end figures or, more appropriately, average values.
(5) Long-term loans should be excluded from liabilities since they are a source of funds rather than a component of net assets.
(6) It is not clear whether there has been consistent treatment of research and development costs or advertising costs.

(ii) Alternative measures

The main suitable alternative to the ROI calculation is to find the residual income (RI) for each division where Residual income = Net profit – Interest on divisional assets. This is an absolute measure encouraging profitable investment, and its maximisation is consistent with the company's likely aim of profit maximisation.

The main problem of the measure is what rate of notional interest should be charged on capital employed for reducing a division's profits. In this case a rate consistent with the risk of each division has been used and an attempt has been made to overcome some of the other problems of the previous ROI figures.

	Division A			*Division B*		
	2017	2018	2019	2017	2018	2019
	K'000	K'000	K'000	K'000	K'000	K'000
Assets	2,000	2,400	3,400	1,000	1,020	960
Current liabilities	(70)	(140)	(340)	(100)	(120)	(160)

Net assets	1,930	2,260	3,060	900	900	800
Net profit	35	100	340	45	100	160
Head office costs	110	340	840	330	350	360
	145	440	1,180	375	450	520
Interest (W)	(386)	(452)	(612)	(144)	(144)	(128)
Residual income	(241)	(12)	568	231	306	392

Working
Interest on net assets

	Division A			*Division B*		
	2017 K'000	2018 K'000	2019 K'000	2017 K'000	2018 K'000	2019 K'000
Net assets	1,930	2,260	3,060	900	900	800
Risk-adjusted interest rate	20%	20%	20%	16%	16%	16%
Notional interest charge	386	452	612	144	144	128

Tutorial note: *An attempt has been made to adjust for some of the difficulties in calculating any performance measure as mentioned in (i) above. However, if more information had been available, further adjustments could have been made. It is often suggested that replacement cost of net assets is a more appropriate basis for calculating the notional interest charge.*

(b) Evaluation of performance using financial ratios

Year	Division A	Division B
(i) Market share		
2017	(1,100/10,000) x 100 = 11.0%	(3,300/31,000) x 100 = 10.6%
2018	(1,700/15,000) x 100 = 11.3%	(3,500/34,000) x 100 = 10.3%
2019	(3,350/17,000) x 100 = 19.7%	(3,600/42,000) x 100 = 8.6%
(ii) Net profit percentage (based on profit before head office costs)		
2017	(145/1,100) x 100 = 13.2%	(375/3,300) x 100 = 11.4%
2018	(440/1,700) x 100 = 25.9%	(450/3,500) x 100 = 12.9%
2019	(1,180/3,350) x 100 = 35.2%	(520/3,600) x 100 = 14.4%
(iii) Asset turnover (based on fixed assets plus net current assets)		
2017	(1,100/1,930) = 0.6	(3,300/900) = 3.7
2018	(1,700/2,260) = 0.75	(3,500/900) = 3.9
2019	(3,350/3,060) = 1.09	(3,600/800) = 4.5
(iv) Annual sales growth		
2018	(1,700/1,100) – 1 = 54.5%	(3,500/3,300) – 1 =6.1%
2019	(3,350/1,700) - 1 = 97.1%	(3,600/3,500) – 1 = 2.9%

(v) Gross profit percentage (using only direct labour and materials)

2017	(825/1,100) x 100 = 75.0%	(2,200/3,300) x 100 = 66.7%
2018	(1,300/1,700) x 100 = 76.5%	(2,300/3,500) x 100 = 65.7%
2019	(2,600/3,350) x 100 = 77.6%	(2,800/3,600) x 100 = 63.9%

(vii) Return on investment (excluding head office costs and long-term loans)

2017	(145/1,930) x 100 = 7.5%	(375/900) x 100 = 41.6%
2018	(440/2,260) x 100 = 19.5%	(450/900) x 100 = 50%
2019	(1,180/3,060) x 100 = 38.6%	(520/800) x 100 = 65%

(vii) Gearing ratio

2017	(180/1,930) x 100 = 9.3%
2018	(920/2,260) x 100 = 40.7%
2019	(1,120/3,060) x 100 = 36.6%

(viii) Annual growth in residual income

2018	K (-12 – (241)) = K253	K(306- 231) = K75
2019	K (568 - 12) = K556	K(392 - 306) = K86

(ix) Reasons for choice of ratios

Market share has been found to:
(1) Assess each division's performance relative to the market;
(2) Acquire some "scale factor" for each division;
(3) Determine how divisional sales have grown relative to the market.

Net profit percentage will show:
(1) How profitable are the divisions;
(2) How well each manager has controlled overheads.

Asset turnover may well be the ratio subject to the most "window-dressing", and most difficult to interpret given the leased assets and old assets, but still shows how each division is
generating sales from its asset base.

Gross profit percentage gives a further idea of the market in which each division operates, measuring the gross mark-ups achieved. A less common set of figures based solely on materials and labour costs has tried to eliminate the effects of different types of asset acquisition.

The initial return on investment, a prime performance measure, suffered from several defects
and two of these have been ironed out by excluding head office costs and long-term loans.

In addition to the growth measures, the gearing ratio has been found to establish how the divisions are managing their finances.

(c) Discussion of the need for different measures for division and manager

The two main purposes of performance measures are

(i) to assist in future decision-making; and
(ii) to improve performance through motivation.

The types of decisions to be made about a division and its manager differ, and therefore different performance measures may be needed. Likewise it is sometimes suggested that different staff are motivated in different ways and by setting various levels of standard; by the same token managers may respond to different performance measures and to different targets in a different manner.

Perhaps the main point at issue here is whether the manager of division X should be set a higher target than the manager of division Y. The different risk of the two divisions is the stated reason but it might also be useful to give Clifford a sterner target to see if he can "rise to the challenge". Alternatively, one might have a cut-off RI or ROI for any division but, if such a target is not achieved, a decision has to be made as to whether it is the fault of the manager or of the division and the area in which it operates.
A manager may be assessed by reference to qualitative measures which would have little significance for divisional performance. The division's profitability might well be compared with overall profitability of the company, whereas the manager's profitability performance could be compared with that of other firms in the same area or market.
If the manager has no control over investment policy, then RI is of less use in assessing his performance and ROI could be used instead.

Some attempt should be made when a manager takes over a division to eliminate the effects
of inherited problems when evaluating his performance. In addition, costs may be incurred which, whilst not directly under the control of a manager, may arise as a direct consequence of a division's operations. It could therefore be excluded from managerial performance measures but included in divisional evaluation.

SOLUTION FIVE

(a) **Production costs** – In a traditional manufacturing company, the main focus of management accounting information is often on production costs. There will be a cost accounting system that records costs of production and provides a valuation for inventory. Annual plans are produced in the form of budgets, and where standard products are manufactured, there may be a standard costing system.
Manufacturing conditions are often relatively stable, which means that budget forecasts can often be produced by using the previous year's performance as a basis for planning the future. Control information for management is likely to be provided in the form of monthly variance reporting.

Basis of costing – However, while such information will be useful for a manufacturing company, it will be less useful for a service organisation like KE. Although cost information is required about the services provided, there should be little if any requirement for inventory costs. This means that costing is more likely to be based on marginal costing than absorption costing.

Individual packages – Even more importantly, KE does not provide standard services, and clients negotiate entertainment packages. Because services are non-standard and KE needs to be flexible in its operations, KE's accounting system must be able to **monitor the profitability of individual contracts** with clients.

Historical cost information may be of limited value for KE, because services are non-standard. It is much more important for the IT system to provide information about current costs and expected costs. This will allow representatives to calculate the cost of packages that clients are requesting, quote prices and, where necessary, negotiate on the details.

Timeliness of information – In a traditional management accounting system, it may be sufficient to obtain control information about costs on a monthly basis. In KE it is much more important to provide immediate access to information for all the company's representatives, as well as management. The IT system must be accessible and responsive.

Feed-forward control – Cash flow is important for KE because it often has to make payments (for tickets or venue hire) well in advance of receiving payment from clients. KE's information system must therefore be capable of providing feed-forward control information about cash flow, so that management can anticipate any future cash shortage and take measures to deal with the problem, for example by deferring some payments, asking some clients for deposits, or arranging for a sufficient overdraft facility with the company's bank.

Non-financial information – Given the nature of the services KE offers, financial performance information should be supplemented by critical non-financial information, such as customer satisfaction and the quality or dependability of service delivery. KE's accounting information system should therefore include nonfinancial elements.
KE operates in a changeable and flexible business environment. HO2 manufactures high-volume consumer products and operates in a more stable and predictable environment. The accounting systems in each company will differ substantially because of the different information needs of management in each business.

(b) An IT system that provides instant access to data about costs, prices and entertainment venues and resources should improve the effectiveness of the company's selling operations, which in turn should result in higher sales revenue and profits.

Timeliness of information – The most important quality of the information provided by the system is probably timeliness. There are two aspects to this:

The first is that information can be made available to sales representatives in meetings with the client, which will often be at a time that the client may be able to make a decision and agree to buy an entertainment package.

The second and more important aspect of timeliness is the **speed with which the information is made available**. Representatives will have immediate access to information about cost/prices and ticket available to make an instant price quotation for any type of package that the customer may want. Whenever some costs change, the new cost can be fed into the system and made immediately available for re-pricing of services and packages. The representative's sales message can be reinforced if the system also delivers visual information about possible venues and entertainment facilities.

The immediacy of the information provision should therefore encourage prompt decision-making by the customer, which should in turn result in more sales.

Costs and ticket availability – The IT system should also contribute to the longer-term performance of the company by giving representatives reliable information about costs/prices and ticket availability. The information should be more reliable than if it is provided by a manual information system or by a separate sales system, because it should be more up-to-date. Up-to-date reliable information should enable representatives to quote realistic prices and confirm the availability of tickets. Over time the company should develop a reputation for efficiency and reliability in this way.

Managing supply and demand – The system will also allow management to monitor the state of the business, for example by checking customer demand patters and by ensuring that quoted prices are sufficient to cover costs. It should also be possible to anticipate sporting events where the company will have too many tickets or too few tickets. By anticipating surpluses or shortages, measures can be taken to deal with the problem – reducing the price of entertainment packages to sell more tickets, or trying to acquire more tickets.

In summary, the IT system will become an integral part of the selling and management systems, and by improving the quality of information, it should improve the performance of the company.

END OF SOLUTIONS

Annuity Table

Present value of an annuity of 1 i.e. $\frac{1 - (1 + r)^{-n}}{r}$

Where r = discount rate
n = number of periods

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	1·970	1·942	1·913	1·886	1·859	1·833	1·808	1·783	1·759	1·736	2
3	2·941	2·884	2·829	2·775	2·723	2·673	2·624	2·577	2·531	2·487	3
4	3·902	3·808	3·717	3·630	3·546	3·465	3·387	3·312	3·240	3·170	4
5	4·853	4·713	4·580	4·452	4·329	4·212	4·100	3·993	3·890	3·791	5
6	5·795	5·601	5·417	5·242	5·076	4·917	4·767	4·623	4·486	4·355	6
7	6·728	6·472	6·230	6·002	5·786	5·582	5·389	5·206	5·033	4·868	7
8	7·652	7·325	7·020	6·733	6·463	6·210	5·971	5·747	5·535	5·335	8
9	8·566	8·162	7·786	7·435	7·108	6·802	6·515	6·247	5·995	5·759	9
10	9·471	8·983	8·530	8·111	7·722	7·360	7·024	6·710	6·418	6·145	10
11	10·37	9·787	9·253	8·760	8·306	7·887	7·499	7·139	6·805	6·495	11
12	11·26	10·58	9·954	9·385	8·863	8·384	7·943	7·536	7·161	6·814	12
13	12·13	11·35	10·63	9·986	9·394	8·853	8·358	7·904	7·487	7·103	13
14	13·00	12·11	11·30	10·56	9·899	9·295	8·745	8·244	7·786	7·367	14
15	13·87	12·85	11·94	11·12	10·38	9·712	9·108	8·559	8·061	7·606	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	1·713	1·690	1·668	1·647	1·626	1·605	1·585	1·566	1·547	1·528	2
3	2·444	2·402	2·361	2·322	2·283	2·246	2·210	2·174	2·140	2·106	3
4	3·102	3·037	2·974	2·914	2·855	2·798	2·743	2·690	2·639	2·589	4
5	3·696	3·605	3·517	3·433	3·352	3·274	3·199	3·127	3·058	2·991	5
6	4·231	4·111	3·998	3·889	3·784	3·685	3·589	3·498	3·410	3·326	6
7	4·712	4·564	4·423	4·288	4·160	4·039	3·922	3·812	3·706	3·605	7
8	5·146	4·968	4·799	4·639	4·487	4·344	4·207	4·078	3·954	3·837	8
9	5·537	5·328	5·132	4·946	4·772	4·607	4·451	4·303	4·163	4·031	9
10	5·889	5·650	5·426	5·216	5·019	4·833	4·659	4·494	4·339	4·192	10
11	6·207	5·938	5·687	5·453	5·234	5·029	4·836	4·656	4·486	4·327	11
12	6·492	6·194	5·918	5·660	5·421	5·197	4·988	4·793	4·611	4·439	12
13	6·750	6·424	6·122	5·842	5·583	5·342	5·118	4·910	4·715	4·533	13
14	6·982	6·628	6·302	6·002	5·724	5·468	5·229	5·008	4·802	4·611	14
15	7·191	6·811	6·462	6·142	5·847	5·575	5·324	5·092	4·876	4·675	15

CA ZAMBIA PROGRAMME EXAMINATIONS

ADVISORY LEVEL

CA 3.6: ADVANCED FINANCIAL MANAGEMENT

FRIDAY 18 DECEMBER 2020

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

INSTRUCTIONS TO CANDIDATES

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

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

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

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

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

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

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

8. Present legible and tidy work.

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

10. Formulae, Present Value, Annuity and normal distribution tables are attached at the end of the question paper.

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

SECTION A

This question is compulsory and must be attempted.

QUESTION ONE

GUZ Plc owns a chain of retail supermarkets across the country. Over the past five(5) years the company has struggled to maintain its market share in the face of fierce competition from small innovative retailers and foreign large supermarket chains offering competitive prices. The board of directors of GUZ Plc has therefore decided that, in order to reduce risk and to secure future growth, the company must diversify its operations instead of concentrating on retail business only.

The company wants to diversify the company's operations away from its main area of business into the manufacturing business. The proposal involves the acquisition ofa small manufacturing plant that costs K45million. The working capital required immediately is K35million and it is assumed to be zero at the end of the project. GUZ Plc believes that by venturing into manufacturing, the company can achieve revenue and costs synergies. The company wishes to hire a financial consultant who can help to evaluate the proposed investment project. The project is expected to produce pre-tax annual operating cash inflows over the project life span of K27.5millionfor three years and K25million for the subsequent seventeen (17) years. At the end of this time its scrap value will be zero. In a recent board meeting, the directors resolved to finance the project by using both equity and debt. Although one of directors expressed concern over the debt financing that it would increase the cost of capital because of financial risk. The director further stated that the ever increasing inflation rate will impact on the future profit performance and hence increase the financial risk too.

The board resolved that the assets of the project will support debt finance of 45% of its initial cost (including issue costs). The loan is to be repaid in three equal annual instalments. GUZ Plc expects that the balance of the finance will be provided by a placing of new equity. Issue costs will be 5% of funds raised for the equity placing and 2% for the loan. Debt issue costs are allowable for corporation tax. The initial cost of investment attracts a 75% initial capital allowance and the balance is to be written off evenly over a period of two years and is allowable against tax. The firm is certain that it will earn sufficient profits against which to offset these allowances.

The manufacturing industry has an average equity beta of 1.401 and an average debt: equity ratio of 3:7 at market values. GUZ's current equity beta is 1.82 and 20% of its long term capital is represented by debt which is generally regarded to be risk free. The risk free rate is 9% per year and the expected return on an average market portfolio is 15.5%.Corporation tax is at a rate of 30%, payable in the same year.

GUZ Plc now wants to engage a financial consultant who should evaluate the proposal to diversify into the manufacturing industry.

Required:

As a hired financial consultant, write a report to GUZ Plc board of directors covering the following:

(a) Evaluate the financial viability of the proposal to diversify into the manufacturing industry using Adjusted Present Value technique. (20marks)

(b) Discuss whether diversification through acquisitions is an effective means of reducing risk and securing future growth for GUZ Plc. (10marks)

(c) Explain how the inflation rate can affect the financial areas of a business and impact upon its profit performance. (10marks)

[Total: 40 Marks]

SECTION B

Attempt any THREE (3) questions in this section.

QUESTION TWO

The Government of the Republic of Zambia, a developing country in the Southern part of Africa in 2015 established the Investments Holding Company (IHC) with the mandate to hold all State Owned Entities (SOEs) in its portfolio with a view to:

1. Promote Good governance in the SOEs;
2. Mobilize resources for the SOEs;
3. Oversee the management of the SOEs with a view to turning them into profit making entities that can operate sustainably; and
4. Facilitate for public participation and transfer of ownership of those profitable and good performing SOEs to the people of Zambia through listing on the Zambian Securities Exchange.

Since its establishment, the IHC portfolio has a total of 24 companies in which it owns 100% of equity shares in all companies. The IHC is responsible for appointing the Boards of the various subsidiaries within the group and has adopted International Financial Reporting Standards for financial reporting. The IHC has a group dividend policy of 30% of profits for the year, regardless of the sector of operations a company is in. Over the past four (4) to 31 December 2018, only two (2) companies within the group have been profitable and thus required to pay dividends. One of the companies ZAN Ltd is in the forestry sector. On average, ZAN Ltd.'s plantations take 25years to grow before they can be sold. ZAN Ltd has been profitable over the past years owing to the nature of its business in that over 70% of its costs are capitalized. The company's revenue has averaged K280 million annually.

In April 2019, IHC announced that ZAN Ltd would be listed on the LuSE by 9 December 2019. With the good performance of ZAN Ltd over the past four years, the Board of IHC is confident that the listing of ZAN Ltd will be attractive. IHC has proposed to sell off 45% of its shareholding in the Initial Public Offer and 30% of the funds raised from the IPO shall be invested in the company while the remaining is the shareholder's realization of their investment in ZAN Ltd. The company issued a bond which is redeemable in five years at a coupon rate of 9% and a face value of K100 million.

Required:

(a) Evaluate the decision by the shareholders of ZAN Ltd to list the company on the LuSE by 9 December 2019. (10 marks)

(b) Given that the Gross Redemption Yield (GRY) is at 10%, determine the following:

(i) Macaulay Duration of the bond,

(ii) Modified Duration.

(10 marks)

[Total: 20 Marks]

QUESTION THREE

The following information relates to two (2) companies from two (2) different industries;

HALoo Ltd
This is a listed entity in the electronics industry. Its stated financial objectives are:

(i) to increase earnings per share year on year by 15% per annum; and
(ii) to achieve a 30% per annum return on capital employed.

This entity has an equity market capitalization of ZMW600million. It also has a variety of debt instruments trading at a total value of ZMW150million.

CheweM Ltd
This entity is a newly established purchaser and provider of healthcare services in the public sector. The entity's legal status is a trust. Its total income for the current year will be almost ZMW100million. The entity was recently gazetted into the National Health Insurance Scheme Authority and is mandated to collected contributions from employees earning and of 1% of earning. The trust's sole financial objective states simply to achieve financial balance during the year. Its other objectives are concerned with qualitative factors such as 'providing high quality healthcare'.

Recently the Government of the Republic of Zambia through the Central Bank announced an increase in the statutory reserve ratio from 4% to 10% in attempt to manage the rampant depreciation of the local currency against major convertible currencies such as the United States Dollar.

Required:

(a) Discuss the reasons for the differences in the financial objectives of HALoo Ltd and Chewe M Ltd. (8 marks)

(b) Discuss the main differences in the business risks involved in the achievement of their financial objectives and how these risks might be managed. (6 marks)

(c) Analyze the impact on the financial strategy of the two (2) companies following the Central Bank's announcement on the increase in the statutory reserve ratio from 4% to 10%. (6 marks)

[Total: 20 Marks]

QUESTION FOUR

KHE Plc is a listed company that operates in the energy and electricity sector. The company undertakes huge capital investment projects to support the generation and distribution of hydro electric energy to its clients. Recently, the Government of the Republic of Zambia, a developing country has stated that electricity tariffs are too high and controls would have to be effected to protect the citizens from these exorbitant prices of electricity. Following such comments, the CEO of KHE Plc has been considering diversifying the Company's revenue base from hydro power which currently contributes over 80% of total revenue for KHE Plc. The CEO has proposed several projects for evaluation and believes the WACC is the best way to evaluate investments projects as this directly increases shareholder value once

positive NPV projects are undertaken. One of the projects is a 10 year investment in a telecom company with an impressive performance and a possible payback of 3 years. This project will involve an investment of K50million and will be financed by a loan. The following information is available to KHE Plc and another similar company in the energy and electricity sector to be used in the determination of the WACC for KHE Plc:

	ZIL Plc	KHEPlc
Equity beta	1.75	Not known
Debt (Market value Km)	35	45
Equity (Market value Km)	88	97
Debt beta	0.15	0.20

Both companies are in similar industries. The tax rate is 25%. The expected annual post tax return on the market is 10% and the risk-free rate is 3%. ZILPlc's debt has a pre-tax return of 5% per annum.

The treasury department of KHE Plc plans to enter into a repo agreement to Sell K2 million (nominal) Treasury Bills for K1.96 million and buy back 60 days later for K1.98 million. The Treasury department also plans to speculate on the oil price because it strongly believes that oil prices will fall over the next three months as indicated by credible financial analysts. The plan is to set the speculation level at 10 contracts. Oil futures on the international market are quoted with the following details:

- Futures price for 3 month delivery = $80.35
- Contract size = 1,000 barrels.
- Tick size = 1 cent per barrel.
- Initial margin = 10% of contract

Required:

(a) Calculate the Weighted Average Cost of Capital for KHE Plc. (10 marks)

(b) Compute the effective interest rate on the treasury bills and initial margin on the futures contract. (4 marks)

(c) Evaluate the outcome of the speculation on the oil prices assuming the futures prices move to $80.51 the next day. (6 marks)

[Total: 20 Marks]

QUESTION FIVE

(a) CDC Ltd, an investment holding company is considering acquiring ZamOil Plc, whose annual dividend is due for payment in a few days. ZamOil Plc has 5 million issued ordinary shares and the share price (ex div basis) is K3.30. The earning per share for ZamOil Plc is 40 ngwee and proposed pay-out ratio is 60%. A year ago the dividend per share was K0.233 while two (2) years ago it was K0.22. The asset beta for ZamOil Plc is 1.079. Other financial information related to the acquisition of the ZamOil Plc is as follows:

Average sector price/earnings ratio	10
Risk-free rate of return	4.6%
Return on the market	10.6%

Required:

(i) Compute the value of ZamOil Plc using the dividend growth model and P/E ratio methods of valuation.

(ii) In relation to the values computed in part (i) above, explain their significance to CDC Ltd in comparison to the current market value of ZamOil Plc.

(10 marks)

(b) The corporate world has developed a number of principles that consider societal goals as part of the assessment of a business's performance. One such old concept is Corporate Social Responsibility (CSR), which is used to explain how a business integrates social and environmental issues in its business activities. Another is the Triple Bottom Line (TBL), which deals with social, environmental and financial performance. For listed companies, a recent development is the concept that deals with Environmental, Social and Governance (ESG) issues. These principles all encourage businesses to look beyond quarterly profits and focus on philanthropic causes.

The Chief Executive Officer (CEO) of CDC Ltd has proposed to the board of directors that it should adopt a triple bottom line (TBL) reporting system for all its investments in order to demonstrate its level of sustainable development. A number of investment holding vehicles have already adopted TBL reporting and the CEO feels that it would be beneficial to the corporation. However, some of the board members are of the view that adopting TBL reporting would be a costly exercise and should therefore be avoided.

Required:

Discuss with the help of examples how producing a Triple Bottom Line (TBL) report may help CDC s' management improve its financial performance. Use clear headings and paragraphs in the report. (10 marks)

[Total: 20 Marks]

END OF PAPER

Formulae

Modigliani and Miller Proposition 2 (with tax)

$$k_e = k_e^i + (1 - T)(k_e^i - k_d)\frac{V_d}{V_e}$$

Two asset portfolio

$$s_p = \sqrt{w_a^2 s_a^2 + w_b^2 s_b^2 + 2w_a w_b r_{ab} s_a s_b}$$

The Capital Asset Pricing Model

$$E(r_i) = R_f + \beta_i(E(r_m) - R_f)$$

The asset beta formula

$$\beta_a = \left[\frac{V_e}{(V_e + V_d(1 - T))}\beta_e\right] + \left[\frac{V_d(1 - T)}{(V_e + V_d(1 - T))}\beta_d\right]$$

The Growth Model

$$P_o = \frac{D_o(1 + g)}{(r_e - g)}$$

Gordon's growth approximation

$$g = br_e$$

The weighted average cost of capital

$$WACC = \left[\frac{V_e}{V_e + V_d}\right]k_e + \left[\frac{V_d}{V_e + V_d}\right]k_d(1 - T)$$

The Fisher formula

$$(1 + i) = (1 + r)(1 + h)$$

Purchasing power parity and interest rate parity

$$S_1 = S_0 x \frac{(1 + h_c)}{(1 + h_b)} \qquad F_0 = S_0 x \frac{(1 + i_c)}{(1 + i_b)}$$

Modified Internal Rate of Return

$$MIRR = \left[\frac{PV_R}{PV_I}\right]^{\frac{1}{n}}\left(1 + r_e\right) - 1$$

The Black-Scholes option pricing model

$$c = P_a N(d_1) - P_e N(d_2) e^{-rt}$$

Where:

$$d_1 = \frac{\ln(P_a / P_e) + (r + 0.5s^2)t}{s\sqrt{t}}$$

$$d_2 = d_1 - s\sqrt{t}$$

The Put Call Parity relationship

$$p = c - P_a + P_e e^{-rt}$$

Present Value Table

Present value of 1 i.e. $(1 + r)^{-n}$

Where r = discount rate
n = number of periods until payment

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	0·980	0·961	0·943	0·925	0·907	0·890	0·873	0·857	0·842	0·826	2
3	0·971	0·942	0·915	0·889	0·864	0·840	0·816	0·794	0·772	0·751	3
4	0·961	0·924	0·888	0·855	0·823	0·792	0·763	0·735	0·708	0·683	4
5	0·951	0·906	0·863	0·822	0·784	0·747	0·713	0·681	0·650	0·621	5
6	0·942	0·888	0·837	0·790	0·746	0·705	0·666	0·630	0·596	0·564	6
7	0·933	0·871	0·813	0·760	0·711	0·665	0·623	0·583	0·547	0·513	7
8	0·923	0·853	0·789	0·731	0·677	0·627	0·582	0·540	0·502	0·467	8
9	0·941	0·837	0·766	0·703	0·645	0·592	0·544	0·500	0·460	0·424	9
10	0·905	0·820	0·744	0·676	0·614	0·558	0·508	0·463	0·422	0·386	10
11	0·896	0·804	0·722	0·650	0·585	0·527	0·475	0·429	0·388	0·305	11
12	0·887	0·788	0·701	0·625	0·557	0·497	0·444	0·397	0·356	0·319	12
13	0·879	0·773	0·681	0·601	0·530	0·469	0·415	0·368	0·326	0·290	13
14	0·870	0·758	0·661	0·577	0·505	0·442	0·388	0·340	0·299	0·263	14
15	0·861	0·743	0·642	0·555	0·481	0·417	0·362	0·315	0·275	0·239	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	0·812	0·797	0·783	0·769	0·756	0·743	0·731	0·718	0·706	0·694	2
3	0·731	0·712	0·693	0·675	0·658	0·641	0·624	0·609	0·593	0·579	3
4	0·659	0·636	0·613	0·592	0·572	0·552	0·534	0·516	0·499	0·482	4
5	0·593	0·567	0·543	0·519	0·497	0·476	0·456	0·437	0·419	0·402	5
6	0·535	0·507	0·480	0·456	0·432	0·410	0·390	0·370	0·352	0·335	6
7	0·482	0·452	0·425	0·400	0·376	0·354	0·333	0·314	0·296	0·279	7
8	0·434	0·404	0·376	0·351	0·327	0·305	0·285	0·266	0·249	0·233	8
9	0·391	0·361	0·333	0·308	0·284	0·263	0·243	0·225	0·209	0·194	9
10	0·352	0·322	0·295	0·270	0·247	0·227	0·208	0·191	0·176	0·162	10
11	0·317	0·287	0·261	0·237	0·215	0·195	0·178	0·162	0·148	0·135	11
12	0·286	0·257	0·231	0·208	0·187	0·168	0·152	0·137	0·124	0·112	12
13	0·258	0·229	0·204	0·182	0·163	0·145	0·130	0·116	0·104	0·093	13
14	0·232	0·205	0·181	0·160	0·141	0·125	0·111	0·099	0·088	0·078	14
15	0·209	0·183	0·160	0·140	0·123	0·108	0·095	0·084	0·074	0·065	15

Annuity Table

Present value of an annuity of 1 i.e. $\frac{1-(1+r)^{-n}}{r}$

Where r = discount rate
n = number of periods

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	1·970	1·942	1·913	1·886	1·859	1·833	1·808	1·783	1·759	1·736	2
3	2·941	2·884	2·829	2·775	2·723	2·673	2·624	2·577	2·531	2·487	3
4	3·902	3·808	3·717	3·630	3·546	3·465	3·387	3·312	3·240	3·170	4
5	4·853	4·713	4·580	4·452	4·329	4·212	4·100	3·993	3·890	3·791	5
6	5·795	5·601	5·417	5·242	5·076	4·917	4·767	4·623	4·486	4·355	6
7	6·728	6·472	6·230	6·002	5·786	5·582	5·389	5·206	5·033	4·868	7
8	7·652	7·325	7·020	6·733	6·463	6·210	5·971	5·747	5·535	5·335	8
9	8·566	8·162	7·786	7·435	7·108	6·802	6·515	6·247	5·995	5·759	9
10	9·471	8·983	8·530	8·111	7·722	7·360	7·024	6·710	6·418	6·145	10
11	10·37	9·787	9·253	8·760	8·306	7·887	7·499	7·139	6·805	6·495	11
12	11·26	10·58	9·954	9·385	8·863	8·384	7·943	7·536	7·161	6·814	12
13	12·13	11·35	10·63	9·986	9·394	8·853	8·358	7·904	7·487	7·103	13
14	13·00	12·11	11·30	10·56	9·899	9·295	8·745	8·244	7·786	7·367	14
15	13·87	12·85	11·94	11·12	10·38	9·712	9·108	8·559	8·061	7·606	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	1·713	1·690	1·668	1·647	1·626	1·605	1·585	1·566	1·547	1·528	2
3	2·444	2·402	2·361	2·322	2·283	2·246	2·210	2·174	2·140	2·106	3
4	3·102	3·037	2·974	2·914	2·855	2·798	2·743	2·690	2·639	2·589	4
5	3·696	3·605	3·517	3·433	3·352	3·274	3·199	3·127	3·058	2·991	5
6	4·231	4·111	3·998	3·889	3·784	3·685	3·589	3·498	3·410	3·326	6
7	4·712	4·564	4·423	4·288	4·160	4·039	3·922	3·812	3·706	3·605	7
8	5·146	4·968	4·799	4·639	4·487	4·344	4·207	4·078	3·954	3·837	8
9	5·537	5·328	5·132	4·946	4·772	4·607	4·451	4·303	4·163	4·031	9
10	5·889	5·650	5·426	5·216	5·019	4·833	4·659	4·494	4·339	4·192	10
11	6·207	5·938	5·687	5·453	5·234	5·029	4·836	4·656	4·486	4·327	11
12	6·492	6·194	5·918	5·660	5·421	5·197	4·988	4·793	4·611	4·439	12
13	6·750	6·424	6·122	5·842	5·583	5·342	5·118	4·910	4·715	4·533	13
14	6·982	6·628	6·302	6·002	5·724	5·468	5·229	5·008	4·802	4·611	14
15	7·191	6·811	6·462	6·142	5·847	5·575	5·324	5·092	4·876	4·675	15

Standard normal distribution table

	0·00	0·01	0·02	0·03	0·04	0·05	0·06	0·07	0·08	0·09
0·0	0·0000	0·0040	0·0080	0·0120	0·0160	0·0199	0·0239	0·0279	0·0319	0·0359
0·1	0·0398	0·0438	0·0478	0·0517	0·0557	0·0596	0·0636	0·0675	0·0714	0·0753
0·2	0·0793	0·0832	0·0871	0·0910	0·0948	0·0987	0·1026	0·1064	0·1103	0·1141
0·3	0·1179	0·1217	0·1255	0·1293	0·1331	0·1368	0·1406	0·1443	0·1480	0·1517
0·4	0·1554	0·1591	0·1628	0·1664	0·1700	0·1736	0·1772	0·1808	0·1844	0·1879
0·5	0·1915	0·1950	0·1985	0·2019	0·2054	0·2088	0·2123	0·2157	0·2190	0·2224
0·6	0·2257	0·2291	0·2324	0·2357	0·2389	0·2422	0·2454	0·2486	0·2517	0·2549
0·7	0·2580	0·2611	0·2642	0·2673	0·2704	0·2734	0·2764	0·2794	0·2823	0·2852
0·8	0·2881	0·2910	0·2939	0·2967	0·2995	0·3023	0·3051	0·3078	0·3106	0·3133
0·9	0·3159	0·3186	0·3212	0·3238	0·3264	0·3289	0·3315	0·3340	0·3365	0·3389
1·0	0·3413	0·3438	0·3461	0·3485	0·3508	0·3531	0·3554	0·3577	0·3599	0·3621
1·1	0·3643	0·3665	0·3686	0·3708	0·3729	0·3749	0·3770	0·3790	0·3810	0·3830
1·2	0·3849	0·3869	0·3888	0·3907	0·3925	0·3944	0·3962	0·3980	0·3997	0·4015
1·3	0·4032	0·4049	0·4066	0·4082	0·4099	0·4115	0·4131	0·4147	0·4162	0·4177
1·4	0·4192	0·4207	0·4222	0·4236	0·4251	0·4265	0·4279	0·4292	0·4306	0·4319
1·5	0·4332	0·4345	0·4357	0·4370	0·4382	0·4394	0·4406	0·4418	0·4429	0·4441
1·6	0·4452	0·4463	0·4474	0·4484	0·4495	0·4505	0·4515	0·4525	0·4535	0·4545
1·7	0·4554	0·4564	0·4573	0·4582	0·4591	0·4599	0·4608	0·4616	0·4625	0·4633
1·8	0·4641	0·4649	0·4656	0·4664	0·4671	0·4678	0·4686	0·4693	0·4699	0·4706
1·9	0·4713	0·4719	0·4726	0·4732	0·4738	0·4744	0·4750	0·4756	0·4761	0·4767
2·0	0·4772	0·4778	0·4783	0·4788	0·4793	0·4798	0·4803	0·4808	0·4812	0·4817
2·1	0·4821	0·4826	0·4830	0·4834	0·4838	0·4842	0·4846	0·4850	0·4854	0·4857
2·2	0·4861	0·4864	0·4868	0·4871	0·4875	0·4878	0·4881	0·4884	0·4887	0·4890
2·3	0·4893	0·4896	0·4898	0·4901	0·4904	0·4906	0·4909	0·4911	0·4913	0·4916
2·4	0·4918	0·4920	0·4922	0·4925	0·4927	0·4929	0·4931	0·4932	0·4934	0·4936
2·5	0·4938	0·4940	0·4941	0·4943	0·4945	0·4946	0·4948	0·4949	0·4951	0·4952
2·6	0·4953	0·4955	0·4956	0·4957	0·4959	0·4960	0·4961	0·4962	0·4963	0·4964
2·7	0·4965	0·4966	0·4967	0·4968	0·4969	0·4970	0·4971	0·4972	0·4973	0·4974
2·8	0·4974	0·4975	0·4976	0·4977	0·4977	0·4978	0·4979	0·4979	0·4980	0·4981
2·9	0·4981	0·4982	0·4982	0·4983	0·4984	0·4984	0·4985	0·4985	0·4986	0·4986
3·0	0·4987	0·4987	0·4987	0·4988	0·4988	0·4989	0·4989	0·4989	0·4990	0·4990

This table can be used to calculate $N(d)$, the cumulative normal distribution functions needed for the Black-Scholes model of option pricing. If $d_i > 0$, add 0·5 to the relevant number above. If $d_i < 0$, subtract the relevant number above from 0·5.

SUGGESTED SOLUTIONS

SOLUTION ONE

REPORT

To: GUZ Plc Board of Directors
From: Financial Consultant
Date: xxxxxxxxxxxxx
Subject: Evaluation of Proposed Diversification into Manufaturing

The report presents the findings of the financial evaluation of the proposed project and discusses the effectiveness of diversification through acquisitions as a means of reducing risk and securing future growth for GUZ Plc. The financial evaluation indicated an APV of K31.95million and therefore should be accepted because it will increase the wealth of the shareholders by this much.

b)
A strategy of diversification does not always provide a sound rationale for a merger or a takeover. One problem is that the synergies identified above are often more difficult to achieve when two businesses, which are quite different in nature, are combined. Such differences may, for example, prevent GUZ Plc from benefiting from economies of scale or the use of complementary resources. Similarly, although the management team of GUZ Plc may be highly efficient and highly motivated, it may not have the necessary skills to replace the management team of the acquired manufacturing plant. There may also be problems in trying to integrate the operations of two different kinds of business because of differences in market needs, business culture and so on. GUZ Plc has always been in the retail sector while the acquired company has been in manufacturing and the management team of GUZ Plc may therefore have a number of challenges adapting to the management of a company in a completely new sector.
Diversification is a useful way of dealing with risk and it is therefore intuitively appealing to see mergers and takeovers as a useful means to achieve this end. The question that must be asked however is whether the directors of the company should diversify or whether the shareholders should diversify. It is usually easier and cheaper for shareholders to diversify, by acquiring a diversified portfolio of shares than for the company to diversify. When the directors of a company diversify, by taking over another company, a significant premium is often paid to the shareholders of the target company which may be costly.

c) Inflation can affect all the financial areas of a business and impact upon its profit performance in a variety of ways.

i) The rate of inflation will affect the prices that a business must pay for all the factors of production and the prices that it is able to charge to its customers. It will therefore affect the level of reported profits.
ii) When inflation is high, regular price reviews will be necessary so as to ensure that there is no erosion of real returns. In times of low inflation, it may be difficult to achieve any price increases due to a reduced level of inflationary expectations.
iii) Where there is a high level of inflation, there is also a high level of uncertainty about the future. This tends to make businesses wary of committing themselves to new long-term investments.
iv) Inflation places pressure on cash flow, particularly where the prices of raw materials are rising ahead of prices charged to customers. Even where sales prices do keep up,

additional cash will still be required to cover the increased payments to suppliers that will have to be made in advance of monies being received in respect of credit sales.

v) Companies may increase their level of investment in inventory as a hedge against anticipated price rises. This will also increase the amount of working capital required and restrict the funds available for new investment.

vi) Different approaches may need to be taken to financial reporting and evaluation methods, such as current cost accounting techniques, which make it easier to understand the changing performance of a company over time.

vii) The relationship between inflation rates and interest rates means that interest rates tend to rise during a period of inflation. This has implications both for the capital structure decisions and investment appraisal criteria used by companies.

APPENDIX 1

Step 1: Base case net present value
First compute the ungeared (asset) beta for this project type (based on the equity beta for the plastics industry).

$$\beta_a = \beta_e \times \frac{V_e}{V_e + V_d(1 - T)}$$

= 1.401 × [7/(7 + 3(1- 0.30))]
= 1.07
Required return of project = 9% + 1.07 (15.5%–9%)
= 16%

Then discount the project cash flows at 16%

Year	0	1	2	3	4 - 20
	K'm	K'm	K'm	K'm	K'm
Equipment	(45)				
Capital allowances (W1)		10.13	1.68	1.68	-
Working capital	(35)				
Operating cash flows		27.5	27.5	27.5	25
Tax on operating cash flows		(8.25)	(8.25)	(8.25)	(7.5)
	(80)	29.38	20.93	20.93	17.5
16% factors	1	0.862	0.743	0.641	3.329
PV	(80)	25.33	15.55	13.42	58.26

Base case NPV = K32.56million
Annuity factor = 5.575 – 2.246 = 3.329

Workings
W1 – Capital allowances

		Tax @30%
	K'm	K'm
Cost of machine	45	
First year allowances (75%)	33.75	10.125
	11.25	
Writing down allowances (straight line for 2yr)	5.625	1.6875

Step 2: Adjusted present value (the side effects)
Lay out the financing package:

	K'm
Capital requirements:	
Equity (55%)	24.75
Debt (45%)	20.25
	45

		K'm
Issue costs:		
(i) Equity 5/95 × 24.75		1.3
(ii)Debt 2/98 × 20.25	0.42	
Tax relief at 30%	(0.126)	
PV of the issue costs on debt		0.294

III Tax relief on loan interest
Gross value of loan = K20.25+ K0.42 (issue costs) = K20.67m
Annual repayments = K20.67m/2.487 = K8.31m

Loan Amortisation Schedule

Year	Opening Balance	Interest 9%	Repayment	Closing balance
	K	K	K	K
1	20.67	1.86	8.31	14.16
2	14.16	1.27	8.31	7.12
3	7.12	0.64	8.31	0.5 (rounding diff)

Tax Relief at 30% on interest

Year	Cash	9% factor	PV
	K'm		K'm

1	0.558	0.917	0.512
2	0.381	0.842	0.321
3	0.192	0.772	0.148
			0.981

Step 3: Adjusted present value

	K'm
Base case NPV	32.56
Issue costs – equity	(1.3)
Issue costs – debt	(0.294)
Tax shield	0.981
The project APV is	31.95

SOLUTION TWO

2(a)

Before deciding whether or not to go public, companies must evaluate all of the potential advantages and disadvantages that will arise. This usually happens during the underwriting process as the company works with an investment bank to weigh the pros and cons of a public offering and determine if it is in the best interest of the company for that time period. This process should therefore take appropriate time to ensure all matters of corporate governance, policies and regulations are adhered. ZAN Limited has been operating as a State Owned Entity (SOE) and in the past, these entities have been subjects of topical issues regarding operational efficiency, huge overhead costs, unsustainable structure, and lack of profit motivate etc. Therefore, the listing of ZAN Limited must be done gradually. The timing of the listing could also be of concern. During the December many corporate go on industrial break and hence decision making to invest may not be made. The liquidity of the market is also constrained during this period as many investors are cashing in so that they could go on holidays.

Once ZAN Ltd lists its shares, it will become a public limited company ('PLC'). The company will be in a better position to enhance shareholder value through;

- Better access to capital – i.e. raising share capital from existing and new investors
- Liquidity – shareholders are able to buy and sell their shares (if they are quoted on a stock exchange
- Value of shares – the value of the firm is shown by the market capitalisation (based on the share price)
- The opportunity to more easily make acquisitions – e.g. by offering shares to the shareholders of the target firm
- To give a company a more prestigious profile

Now that ZAN Limited is a public limited and in the process of being listed on the Lusaka Securities Exchange (LuSE), Management will need to take note of the fact that the Corporation will in addition to its previous compliance requirements also be expected to be compliant with requirements of the Securities and Exchange Commission (SEC) and the LuSE. These requirements are with regards to the Securities Act, No. 41 of 2016 and the Listing Rule created pursuant to that Act. All listed companies include Government owned are not exempt from the provisions of this law. Therefore, the company;

1. Will now be required to submit annual reports within ninety days of the date of its financial year. The reports are expected to include information on the corporate governance policy and audited financial statements;
2. Will be expected to keep the public informed of all matters which affect the value of the securities immediately upon their becoming known to the directors of the issuer, by placing an advertisement in a newspaper of general circulation or in other media approved by the Commission and shall submit reports to the Commission and to the securities exchange on which those securities are listed.
3. Will be required to disclosure of quarterly earnings forecasts. In so providing ZAN PLC is expected to provide to the Lusaka Securities Exchange its quarterly earnings forecast in the manner and form prescribed by the Commission in rules issued by statutory instrument; and

4. So much so that notwithstanding the Companies Act, a listed company such as ZAN PLC will be required to file with the Commission, on a periodic or annual basis, as may be prescribed by the Commission, its accounting records, financial statements and such other returns.

Clearly, it can be seen from the above that ZAN Ltd will be subjected to greater scrutiny, wider accountability and more public participation in the operations of the company. However, the biggest question "is ZAN Ltd ready for all this"?
Finally ZAN Ltd's current accounting approach would have to be reviewed as to whether it reflects a true and fair position of the company's performance and whether this is sustainable on the long run. This is because, A's business is that of a long term. With about 70% of costs going to the statement of financial position, the company is bound to make huge profits, however, its true performance could be assessed on its ability to generate 'free cash flows'.
The proportion of the utilisation of funds raised from the IPO would influence potential investors seeing that this is likely to be contained in the prospectus. Therefore, a bigger amount being reinvested in the company is likely to instil investor confidence.
Lastly, listing on the stock market is a positive step to enhance the value of an entity but this need to be done with caution and well timed.

2 marks for each valid point x 5 = 10 marks

2 (b)

Year	1	2	3	4	5
Cash flows	9	9	9	9	109
GRY@10%	0.909	0.826	0.751	0.683	0.621
Present Values	8.181	7.434	6.759	6.147	67.689

Value of Bond = K96.21

Weighting	8.181	14.868	20.277	24.588	338.445

Total weighting = 406.359

Macaulay Duration of the bond = 406.359/96.21 =4.22 years

Modified Duration = Macaulay/ 1+GRY = 4.22/1.1 = 3.84 years.

SOLUTION THREE

3(a) Differences in financial objectives

Objectives in the private and public sectors have come closer together in recent years, as private companies appreciate the needs of other stakeholders apart from shareholder, and the public sector concentrates more on value for money and the best use of the financial resources.
However, the financial objectives remain the key areas for the private sector, whose primary responsibility is to their shareholders, and the public sector's primary objectives are the provision of a quality service.
In addition, the private sector will generally set their objectives, by reference to the needs of their stakeholders, while the public sector organisation will have many of its objectives imposed by the government.

EPS
Earnings per share are used by shareholders to judge the growth achieved. While it can be misleading, it gives an idea of the profits generated in the year. The public sector generally does not have such a financial measure but concentrates more on the service provided.

ROCE
The private sector company has to give a sufficient return to its investors for the risk they perceive in the investment. This can be approximated by tracking the return on capital employed.
In the public sector, to convince the 'investors', usually the government, to release funds and not to withdraw resources, the organisation needs to persuade them that the activities represent value for money. This is often politically driven rather than being based on long-term financial analysis.

Cash limits
The public sector has a major objective to achieve financial balance during the year, as it is unable to raise more during the year. The private sector charges customers and can raise more revenue by selling more.
2 marks x 4 valid points = 8 marks

3(b) Business risks and management

A major difference between the two is how risk in the organisation is built into the objective.
A private sector company has the risk that it may fail to attract any customers and hence any revenue. Hence the objectives are focused around the revenues and profits generated.
In the trust, the 'customers' have little choice in the healthcare in the area, so there is little risk to the trust in terms of the quantity of service required dropping.
However, there is a major risk in terms of the quality of service delivered, so the main objectives relate to this. This is bound to be more difficult to measure, so a number of targets have been developed by government to assess progress in these areas. Generally, we could say the main risk to a private sector organisation is that demand for the product falls, while for a public sector one, demand for the service increases beyond what can be managed within its resources.

The private sector company could manage its major commercial risk by:
1. maintaining and monitoring its quality
2. analysing customers and competitors

3. ensuring against risks where possible.

The public sector trust has to manage the risk that it fails to give a service of sufficient quality within its financial constraints, by:

1. monitoring value for money of the services provided, both internally and externally
2. ensuring that services bought are the most effective
3. using private finance where possible to ease financial constraints.
   2 marks x 3 valid points = 6 marks

Part c Increase in reserve ratio

The Statutory Reserve Ratio (SRR) is ratio used by the central bank in adjusting monetary imbalances in the supply and demand of foreign currencies relative to the local currency through imposing more compliance requirements. In this case an increment, results in more cash being kept by the central bank therefore, reducing supply of the local currency and creating demand for it.

Considering that this measure is a factor affecting the general economic environment, both entities would impact. However, private entities would have kept cash reserves to be used during such periods, while non-profit making entities are likely to see reduced budget funding and tighter controls on expenditure.

In addition, private entities are likely to pass over the extra cost to their customers while non-profit making entities would be expected to absorb the cost through reduced activities and programmes.

SOLUTION FOUR

Part a

Firstly un-gear A plc equity beta to find asset beta (which measures the business risk)
Exam formula (un-gearing ▪)
a = g x { Ve } + d x { Vd (1-t) }
Ve + Vd (1-t) Ve + Vd (1-t)
Where
a = asset beta = beta for the equity for un-geared company
g = equity beta = beta of the equity for the geared company
d = beta of debt
Vd = market value of debt
Ve = market value of equity
t = corporation tax rate
= 1.75 x {(88 / (88 + 35 x (1-0.25)} + 0.15 x {(35 x (1-0.25) / ((88 + 35 x (1-0.25)}
= 1.35 + 0.03
= 1.38 = asset beta
Now re-gear the asset beta with Z plc's gearing to find Z plc's equity beta
Re-gearing formula – (beta for debt included)
g = a + {(Vd (1-t) / Ve} x (a - d)
Where
a = asset beta = beta for the equity for un-geared company
g = equity beta = beta of the equity for the geared company
d = beta of debt
Vd = market value of debt
Ve = market value of equity
t = corporation tax rate
g = a + {(Vd (1-t) / Ve} x (a - d)
= 1.38 + {(45 x (1-0.25) / 97} x (1.38 – 0.20)
= 1.79
Use CAPM to find geared cost of equity:
Keg = Rf + (Rm – Rf) ▪
= 3 + (10 – 3) x 1.79
= 15.53%

Now use WACC formula:
WACC = ke x { Ve } + kd(after tax) x { Vd }
VE + VD VE + VD
WACC = 15.53% x 97 / (97 + 45) + 5% x (1-0.25) x 45 / (97 + 45)
WACC = 10.61% + 1.19%
WACC = 11.8%

Part b
The evaluation of projects using the WACC is one of the recommended approaches in project appraisal. The WACC however, has a number of limitations;
The WACC as calculated in part (a) assumes the project being evaluated will be financed in the existing capital structure and will not cause significant changes. The project will require K50m financing through debt, which is likely to increase the gearing level by over 100%, therefore significantly changing the capital structure of the company.
The WACC also assumes the business of the project being evaluated and that of the company is similar. However, in the case of Company A, which is in the hydroelectric

business while the project is in the Telecom business, therefore the business risks are different.
The WACC was calculated on the basis of the CAPM to determine the cost of equity. It is important to consider whether this was the best approach for the cost of equity as dividend is another approach.

Part c
Some approaches to be outlined by students include;

1. The use of the adjusted discount rate;
2. Specific discount rate for the project; and
3. Adjusted present value approach.

Student should suggest how the any one of the above techniques could be used by outlining the steps in calculate the rate where required and finally how the project could be evaluated.

SOLUTION FIVE

(i) <u>Price/earnings ratio method valuation</u>

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

(ii) <u>Dividend growth model</u>

Earnings per share of ZamOil Ltd = 40n
Proposed payout ratio = 60%
Proposed dividend of ZamOil Plc 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%)

Equity Beta

1.079=Be x 16.5/16.5+7(1-0.3)

Be= 1.4

<u>Cost of equity</u> of ZamOil Ltd 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 ZamOil Ltd = 2.95 x 5m = <u>K14.75 million</u>

(iii) The <u>current market capitalization</u> of ZamOil Ltd is <u>K16.5m</u> (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. ZamOil Plc'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 ZamOil following its acquisition. If CDC 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 capitalization at K14.75m. This represents a minimum value that ZamOil shareholders will accept if CDC makes an offer to buy their shares. In reality they would want more than this as an inducement to sell. The current market capitalization of ZamOil of K16.5 million 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 ZamOil'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.

5 (b)

A triple bottom line (TBL) reporting is defined as corporate communication with stakeholders in order to provide its performance in terms of its economic or financial impact, its impact on environmental quality and its impact on social performance. The principle of TBL reporting is that a corporation's true performance must be measured in terms of a balance between economic (profits), environmental (planet) and social (people) factors; with no one factor being achieved at the expense of the others.

A corporation's sustainable development is about how these three factors can grow and be combined so that a corporation is building a reputation as being a good citizen. The contention is that a corporation that accommodates all the three factors will enhance shareholder value by addressing the needs of its stakeholders. TBL reporting would be a quantitative summary of mega mart's performance in the three factors over a previous time period, say a year. Therefore TBL provides the measurement tool to assess a corporation's performance against its objectives.

Each factor can be assessed or measured using a number of proxies. The economic impact can be measured by considering proxies such as operating profits, dependence on imports and the extent to which the local economy is supported by purchasing locally produced goods and services by mega mart. Social impact can be measured by considering proxies such as working conditions, fair pay, and maintenance of appropriate food standards. Environmental impact can be measured by considering proxies such as emissions to air, use of energy and water, investments in renewable resources.

An assessment by the management of a corporation's performance in the three factors – economic, environmental and social, that make up the TBL report will result in an improvement in the financial position, if long-term shareholder value is increased as a result of the report being produced.

The benefits that accrue from the assessment and production of a TBL report must exceed the costs of undertaking the report. It may be the case that the costs of producing the report are relatively easy to measure but the financial benefits may be more difficult to measure and may take place over a longer time period. Some examples of the ways in which mega mart may benefit financially include:

Focusing on and reporting the company's environmental and social impact may build and enhance its brand reputation. Increasing reputation may increase the long-term revenue of the company. On the other hand, if the company does not follow (or even try to lead) its competitors in this area then the loss of reputation may damage its revenue stream and lower its corporate value.

Consideration and improvement of working standards and consulting employees as part of this process, when assessing social factors, may help in retaining and attracting high performing, high caliber employees. This will benefit mega mart in the long term because of increased employee motivation and performance. Employee involvement may also help reduce the costs related to the company's risk management activity and thus have a direct cost reduction impact.

Improvement of due diligence procedures as part of the economic factor assessment may help limit direct legal costs and indirect costs incurred in maintaining stakeholder relationships, communication with stakeholders and thus improving the quality of reporting may result in improvements in governance procedures. This in turn would lead to a reduction of the costs related to risk management.

Assessing and improving the environmental impact in the TBL report may result in the company making efforts to reduce its carbon footprint by placing less reliance on imports and developing local expertise in producing the inputs it needs. This may reduce the risk of supplier related problems and alleviate problems related to possible inventory shortfalls. It may also improve its reputation, leading to long-term financial benefits.

Monitoring and reporting on the performance of employees and managers as part of the assessment of economic and social factors may help identify areas where work can be done more effectively and efficiently. It may help managers reconsider business processes and identify areas where improvements can be made.

The result of the assessment required in producing the TBL report and comparing the corporation's progress in relation to its aim of becoming a sustainable organization will create opportunities which senior managers can develop into financial benefits. The extent to which these opportunities are successfully developed depends on the quality of assessment and the organization's ability to enable change to happen.

CA ZAMBIA PROGRAMME EXAMINATIONS

ADVISORY LEVEL

CA 3.7: PUBLIC SECTOR AUDITS AND ASSURANCE

FRIDAY 18 DECEMBER 2020

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

INSTRUCTIONS TO CANDIDATES

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

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

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

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

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

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

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

8. Present legible and tidy work.

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

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

SECTION A

This question is compulsory and must be attempted.

<u>QUESTION ONE</u> (COMPULSORY)

Victoria University is a public university and has been operating for the past twenty (20) years. The university carries out research activities as one of its main objectives.

Richard is a researcher in the School of Clinical Sciences. The University has faced serious challenges in terms of human resources required to train scientists. On a world scale, there are large sums of money available for research purposes. Researchers apply for such funds and if they meet the set conditions, the funds are given by way of grants.

Richard has been spending long hours on internet looking for any funding that would be for capacity building particularly in tertiary education. Early in 2015 Richard came across a call for $5.0million dollars over a five (5) year period for capacity building in the science field. Richard got interested in the call and quickly put together a team which answered to the call.

One of the conditions of the application for funding is that applicants cannot apply in their individual capacity but must instead apply under the auspices of the University for which they work. If the grant is awarded the agreement would be with the institution but the person who applied for the funding would be responsible for the project implementation and adherence with the contract agreement conditions.

In 2016 Richard received a Notice of Award of the grant of $5.0million and he quickly arranged for the necessary signing of the agreement. The Vice Chancellor was very excited and he facilitated the signing of the agreement which was returned to the donor before the closing date.

The following are extracts of some of the agreement conditions:

1. Project funds are required to be in a dedicated bank account and not mixed with any other university funds.
2. Annual financial statements should be prepared in accordance with the requirements of the societies act and these should be audited by an independent firm of auditors. The audited financial statements should be submitted to the donor by 30 March of the following year.
3. The grant has an annual budget prepared by Richard and approved by the donor. The budget provides for acquisition of a bus and information technology equipment in year two of the project.
4. All expenditure should be within the approved budget. Any expenditure above the approved budget should be done with prior written approval of the donor.
5. The grant is an education one with the objective of training staff development fellows who will work for the university on completion. The grant provided for twenty (20) candidates at the masters level and fifteen candidates at the PhD level. The grant provides for full sponsorship by paying all the tuitionfees required by Victoria University as well as research funds for the students.
6. The project agreement stipulates that the project should comply with regulations of the Centre for Disease Control (CDC) project management guidelines.

The project is in its fourth year of running. Of the twenty Masters students enrolled at the commencement of the project, two have died, while four have been struggling and have been excluded by the university from continuing with the program. Fifteen students were enrolled for the PhD program out which nine candidates are expected to complete and graduate at the end of the program.

All the project sponsored students were given a tuition waiver by the University of 40% of the fees because the students are staff development fellows. The vice chancellor sent an email to the project manager requesting that the funds saved from the tuition waiver should go towards sponsoring three students to undertake a program that is not covered in the grant agreement.

You work for a firm of chartered accountants which performed the financial audits of the project from inception. In the current year, the project manager requested your firm to conduct performance and compliance audits. The donor wrote to him requesting that audits should be conducted in addition to the financial audit. The project manager is not sure of the scope of the compliance and performance audits because it is the first time that he has heard of these types of audits. One of the audit assistants is concerned that your firm will be required to performcompliance and performance audits when your firm is not a member of the International Organization of Supreme Audit Institutions (INTOSAI) which is responsible for public sector auditing and overseeing the operations of Supreme Audit Institutions (SAIs) of member countries.

You are at the planning stage of the financial, performance and compliance audit of the project.

Required:

Using the information in the scenario

(a) Discuss the need for a performance audit of the project activities using relevant information in the scenario. (4 marks)

(b) (i) Discuss the need for a compliance audit in the project activities using relevantinformation in the scenario. (4 marks)

(ii) Describe four (4) audit procedures that should be carried out in the performance audit of the project. (6 marks)

(c) Describe the matters that you need to gain an understanding of in the audit of Victoria University according to ISSAI 1315 under the headings of financial, compliance and performance audits. (9 marks)

(d) Describe how the audit team will gain an understanding of the financial, compliance and performance issues in line with guidance in ISSAI 1315. (4 marks)

(e) (i) Evaluate the justification for the Office of the Auditor General(OAG) carrying Out financial, performance and compliance audits when the same have been carried out by independent auditors. (5 marks)

(ii) Explain four (4) benefits to member countries and the Supreme Audit Institution (SAI) of belonging to the International Organization of Supreme of Supreme Audit Institutions (INTOSAI) (8 marks)

[Total: 40 Marks]

SECTION B

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

QUESTION TWO

(a) Public sector auditors are required to use professional skepticism and professional judgment in the performance of their audits.

Required:

(i) Explain the meaning of professional judgment and give four (4) examples of situations when the public sector auditor should apply professional judgment. (5 marks)

(ii) Explain the meaning of professional skepticism and give two (2) circumstances when it may be applied by the public sector auditor.

(3 marks)

(b) You work for the Supreme Audit Institution (SAI) of your country. The Supreme Audit Institution (SAI) is a member of the International Organization for Supreme Audit Institutions (INTOSAI).

The Head of the Supreme Audit Institution (SAI) has forwarded to you an email that he received from the secretariat of the International Organization of Supreme Audit Institutions (INTOSAI) indicating that your Supreme Audit Institution (SAI) will be part of a regional team that has been assigned to go and carry out a peer review of the operations of the Supreme Audit Institution (SAI) of the Republic of Dongo.

The objective of the peer review is to conclude at the end of the review whether the Supreme Audit Institution (SAI) of the Republic of Dongo complies with the objectives of ISSAI 12 *Value and benefits of Supreme Audit Institutions* through achieving the objectives of **Strengthening accountability, integrity and transparency** and the objective of **Being a role model organization**.

You have been provided with the following information regarding the Supreme Audit Institution (SAI) of the Republic of Dongo:

The Head of the Supreme Audit Institution (SAI) of the Republic of Dongo is appointed by the Minister of Finance on a five (5) year renewable contract subject to satisfactory performance evaluated by a committee of the Ministry of Finance.

The Supreme Audit Institution (SAI) was established ten(10) years ago and has resource constraints including human resources. As a result it takes more than three (3) years before an institution is audited a second time. In order to increase the subjects to be audited, when the Supreme Audit Institution (SAI) goes back to audit a previously audited entity, there is no review of the previous audit findings.

The draft audit reports are presented to the President of the Republic of Dongo who decides on matters that should be included in the final report before it is published. Further, institutions that are of a security nature such as the security wings are currently not subject to audit by the Supreme Audit Institution (SAI) of the Republic of Dongo because of the fear that security information may be leaked.

The Supreme Audit Institution (SAI) of the Republic of Dongo does not have quality control systems in place due to resource constraints. The Head of the Supreme Audit Institution (SAI) has submitted a request to the Minister of Finance that the ministry should include in the forthcoming budget funds for staff training. This will enable the Supreme Audit Institution (SAI) to train more staff and also put in place continuing professional development training to ensure that staff involved in audits have necessary competences to carry out the work.

Required:

Evaluate the operations of the Supreme Audit Institution of the Republic of Dongo with reference to the objectives of strengthening accountability, integrity and transparency and being a role model. (12 marks)

[Total: 20 Marks]

QUESTION THREE

(a) You work for the Office of the Auditor General (OAG). The audit of the National Road Agency is almost complete.

The principal auditor who led a team of auditors has informed you that there was lack of evidence regarding the pension due to employees who were laid off in a restructuring of the Agency four (4) years ago. The case is still active in court and you requested written representations from management regarding the provision made in the financial statements.

The Finance Manager who has been involved with this case is away on a business trip to Europe and will be returning in three weeks after which the audited financial statements should have been signed and issued. The assistant payables accountant gave the audit team a statement confirming the amount that has been provided in the financial statements and this statement is part of the evidence in the working papers.

Soon after you signed the audit report on 14 March 2019, you received the written representation concerning the pension due from the Finance Manager who has since returned from the business trip. He asked you to replace the written statement that you obtained from the payables assistant and replace it with one that he has written.

Required:

(i) Discuss the reliability of the written statement by the assistant payables accountant in the working papers. (4 marks)

(ii) Discuss the reliability of the written representation by the Finance Manager with regards to the audit of National Road Agency. (4 marks)

(b) You work for the Office of the Auditor General. You have been appointed to lead a team of auditors to perform an audit of ten Zambian Missions abroad.

All the embassies are financed by the government through annual grants appropriated by the Ministry of Finance. Before joining the Office of the Auditor General, you worked for the Ministry of Finance as a Liaison Officer.

Your supervisor has requested you to assemble a team of experienced auditors who will undertake the audits of the ten missions. He is worried that if the team is not well selected the cost of doing the audits may be high in view of the cost of re-performing any work already done. Your supervisor has suggested that you should include amongst the audit team members those who have had no chance of auditing missions abroad in the past and this means disregarding any ethical issues that may arise.

Your supervisor has emphasized the need for a pre audit meeting at which a number of issues should be discussed including the following:

1. Emphasis on the need to document all the work that will be carried out in order to make it easy for reviews to be done. He has suggested that the team should take advantage of internet and suggested that where necessary work could be reviewed electronically and feedback given much earlier than if reviews of hard copies of working papers were done.
2. The need for consultation amongst the audit team and the audit team members. This will be necessary so that issues are resolved with minimum delay. Emphasis should be made on the need for the audit team members to communicate with the audited entities' management so that matters are resolved. If the missions are to benefit from the audits any deficiencies and recommendation should be communicated on a timely basis.
3. In order to cut down on costs of audit, the audit team members will not be required to carry out risk assessment procedures in the audit of the missions abroad.
4. The need for staff to apply professional skepticism, professional judgment and due care throughout the audit of missions abroad.

Required:

Evaluate the adherence or lack thereof with ISSA 100 General principles of public sector auditing in the planned audits of the missions abroad by the Supreme Audit Institution (SAI). (12 marks)

[Total: 20 Marks]

QUESTION FOUR

The Supreme Audit Institution (SAI) is referred to as the National Audit Office in a country called Elsa. The country has excellent governance structures which supports the ideals of accountability and transparency. It is mandatory for every public entity to have an Audit Committee aimed at strengthening the financial reporting systems.

In Elsa, the Head of the National Audit Office, who is known as the Auditor General (AG), is a senior government official reporting to the Chief Justice. The Chief Justice is appointed by an association of respected traditional churches. Some Non-Governmental Organizations (NGOs) started questioning the objectivity and independence of the National Audit Office and its staff. They want the National Audit Office to adopt the requirements for

independence and objectivity for both the SAI and the SAI staff according to ISSAI 30 *Code of Ethics*.

You are an experienced Audit Supervisor in Elsa's National Audit office. You have been given responsibility by the Auditor General (AG) to establish an office in a rural area which has attained district status. Government wants to establish all critical institutions in the district before releasing huge sums of money which were approved by Parliament.

Government has advised you to work closely with the traditional leadership. At a recent meeting organized by the indunas to officially welcome you, the Paramount Chief suggested the following:

1. The nephew to the Paramount Chief who lost the elections for area Member of Parliament should be employed as an Auditor. He is a CA graduate with two (2) years practical experience.
2. The local National Audit Office should prepare a corrective plan to address the deficiencies identified by National Audit Office staff last year. This relates to a public entity which provides solar electricity in the area. The Paramount Chief sits on the Board of Directors for this public entity and was concerned with the number of deficiencies and wants these to be reduced significantly.
3. The audit staff should be transferred on a regular basis to other areas.
4. The Paramount Chief has promised you 10 acres of fertile land if you work well with the traditional leadership.
5. Promote learning and knowledge sharing, as well as capacity building in the local National Office.

Required:

(a) Explain the requirements for independence and objectivity for both the SAI and the SAI staff according to ISSAI 30 *Code of Ethics*. (8 marks)

(b) Evaluate each of the suggestions made above, commenting on the ethical and professional issues raised. (12 marks)

[Total: 20 Marks]

QUESTION FIVE

In Zambia, the Supreme Audit Institution (SAI) is known as the Office of the Auditor-General (OAG). However, under the Public Audit Act 2016, the OAG is to be renamed the National Audit Office. This is meant to restructure and reposition the SAI so that it is more independent and effective.

The Office of the Auditor General (OAG) exists to provide quality audit services to government and other institutions in order to promote accountability and value for money in the management of public funds and other resources for the benefit of society.

You have joined the OAG as Audit Manager and you are responsible for revenue audits, which are divided into two (2) sections – Tax Revenues and Non-Tax Revenues. Your first assignment is a budget execution audit, which involves verification of whether the non-tax revenue targets for the Civil Aviation have been met (as stated in the National Budget) and make recommendations to Government to ensure that all revenue is collected and

accounted for. The Civil Aviation Authority retains 3% of the collections and this is used for capital and recurrent expenditure.

You are aware that the Auditor-General (AG), during induction mentioned that in most financial audits, one of the overall objectives of the auditor in a public sector audit is to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, thereby enabling the auditor to express an opinion on whether the financial statements are prepared, in all material respects, in accordance with an applicable financial reporting framework.

You have obtained a detailed financial statement on non-tax revenues from the Civil Aviation Authority (CAA) for the year ended 31 December 2020. The detailed financial statements show the various types of non-tax revenue, budgeted figures, actual figures and the variances. The figures are accompanied by various charts and commentaries.

One of the comments gives an explanation of the reasons for one of significant variances. You have questioned the adequacy of the reasons and you have requested the directors to include the economic challenges the country is facing as one the reasons. However, the Finance Director has informed you that the directors have refused.

Required:

(a) Explain the attributes of an acceptable financial reporting framework. (5 marks)

(b) Discuss why an acceptable financial reporting framework may not be relevant in a budget execution audit. (3 marks)

(c) Consider the possible reasons why the directors of the Civil Aviation Authority (CAA) are reluctant to include the economic challenges being faced by the country. (8 marks)

(d) Recommend four (4) further audit procedures that should be carried out regarding the comment. (4 marks)

[Total: 20 Marks]

END OF PAPER

SUGGESTED SOLUTIONS

SOLUTION ONE

a) **Need for a performance audit:**

Performance audits are conducted with a view to establishing whether the activity under audit has been performed in a manner that meets the requirements of the principles of economy, efficiency and effectiveness.

In the case study at hand funding has been received for research purposes and the donor interest is that the funds must be used for the intended purposes considering the three aspects of economy, efficiency and effectiveness.

Applying the above principles the performance audit will seek to establish:

- Economy -Funds have been used in a manner that does not allow wastage. For example that all payments are based on the lowest cost without compromising on quality.
- Efficiency- This will aim at comparing the output in the program compared to the input. Consideration will be made on whether maximum use of the funds have been made or the output could have been achieved at a lower cost.
- Effectiveness – this is aimed at establishing whether or not the intended objectives of the project have been met. In this case consideration will made regarding the number of Masters Graduates and PhD graduates at the end of the project.

b) i. **Need for a compliance audit:**

Compliance audits are performed by the public sector auditors with a view to establish whether or not activities have been performed in accordance with a given criteria.

In the case at hand, there is an agreement between the donor and the university with regards how project funds must be accounted for and spent.

The need for a compliance audit is to obtain evidence with a view to establish whether the project conditions contained in the Notice of Award are being complied with in the implementation of the project.

ii. **Work that will be conducted in a performance audit:**

The public sector auditor's work in a performance audit will include work that is done at the planning stage of the audit and that done during the substantive stage of the audit.

1. At the planning stage of the performance audit, there will be need to gain an understanding of the subject matter that is subject to the performance audit. In this case this is regards the grant received for capacity building in the School of Clinical Sciences.
   The public sector auditor will require to hold discussions with the management of the school and obtain any documentation that will enable him know the details regarding the grant.
2. During the planning stage the auditor will establish the criteria against which actual performance will be measure. These will be extracted

from the information in the agreement for the grant and will include matters such as the budget and the outcome from the project.

During the process of gathering evidence the following will be carried out. Being a performance audit the audit work will have regard to the three elements of performance audits namely economy, efficiency and effectiveness. The following work will be carried out:

Economy:
A review of payments made by the school regarding costs incurred will be made in order to e4stblish whether or not the best amounts have been paid without compromising on quality. For example, in the case of the purchase of the bus and IT equipment the public sector auditor will wish to establish that the school has paid more than should have been paid for these items.

Comparison of the amounts paid with market and competing prices will be made and also the procedure used in procurement whether there was competitive bidding or not.

Efficiency:
The work done under this heading is aimed at establishing whether the output achieved could have been achieved using lessor resources.

Enquiries within the school and the market will require to be made to establish the cost of training PhD candidates and compare with the outcome given the funds under the grant.

Effectiveness:
This element is aimed at establishing whether the objectives of the grant have been achieved. The public sector auditor will require establishing at the end of the project whether the targets of 20 candidates at the master's level and 15 at the PhD levels have been met. Discussions with management will explain the reasons for not meeting the targets.

c) Matters that the public sector auditor should gain an understand of:

Financial audit:
The public sector auditors need to understand the following matters regarding the financial audit of the project:

- The project conditions contained in the agreement as they relate to the financial statements.
- An understanding of the American Government Financial Regulations which should be complied with in the project implementation.
- The information system in use which forms the basis of the preparation of the financial statements.
- Internal controls that exist regarding the management of project funds.

Compliance audit:

- The grant conditions which are contained in the agreement should be clearly understood by the public sector auditor.

- The internal controls that are relevant to ensure compliance with grant conditions.

Performance audit:

- A clear understanding of the input resources in the project against which output will be measured.
- An understanding of the expected output at the end of the project.
- An understanding of the grant conditions in terms of the scholarship and what is included.

d) Methods that will be used to gain an understanding:

The public sector auditor will gain an understanding of the project activities through any of the following ways:

- Enquiry and discussions with the project Richard the project manager. Discussions could also be held with the other staff who are involved in the project implementation.
- Obtaining and going through the Notice of Awards which has complete details of the project conditions which should be adhered to.
- Obtaining and going through a copy of the regulations contained in the American Government Financial Regulations.
- Previous year's working papers may be a good source of information for the public sector auditor.
- Through observation and inspection of the project activities the public sector auditor can gain an understanding of the project and the environment within which it is operating.

e) (i) Justification for carrying out public sector audits for financial statements audited by independent auditors:

Private auditors carry out audits of financial statements with a view to form an opinion on whether the financial statements show a true and fair view. In most cases it is the private sector that is subject to audits by private independent auditors.

In the case at hand the grant agreement provides that the project accounts should be audited by private auditors and reports submitted to the donor annually.

The role of the public sector auditors and in this case the Office of the Auditor General (OAG) is to carry out audits of all recipients and users of public funds. This includes any funds received from donors for use by the public institutions. In this case the grant was sourced by Richard but the agreement is with Victoria University.

It is therefore justifiable that the Office of the Auditor General will carry out audits of the university as well as project funds. Further, the Auditor General may carry out compliance and performance audits in addition to the financial audit of project activities.

(ii) Benefits to SAIs of belonging to INTOSAI:

1. **Issuing of ISSAIs:**
   The International Organization of Supreme Audit Institutions (INTOSAI) develops and issues International Standards for Supreme Audit Institutions (ISSAIs) which give guidance to SAI on how they should carry out public sector audits.

   By belonging to INTOSAI, the SAI will have standards that its staff will follow when performing audits. New standards are issued as need arises and amendments to existing standards can be done for the benefit of the member countries.

2. **Knowledge sharing:**
   Experiences of member countries are shared amongst member countries. This means that SAIs in countries that may not have the resources to develop improved methods of holding those responsible for the use of public funds accountable can benefit through the sharing of experiences.
   Staff of individual SAI will gain experience in the audit of public institutions through interactions with other member countries when they interact with each other in meetings etc.

3. **Setting up SAIs:**
   Countries that wish to set up SAIs can draw from the guidelines issued by INTOSAI in setting up the institutions. For example the Lima declaration gives the requirements expected for a SAI while the Mexico declaration deals with provisions relating to the independence of the SAI.

4. **Peer reviews:**
   Member countries of the INTOSAI can benefit from independent peer reviews that can be carried out on their operations. This enhances the requirement that the SAI should lead by example in terms of transparency and accountability on how they use the funds appropriated for their use.

SOLUTION TWO

a) i. **Meaning of professional judgment:**

Professional judgment is the use by the auditor of the skills that he has through training and experience in the performance of the audit.

Examples of when professional judgment can be applied by the public sector auditor:

- Professional judgment should be used by the public sector auditor throughout the audit including:

- When determining the materiality for the financial statements as a whole and performance materiality.
- When determining the nature, timing and extent of audit procedures that should be carried out.
- When determining whether or not sufficient audit evidence has been obtained during the audit.
- When determining the management judgments in applying the financial reporting framework applicable the entity being audited.
- When determining sample sizes of items to be audited.

When reaching and drawing conclusions from the evidence that has been gathered.

ii. **Meaning of professional skepticism:**

Professional skepticism is an attitude of mind whereby the public sector auditor should remain alert throughout the audit for evidence of evidence that might contradict other evidence.

Examples of when professional skepticism can be applied by the public sector auditor include the following:

- When evaluating the evidence that has been provided by management such as authenticity of the documentation examined.
- When gathering evidence during the course of the audit.
- During the audit to look out for the existence of fraud which may cause the financial statements to be materially misstated.

b) **SAI adhering to the objective of strengthening accountability, integrity and transparency:**

- One of the principles within this objective is that the SAI and the staff who work for it should be independent of the entities that will be subject to audit.
  The appointment of the head of the SAI by the Minister of Finance in the Republic of Dongo is not in line with this principle because the ministry of finance is one of the government agencies that will be audited by the SAI.
- The SAI is expected to help those charged with the responsibility of oversight perform their duty by reviewing previous findings and recommendations to ensure they have been addressed by the audited entity.

In the case of the SAI of the Republic of Dongo due to lack of resources the SAI does not review the work previously performed and as a result it does not help strengthen accountability of audited entities.

- Another principle under this heading is that the SAI should be independent to decide the content of its report. The fact that the draft reports are referred to the president before finalization of the report is not in line with this objective.
- Accountability in the use of public funds is expected of all those who receive and spend public funds without exception.
  The restriction of the SAI from auditing institutions that are perceived to be of a security nature is against the objective of strengthening accountability, integrity and transparency.

SAI adhering with the objective of being a role model:

- One of the principles under this objective is that the SAI should have quality systems in place if it is to operate effectively.
  Lack of quality control systems is not in line with the principle of being a role model by expecting quality in the audited entities which it does not apply in running the SAI.
- The SAI is required to have resources necessary to enable it carry out its mandate. This includes human resources who should have the necessary skills to perform audits and who should be up-to-date with current requirements for conducting audits.
  The fact that the SAI requested for funding to enable it train staff and put in place continuing professional development training suggests that these are currently not in place suggesting that the SAI of the Republic of Dongo is not in compliance with this principle and objective of being a role model.
- The SAI expected that the audited entities should have codes of ethics which staff follow in the performance of their work. The fact that the SAI of the Republic of Dongo does not have a code of ethics in place for its staff to follow show that it is not leading by example and hence failing to meet the objective of being a role model.

SOLUTION THREE

a) i. **The reliability of the written representation by the assistant payables accountant:**

Written representations form part of the evidence that the public sector auditor gathers and which forms part of the evidence upon which the audit opinion is reached.

Generally the written evidence should be obtained from staff that possesses the necessary knowledge concerning the matter for which they are obtained.

The reason for the public sector auditors require written representations in this case is with regards determining an ongoing court case regarding pensions. It is unlikely that the assistant payables accountant will have sufficient knowledge regarding this case. The public sector auditors should not rely on the written representation from assistant payables accountant. They should perform alternative audit procedures to obtain the required level of satisfaction regarding the provision for the legal case.

The conclusion here is that the written representation given by the assistant payables accountant should not be relied upon in determining whether or not the amount of provision is materially misstated.

ii. **Reliability of the written representation by the Finance Director:**

The Finance Director of the National Road Agency is senior enough to have in-depth knowledge of the legal case at hand.

The problem with the written representation that has been received from the Finance Director is that it is received after the audit report has been signed. The written representation is supposed to be part of the evidence upon which the opinion is determined.

The fact that the written representation from the Finance Director is after the report date invalidates the reliability of this evidence.

b) **Adherence or non-adherence with the general principles of public sector auditing:**

- The suggesting that ethical issues should be disregarded in selecting audit team members to go and carry out audits of missions abroad in not in compliance with the general principles of public sector auditing.
  The general principles require that public sector auditors should apply relevant ethical requirements in the performance of their work.
- The suggestion that the team that should be selected to go and carry out the audits of the missions abroad should include those who have had no chance of auditing mission abroad in the past suggests that skills and competences of staff will not be considered.
  The general principles suggest that quality control in the performance of public sector auditors is paramount. The skills and competences of staff are important in achieving quality. This principle appears to have been ignored

here because the motivating factor is to give everyone a chance to go abroad.

- Effective communication within the audit team and with the audited entity is one of the general principles of public sector auditing. The audited entity should be kept informed on a timely basis the findings of the audit.
  The fact that communication is emphasized to the audit team in the pre-audit meeting is in line with the general principles of public sector auditing.
- Documentation of audit working papers is one of the general principles of public sector auditing.

  The emphasis to the audit team members in the pre-audit meeting that all work must be documented and reviewed is in line with the general principle on documentation.

- The fact that the public sector auditors to carry out audits of missions abroad will not carry out risk assessments is not in compliance with the general principles of public sector auditing.
  It is required that risk assessment is carried out in order for the public sector audit to reduce the risk of issuing an inappropriate opinion or conclusion to acceptable levels. Risk assessment enables the auditor to respond to any identified risks appropriately.
- Materiality is supposed to be considered in the performance of audits by public sector auditors. Misstatement of material items are likely to result in the financial statements to be misstated.
  Attention should be paid to matters that are likely to affect the decisions of users of financial statements. Further, materiality will help the public sector auditor to decide on the nature, timing and extent of audit procedures that should be carried out.
  The suggestion in the meeting that materiality should not be considered in carrying out the audits of missions abroad is not in line with the general principles of public sector auditing.

SOLUTION FOUR

(a) **ISSAI 30 Requirements for independence and objectivity of the SAI and the SAI staff:**

Requirement for the SAI

- The SAI must be independent, even though it is a government body.
- The SAI should adopt policies for ensuring that its staff (especially at senior level) do not develop relationships with audited entities that may put their independence and objectivity at risk.
- The SAI should not provide non-audit services to an audited entity, where this would involve assuming some managerial responsibilities.

Requirement for the SAI staff

- SAI staff should be independent from political influence and free from political bias.
- SAI staff should not audit their own work.
- SAI staff should not audit an entity where they have recently been employed, without appropriate safeguards.
- SAI staff should avoid circumstances where personal interests could affect decision-making, or where relationships with the management of an audited entity could affect decision-making.
- SAI staff should refuse gifts, gratuities or preferential treatment that could affect their independence or objectivity

(b) **Evaluation of the ethical and professional issues raised:**

The Code of Ethics requires independence both in fact and in appearance. Independence in appearance does not exist when a "reasonable and informed third party, having knowledge of relevant information", has reasonable doubts about the integrity, objectivity or professional skepticism of an individual auditor. It is not sufficient to be independent and objective: it is necessary to be seen by others as trustworthy, independent and objective. This is the guiding principle for all public sector auditors. The evaluation of the suggestions made by the Paramount Chief will be based on the ethical guidance above.

1. The nephew to the Paramount Chief who lost the elections for area Member of Parliament should be employed an Auditor – Political neutrality will be questionable and the reports may not be trusted. Stakeholders may think he may using the audits to sort out political opponents or those who hold different views. The nephew may be employed in other roles not directly related to audits since he is qualified.
2. The local National Audit Office should prepare a corrective plan to address the deficiencies identified by National Audit Office staff last year – This will mean taking over management responsibility, which could lead to a serious self-review threat. Participation in the management of an audited entity is not permitted. Management responsibilities for an audited entity must remain with its

management. It will be difficult for the local National Office to criticize its own work and no safeguards could be in place to reduce this ethical threat to an acceptable level. This should be politely declined.

3. The audit staff should be transferred on a regularly basis – This is acceptable in order to guard against familiarity threat. However, the transfers must conducted in accordance with the National Audit Office's policies and procedures.
4. The Paramount Chief has promised you 10 acres of fertile land if you work well with the traditional leadership – This may result in a self-interest threat and objectivity is likely to be impaired. You may want to impress the traditional leadership at all costs. It will be important to refuse this gesture by politely referring to the National Audit Office's policies and procedures. This should not be leading.
5. Promote learning and knowledge sharing, as well as capacity building in the local National Office – SAI are expected to set high standards of conduct and behavior that can act as a role model for others in the public sector. This must be done in accordance with the SAIs policies and procedures.

SOLUTION FIVE

(a) **Attributes of acceptable financial reporting frameworks:**

- **Relevance** – the information in the financial statements is relevant to the nature of the audited entity and the purpose of the financial statements
- **Completeness** – there are no omissions of transactions, events, account balances or disclosures that could affect audit conclusions on the financial statements
- **Reliability** – the information provided in the financial statements reflects the economic substance of events and transactions and not merely their legal form
- **Neutrality and objectivity** – the information in the financial statements is free from bias
- **Understandability** – the information in the financial statements is clear and understandable

(b) **A Financial reporting framework and the budget execution audit:**

A conceptual framework is simply a statement of generally accepted theoretical principles which form the frame of reference for financial reporting. A budget execution audit basically involves an examination of transactions against a budget for compliance and regularity issues. This process is relatively straightforward and as such there may not be an acceptable financial reporting framework, and the results of financial transactions may be presented as a comparison between actual expenditure and budgetary amounts. Management could agree with the intended users on the additional information to provide and in what form.

(c) **Possible reasons why the directors of the Civil Aviation Authority (CAA) are reluctant to include the economic challenges being faced by the country:**

1. **Avoid misunderstanding**
   The directors may not want to highlight the economic challenges to avoid being misunderstood by the stakeholders (especially the politicians). This may be interpreted that those in charge of the economic affairs of the country have failed.

2. **Protect their own interests**
   The directors may be worried that stakeholders may call for drastic restructuring measures which could adversely affect their jobs.

3. **Protect the CAA's interests**
   Some stakeholders could start questioning the going concern status of the entity. For example, suppliers may choose to withdraw business if they are concerned about the CAA's ability to pay.

4. **Increased labour turnover**
   The directors may fear that valued employees may start leaving the CAA. This will have a negative impact on the operations of the CAA.

5. **Not the competent authorities on the country's economic status:** The directors may not be willing to include the economic challenges being faced because they are not the competent authorities to comment on matters affecting the economy. Doing so may have sanctions which the directors do not wish to face.

(d) **Further audit procedures**

These include:

- Obtain previous financial statements and check for inclusion of economic challenges in the commentaries
- Inspect the board minutes for evidence regarding the resolution on the comment
- Hold discussions with those charged with governance, preferably the Audit Committee
- Obtain written management representations giving the reasons for the refusal
- Consider the implications on the audit report.

END OF SUGGESTED SOLUTIONS

CA ZAMBIA PROGRAMME EXAMINATIONS

ADVISORY LEVEL

CA 3.8: PUBLIC SECTOR FINANCIAL MANAGEMENT

FRIDAY 18 DECEMBER 2020

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

INSTRUCTIONS TO CANDIDATES

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

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

SECTION A

This question is compulsory and must be attempted

QUESTION ONE (COMPULSORY)

The National Construction Holdings (NCH) Ltd, is a construction company created by the Government for infrastructure projects. The company has embarked on a project to construct a 1 kilometer bridge. The total cost of the project has been estimated at K0.5 billion by an external consultancy firm.Only K0.3 billion of this amount will be financed from Government budget support as the Government is currently running a budget deficit. K0.1 billion is expected to be financed by a project loan agreement with the World Bank. The balance of K0.1 billion will be financed by a foreign project grant. The external consultancy firm which was engaged to carry out a feasibility study of the proposed project was paid an estimated K100,000.

The construction project is expected to last five (5) years after which it will be handed over to the Government. A private firm will be engaged to construct the bridge. Payment to the private firm is estimated to be 20 % of the project cost per annum for the first two (2) years of construction and 20% of the project cost per annum in the third and fourth year and 15% of the cost upon completion of the project. The first 5% of the project cost will be paid before commencement of construction.

NCH Ltd is expected to spend K100 million as compensation to individuals who will be displaced as a result of the bridge passing through their farm land. The payment is expected to be made before the commencement of the project.

Government expects that the bridge will boost trade with other countries as it will be situated in a border town. Additional export earnings of K200million per annum for the next 10 years are expected after the bridge is completed.

For the evaluation of long term capital projects the Government uses the Ministry of Finance discount rate of 5% per annum. This is derived from the post-tax savings rate adjusted for consumption growth and marginal utility.

Required:

(a) Appraise the proposed construction project using the Net Present Value Method. (16 marks)

(b) Discuss the benefits of public private partnership (PPP) models. (6marks)

(c) Explain five (5) specific actions that can be undertaken to manage capital project risk. (10 marks)

(d) Discussthe reasons for a budget deficit and the impact on the economy. (8marks)

[Total: 40 Marks]

SECTION B

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

QUESTION TWO

Northern University a recently established university by the Ministry of Higher Education is a public university. The University offers various courses in medicine, law, Education and Engineering. The management recently introduced two (2) degree programs in finance. Both programs have a component of financial management. However, the programs are only focused on financial management in the private sector.

The university recently carried out a market research about the quality of their programs. The research was focused on former students, current students and those likely to enroll for a program of study at the university in the near future.The result of the research indicated that most respondents are satisfied with the most of the programs offered by the university. However the majority of the respondents were of the view that as a public university, Northern University should introduce a financial management course focused on the public sector.

The university is now considering introducing public sector financial management as one of the courses in its degree programs. However some stakeholders are of the view that introducing public sector financial management will not add value to the university as it is very similar to financial management in the private sector.

Required:

(a) Discuss how public sector financial management differs from private sector financial management. (10 marks)

(b) Explain the key institutions responsible for public sector financial management in Zambia and provide a brief explanation of their functions. (10 marks)

[Total: 20 Marks]

QUESTION THREE

TheGovernment of a SADC country, which obtained its independence on 31 December, 1999 from its colonial masters, presented its first budget to parliament in November, 2019 for the first time after 20 years. The reason is that the country has had no stable Government during this period, largelydue to a civil war. The war resulted into devastation of its infrastructure like, roads, water and sanitation, Schools and Hospitals. The Finance Minister allocated 20% of the total budget to finance road construction, 15% for water and sanitation, 35% and 10% for Schools and Hospitals respectively. The source of funds for road construction, water and sanitation infrastructure was to be exclusively from foreign grants, programme and project loans. All of the programme and project loans were to be obtained from a bank in Asia.

The business model adopted by the Government in the capital approval process was the five step business case model, as developed by HM Treasury of the United Kingdom.

Required:

(a) Explain the five (5) step business case model and identify its key components as developed by HM Treasury in the United Kingdom and adopted by the SADC country in its capital expenditure approval process. (10marks)

(b) Explain the difference between project grants, programme and project loans as sources of foreign financing and the constraints on relying entirely on foreign borrowing as a major source of Government financing. (10marks)

[Total: 20 Marks]

QUESTION FOUR

Piopter Plc is a fast growing manufacturing company based in Eastern Province. In the recent past, it has earned below-industry returns on its investments which was determined as 5%, however, projections from 2021 onwards, seems to indicate that there is likely to be a good prospect of earning an above industry returns. It was noted that PiopterPlc has been following a dividend policy, that of paying 70% of the earnings to preference shareholders as per coupon rate on the shares they hold and retaining 30% to equity shareholders as per declaration in the shareholders meeting. The explanation by the Chief Finance Manager of PiopterPlc as to why such a policy was adopted, to the Board of Directors in the recent Board Meeting, was that the main objective of the company was that of paying dividends at all cost as dividends, he said, have a positive impact on the price of the share.

PiopterPlc was one of the private companies that bidded for a contract with the Ministry of Health to supply medicines worth K1 Billion. The Chief Executive indicated in the Bid documents that the Company had the capacity to source these medicines from the international suppliers. They however needed an advance payment of 60% whose amount was to be deposited in an offshore account upon being offered the contract to supply the medicines. Piopter was to obtain interest from the offshore account before the principal amount is withdrawn after one month. The other 40% was to be paid after the contract is fully executed.

It was however, noted from the recently published financial statements of PiopterPlc that the acid-test ratios of the past three (3) years were2:1 in 2017, 0.5:1 in 2018 and 0.2:1 in 2019respectively, signifying a deteriorating liquidity situation.

Required:

(a) Explain in detail the financial risks that PiopterPlc will be exposed to in the event that the contract is awarded and an advance amount of 60% is disbursed by the Ministry of Health and the amount is deposited in the offshore account. (8 marks)

(b) Explain the nature of fiscal risks faced by a public sector entity. (12 marks)

[Total: 20 Marks]

QUESTION FIVE

You have been seconded to the Government of Country Z to assist in reviewing the budget which was recently presented by the Minister of Finance and provide solutions on the current economic challenges. According to the budget that was presented, Governmenthas allocated its budget as follows:

Functional Area	Amount (K'million)	% of Budget
General Public Service	14,000	45
Defence	2,500	8
Public Order and Safety	6,000	19
Economic Affairs	7,000	23
Environmental Protection	500	2
Housing and Community Amenities	100	0.3
Health	250	0.8
Recreation, Culture and Religion	50	0.2
Education	300	1
Social Protection	200	0.7
Total	**30,900**	**100**

During the debate of the budget, the Legislature raised concern on the low investment in the Social Sector and increased investment in General Public Service and Public Order and Safety. In response, the Executive indicated that most of the resources have been channeled towards debt service.

As part of your secondment, you must explore how Government could be assisted with enhancing its cash management in order to sustain the social sector and improve liquidity. There is also a belief that Governmenthas embarked on projects without proper appraisal. The projects embarked on are being financed using debt. Appraising of projects is a relatively new area for country Z and very few have appropriate knowledge and skills.

In order not to exceed the current debt limit, the Authorities have submitted a paper to cabinet to consider Public Private Partnership (PPPs) as a way of improving infrastructure. The International Monetary Fund(IMF) have also requested the Government of Country Z to undertake a debt sustainability analysis.

The exchange rate of the country has depreciated by over 100% in three months and has impacted heavily on huge outflows especially when Government is paying interest due on debt.

Required:

(a) Identify and explain any two (2) critical reforms in the area of cash management that will assist Government improve its liquidity. (2 marks)

(b) Explain any five (5) criteria that can be used when evaluating sourcing of financing and evaluate the Public Private Partnerships (PPPs) against these five criteria. (10 marks)

(c) Define sustainable debt service and explain the objectives of IMF's framework in relation to undertaking Debt Sustainability analysis. (8 marks)

[Total: 20 Marks]

END OF PAPER

Formulae

Modigliani and Miller Proposition 2 (with tax)

$$k_e = k_e^i + (1 - T)(k_e^i - k_d)\frac{V_d}{V_e}$$

Two asset portfolio

$$s_p = \sqrt{w_a^2 s_a^2 + w_b^2 s_b^2 + 2w_a w_b r_{ab} s_a s_b}$$

The Capital Asset Pricing Model

$$E(r_i) = R_f + \beta_i (E(r_m) - R_f)$$

The asset beta formula

$$\beta_a = \left[\frac{V_e}{(V_e + V_d(1 - T))}\beta_e\right] + \left[\frac{V_d(1 - T)}{(V_e + V_d(1 - T))}\beta_d\right]$$

The Growth Model

$$P_o = \frac{D_o(1 + g)}{(r_e - g)}$$

Gordon's growth approximation

$$g = br_e$$

The weighted average cost of capital

$$WACC = \left[\frac{V_e}{V_e + V_d}\right]k_e + \left[\frac{V_d}{V_e + V_d}\right]k_d(1 - T)$$

The Fisher formula

$$(1 + i) = (1 + r)(1 + h)$$

Purchasing power parity and interest rate parity

$$S_1 = S_0 x \frac{(1 + h_c)}{(1 + h_b)} \qquad F_0 = S_0 x \frac{(1 + i_c)}{(1 + i_b)}$$

Modified Internal Rate of Return

$$MIRR = \left[\frac{PV_R}{PV_I}\right]^{\frac{1}{n}} \left(1 + r_e\right) - 1$$

The Black-Scholes option pricing model

$$c = P_a N(d_1) - P_e N(d_2) e^{-rt}$$

Where:

$$d_1 = \frac{\ln(P_a / P_e) + (r + 0.5s^2)t}{s\sqrt{t}}$$

$$d_2 = d_1 - s\sqrt{t}$$

The Put Call Parity relationship

$$p = c - P_a + P_e e^{-rt}$$

Present Value Table

Present value of 1 i.e. $(1 + r)^{-n}$

Where r = discount rate
n = number of periods until payment

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	0·980	0·961	0·943	0·925	0·907	0·890	0·873	0·857	0·842	0·826	2
3	0·971	0·942	0·915	0·889	0·864	0·840	0·816	0·794	0·772	0·751	3
4	0·961	0·924	0·888	0·855	0·823	0·792	0·763	0·735	0·708	0·683	4
5	0·951	0·906	0·863	0·822	0·784	0·747	0·713	0·681	0·650	0·621	5
6	0·942	0·888	0·837	0·790	0·746	0·705	0·666	0·630	0·596	0·564	6
7	0·933	0·871	0·813	0·760	0·711	0·665	0·623	0·583	0·547	0·513	7
8	0·923	0·853	0·789	0·731	0·677	0·627	0·582	0·540	0·502	0·467	8
9	0·941	0·837	0·766	0·703	0·645	0·592	0·544	0·500	0·460	0·424	9
10	0·905	0·820	0·744	0·676	0·614	0·558	0·508	0·463	0·422	0·386	10
11	0·896	0·804	0·722	0·650	0·585	0·527	0·475	0·429	0·388	0·305	11
12	0·887	0·788	0·701	0·625	0·557	0·497	0·444	0·397	0·356	0·319	12
13	0·879	0·773	0·681	0·601	0·530	0·469	0·415	0·368	0·326	0·290	13
14	0·870	0·758	0·661	0·577	0·505	0·442	0·388	0·340	0·299	0·263	14
15	0·861	0·743	0·642	0·555	0·481	0·417	0·362	0·315	0·275	0·239	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	0·812	0·797	0·783	0·769	0·756	0·743	0·731	0·718	0·706	0·694	2
3	0·731	0·712	0·693	0·675	0·658	0·641	0·624	0·609	0·593	0·579	3
4	0·659	0·636	0·613	0·592	0·572	0·552	0·534	0·516	0·499	0·482	4
5	0·593	0·567	0·543	0·519	0·497	0·476	0·456	0·437	0·419	0·402	5
6	0·535	0·507	0·480	0·456	0·432	0·410	0·390	0·370	0·352	0·335	6
7	0·482	0·452	0·425	0·400	0·376	0·354	0·333	0·314	0·296	0·279	7
8	0·434	0·404	0·376	0·351	0·327	0·305	0·285	0·266	0·249	0·233	8
9	0·391	0·361	0·333	0·308	0·284	0·263	0·243	0·225	0·209	0·194	9
10	0·352	0·322	0·295	0·270	0·247	0·227	0·208	0·191	0·176	0·162	10
11	0·317	0·287	0·261	0·237	0·215	0·195	0·178	0·162	0·148	0·135	11
12	0·286	0·257	0·231	0·208	0·187	0·168	0·152	0·137	0·124	0·112	12
13	0·258	0·229	0·204	0·182	0·163	0·145	0·130	0·116	0·104	0·093	13
14	0·232	0·205	0·181	0·160	0·141	0·125	0·111	0·099	0·088	0·078	14
15	0·209	0·183	0·160	0·140	0·123	0·108	0·095	0·084	0·074	0·065	15

Annuity Table

Present value of an annuity of 1 i.e. $\frac{1 - (1 + r)^{-n}}{r}$

Where r = discount rate
n = number of periods

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	1·970	1·942	1·913	1·886	1·859	1·833	1·808	1·783	1·759	1·736	2
3	2·941	2·884	2·829	2·775	2·723	2·673	2·624	2·577	2·531	2·487	3
4	3·902	3·808	3·717	3·630	3·546	3·465	3·387	3·312	3·240	3·170	4
5	4·853	4·713	4·580	4·452	4·329	4·212	4·100	3·993	3·890	3·791	5
6	5·795	5·601	5·417	5·242	5·076	4·917	4·767	4·623	4·486	4·355	6
7	6·728	6·472	6·230	6·002	5·786	5·582	5·389	5·206	5·033	4·868	7
8	7·652	7·325	7·020	6·733	6·463	6·210	5·971	5·747	5·535	5·335	8
9	8·566	8·162	7·786	7·435	7·108	6·802	6·515	6·247	5·995	5·759	9
10	9·471	8·983	8·530	8·111	7·722	7·360	7·024	6·710	6·418	6·145	10
11	10·37	9·787	9·253	8·760	8·306	7·887	7·499	7·139	6·805	6·495	11
12	11·26	10·58	9·954	9·385	8·863	8·384	7·943	7·536	7·161	6·814	12
13	12·13	11·35	10·63	9·986	9·394	8·853	8·358	7·904	7·487	7·103	13
14	13·00	12·11	11·30	10·56	9·899	9·295	8·745	8·244	7·786	7·367	14
15	13·87	12·85	11·94	11·12	10·38	9·712	9·108	8·559	8·061	7·606	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	1·713	1·690	1·668	1·647	1·626	1·605	1·585	1·566	1·547	1·528	2
3	2·444	2·402	2·361	2·322	2·283	2·246	2·210	2·174	2·140	2·106	3
4	3·102	3·037	2·974	2·914	2·855	2·798	2·743	2·690	2·639	2·589	4
5	3·696	3·605	3·517	3·433	3·352	3·274	3·199	3·127	3·058	2·991	5
6	4·231	4·111	3·998	3·889	3·784	3·685	3·589	3·498	3·410	3·326	6
7	4·712	4·564	4·423	4·288	4·160	4·039	3·922	3·812	3·706	3·605	7
8	5·146	4·968	4·799	4·639	4·487	4·344	4·207	4·078	3·954	3·837	8
9	5·537	5·328	5·132	4·946	4·772	4·607	4·451	4·303	4·163	4·031	9
10	5·889	5·650	5·426	5·216	5·019	4·833	4·659	4·494	4·339	4·192	10
11	6·207	5·938	5·687	5·453	5·234	5·029	4·836	4·656	4·486	4·327	11
12	6·492	6·194	5·918	5·660	5·421	5·197	4·988	4·793	4·611	4·439	12
13	6·750	6·424	6·122	5·842	5·583	5·342	5·118	4·910	4·715	4·533	13
14	6·982	6·628	6·302	6·002	5·724	5·468	5·229	5·008	4·802	4·611	14
15	7·191	6·811	6·462	6·142	5·847	5·575	5·324	5·092	4·876	4·675	15

Standard normal distribution table

	0·00	0·01	0·02	0·03	0·04	0·05	0·06	0·07	0·08	0·09
0·0	0·0000	0·0040	0·0080	0·0120	0·0160	0·0199	0·0239	0·0279	0·0319	0·0359
0·1	0·0398	0·0438	0·0478	0·0517	0·0557	0·0596	0·0636	0·0675	0·0714	0·0753
0·2	0·0793	0·0832	0·0871	0·0910	0·0948	0·0987	0·1026	0·1064	0·1103	0·1141
0·3	0·1179	0·1217	0·1255	0·1293	0·1331	0·1368	0·1406	0·1443	0·1480	0·1517
0·4	0·1554	0·1591	0·1628	0·1664	0·1700	0·1736	0·1772	0·1808	0·1844	0·1879
0·5	0·1915	0·1950	0·1985	0·2019	0·2054	0·2088	0·2123	0·2157	0·2190	0·2224
0·6	0·2257	0·2291	0·2324	0·2357	0·2389	0·2422	0·2454	0·2486	0·2517	0·2549
0·7	0·2580	0·2611	0·2642	0·2673	0·2704	0·2734	0·2764	0·2794	0·2823	0·2852
0·8	0·2881	0·2910	0·2939	0·2967	0·2995	0·3023	0·3051	0·3078	0·3106	0·3133
0·9	0·3159	0·3186	0·3212	0·3238	0·3264	0·3289	0·3315	0·3340	0·3365	0·3389
1·0	0·3413	0·3438	0·3461	0·3485	0·3508	0·3531	0·3554	0·3577	0·3599	0·3621
1·1	0·3643	0·3665	0·3686	0·3708	0·3729	0·3749	0·3770	0·3790	0·3810	0·3830
1·2	0·3849	0·3869	0·3888	0·3907	0·3925	0·3944	0·3962	0·3980	0·3997	0·4015
1·3	0·4032	0·4049	0·4066	0·4082	0·4099	0·4115	0·4131	0·4147	0·4162	0·4177
1·4	0·4192	0·4207	0·4222	0·4236	0·4251	0·4265	0·4279	0·4292	0·4306	0·4319
1·5	0·4332	0·4345	0·4357	0·4370	0·4382	0·4394	0·4406	0·4418	0·4429	0·4441
1·6	0·4452	0·4463	0·4474	0·4484	0·4495	0·4505	0·4515	0·4525	0·4535	0·4545
1·7	0·4554	0·4564	0·4573	0·4582	0·4591	0·4599	0·4608	0·4616	0·4625	0·4633
1·8	0·4641	0·4649	0·4656	0·4664	0·4671	0·4678	0·4686	0·4693	0·4699	0·4706
1·9	0·4713	0·4719	0·4726	0·4732	0·4738	0·4744	0·4750	0·4756	0·4761	0·4767
2·0	0·4772	0·4778	0·4783	0·4788	0·4793	0·4798	0·4803	0·4808	0·4812	0·4817
2·1	0·4821	0·4826	0·4830	0·4834	0·4838	0·4842	0·4846	0·4850	0·4854	0·4857
2·2	0·4861	0·4864	0·4868	0·4871	0·4875	0·4878	0·4881	0·4884	0·4887	0·4890
2·3	0·4893	0·4896	0·4898	0·4901	0·4904	0·4906	0·4909	0·4911	0·4913	0·4916
2·4	0·4918	0·4920	0·4922	0·4925	0·4927	0·4929	0·4931	0·4932	0·4934	0·4936
2·5	0·4938	0·4940	0·4941	0·4943	0·4945	0·4946	0·4948	0·4949	0·4951	0·4952
2·6	0·4953	0·4955	0·4956	0·4957	0·4959	0·4960	0·4961	0·4962	0·4963	0·4964
2·7	0·4965	0·4966	0·4967	0·4968	0·4969	0·4970	0·4971	0·4972	0·4973	0·4974
2·8	0·4974	0·4975	0·4976	0·4977	0·4977	0·4978	0·4979	0·4979	0·4980	0·4981
2·9	0·4981	0·4982	0·4982	0·4983	0·4984	0·4984	0·4985	0·4985	0·4986	0·4986
3·0	0·4987	0·4987	0·4987	0·4988	0·4988	0·4989	0·4989	0·4989	0·4990	0·4990

This table can be used to calculate $N(d)$, the cumulative normal distribution functions needed for the Black-Scholes model of option pricing. If $d_i > 0$, add 0·5 to the relevant number above. If $d_i < 0$, subtract the relevant number above from 0·5.

SUGGESTED SOLUTION

SOLUTION ONE

(a)

Item	Cash flow (Kbn)	Discount@5%	PV(Kbn)
Construction costs (1-4yr)	20% x K0.5bn=K0.1	3.546	0.3546
Construction costs (5yr)	15% x0.5 = K0.075	0.784	0.0588
Initial Cost	0.05x 0.5= k0.025	1.000	0.025
Compensation cost			0.1
PV of Costs			**0.5384**
Additional export earnings	0.2	6.051	1.2102
NPV			**0.6718**

Annuity Factors

Period	Discount Factor
Year 1 – 4	3.546
Year 1 –5	4.329
Year 6 - 15	(10.38-4.329) =6.051

Recommendation

The construction project should be undertaken since the NPV is positive. However, it will be important to consider non-financial factors before making the financial decision.

(b) **Benefits of public private partnership (PPP) models**

1) Financing-The cost of building is met by the private sector

2) Construction risk- the public sector usually holds the risks related to construction delays and overruns

3) The asset is the property of the public sector

(c) **Five specific actions that can be undertaken to manage capital project risk**

- Consult with stakeholders early to ensure requirements are properly identified.
- Avoid decisions that are irreversible and restrict alternative courses of action.
- Use pilot studies to gain greater information on costs and benefits.
- Ensure there is greater flexibility designed into the project so that uncertainties can be adapted to.
- Take a precautionary approach against risks with catastrophic outcomes.

(d) Reasons for a budget deficit and the impact on the economy.

This is where budgeted expenditure exceeds budgeted revenue. The shortfall in revenue is then met using borrowed funds.

The reasons for a budget deficit are:

i) To boost economic activity were there was an economic slump.
ii) To create employment through increased funding of projects through the budget.
iii) To stimulate exports. i.e increased money supply will cause a rise in inflation which may in turn weaken the currency. Weakening of a currency makes exports cheaper.

SOLUTION TWO

1) The key differences which lead to distinct characteristics of PFM are as follows:

   a) The relationship between citizens and those who use services and the state is based on rights, the public interest, and funding through taxation. Individuals usually have a choice over whether to purchase goods and services and who to purchase them from in the private sector. Ultimately they can, at least theoretically, withhold resources and exit markets. This is not the case in the public sector, where public goods and services are provided by the state and must be funded through taxes or compulsory fees and charges.
   b) As individuals and other entities are required to pay taxes in order for services to be made available, these taxes must be spent by government in the public interest, to high standards of ethics and governance, and in a manner that promotes value for money. There must therefore be transparency as to how public resources have been used, and government officials must act with fairness, integrity and be accountable to citizens and service users. In the private sector the source of funds is usually the owners of the company or shareholders.
   c) Government is often a monopoly provider of public goods and services and in the absence of competition and a profit motive to determine a fair way in which to allocate scarce resources, achieving value for money can be challenging. While input measures may be readily available, measuring outputs and outcomes is also often far more difficult, which further complicates financial decision making. In the private sector the motive is profit and shareholder wealth maximisation
   d) There are many complex and competing objectives faced by governments, and operating in a political environment adds additional pressures. Delivery of certain services may be deemed necessary for wider social or political reasons, even if from a strict financial management perspective such decisions do not lead to an optimal use of resources.
   e) Finally there is a challenge that can arise from other parts of government or external providers of funding, who may also have both legitimate expectations as to how resources will be utilized and their own stakeholders to satisfy. Service delivery at a local level for example may be subject to different decision making and accountability mechanisms and external donors may require resources to be used in a certain manner that does not coincide with government priorities.

2)
   a) The Ministry of finance.(MoF)

      The MoF is responsible for economic and financial management. Its missions are to efficiently and effectively coordinate national planning and economic management, mobilize and manage public resources in a transparent and accountable manner for sustainable national development. Its two main functions include:

   i) Economic management and finance

      This involves among other things the development of fiscal and monetary policies to guide domestic resource mobilization and government medium

and long term expenditure. It’s also responsible for managing the financial resources of the country and monitoring accounting processes.

ii) Budgets and economic affairs

It is responsible for budget implementation, managing cash flows of the republic and setting revenue targets for the ZRA.

Economic and debt management role include includes monitoring and evaluating the governments investments and management of domestic and external debt stock.

b) Ministries, Provinces and Spending Agencies (MPSAs)

The government of Zambia is centralized with central government comprising Ministries, Provincial administrations and Spending Agencies.

Services at district level are coordinated at a provincial level and effectively managed by units of the relevant central government ministry. E.g. Health service delivery is managed by District Health Offices. Markets and bus stations are managed by local authorities in the district.

c) Auditor general and the National Audit Office

The auditor general’s duties and responsibilities provided for in article 250 of the constitution include audit of the accounts of state organs, provincial administration, local authorities and institutions financed from public funds. The other responsibilities includes ascertaining that money appropriated by parliament or raised by government and disbursed has been applied for the purpose for which it was appropriated.

d) The Legislature

Parliament of Zambia consists of the president and the national assembly. Parliament enacts legislation through bills passed by the national assembly and assented to by the president. Article 63(2) of the constitution states that the national assembly is responsible for overseeing the performance of executive functions by among other things:

i) Ensuring equity in the distribution of national resources amongst the people of Zambia
ii) Approving public debt before it is contracted
iii) Scrutinizing public expenditure.

SOLUTION THREE

a) The five step business case model has the following core key components:

i. The "Strategic case" - that the intervention is supported by a case for change which provides a rationale for why the project is required, what the outcomes will be , and how this fits with wider national, regional and/or local priorities.
ii. The "economic case"-that the intervention represents best public value. This demonstration requires the identification and appraisal of a range of alternatives with a view to producing a short list of options that are subjected to detailed cost-benefit analysis.
iii. The "commercial case"-required to demonstrate that the preferred option put forward in the economic case will result in a viable procurement process. This includes the need to specify service requirements and outputs, delivery models and risk allocation, and any anticipated charging regime.
iv. The "financial case"-demonstrates that the preferred option is affordable and can be funded. This requires the demonstration of capital and revenue expenditure for the proposal over the life of the project, including an assessment of the impact on the public sector entity's budgets.
v. The" management case" –this demonstrates that there is the capacity to deliver the preferred option successfully, in accordance with sound project management methodologies and with robust monitoring and evaluation, change management, risk identification and mitigation and other processes in place.

b).Foreign Financing:

Foreign project grants are provided to a particular nation on either a bilateral or multilateral basis to fund specific projects. As they are grants, they do not need to be repaid provided that the conditions attached to the grants are fulfilled and met.

Programme and Project Loans:

The funds obtained as programme and project loan have to be repaid and in most instances attract interest. These include financing from multinational organisations like the World Bank,.European Investment Banks and African Development Banks. They also include bilateral financing from banks such as the Export-Import Bank of China.

While it is useful to borrow from these institutions, particularly when domestic capital markets are constrained, the requirement to pay interest and repay capital restricts future spending flexibility. Additional issues arise if borrowing is made and repayments are required in form of a foreign currency such as the US$, as depreciation of the local currency can lead to significantly higher repayments.

SOLUTION FOUR

(a) Financial management in the private sector is concerned with the management of the finances of the organisation in order to achieve the objectives of the private sector entity. In the situation of Piopterplc, the main objective being that the company should pay dividends, i.e. maximisation of shareholder's wealth.

The decision to invest the 60% of the advance payment in an offshore account before purchase of the drugs for the hospital has in itself certain inherent risks that the company faces and also the public institution, the hospital. While the company may want to realise interest on the offshore investment, the hospital will be exposed to the risk of provided the necessary service to the general public of which it is mandated to provide.

The other risk Piopler Plc faces is that primarily focused on cash flows. Already the Liquidity ratios particularly the acid test ratio shows a declining trend, meaning it has inadequate current assets (less stocks) to meet its short-term obligations. The firm is exposing itself to the risks of exchange rates which may affect selling prices, purchase price prices and volumes, influencing the company's market position and its value. Further, there may be changes in interest rates which can affect the company negatively.

(b) The Private Sector Financial Risk is primarily focused on risks to the cash flows of the firm.

In the public Sector, while cashflow are equally important, the financial risks are broader in that they need to be understood from the from a fiscal whole of public sector perspective as well as at the level of the individual public sector entity.

The Fiscal risks are crucial to understanding wider public sector financial risk due to the following:

1. There can be very large-Sudden macroeconomic deteriorations result in sharp increases in government deficits and debt which cab take many years to bring back.
2. They are biased towards the downside- positive fiscal shocks tend to be anticipated and incorporated into forecasts, meaning remaining risks are usually negative.
3. They are highly correlated-macroeconomic downturns tend to trigger other shocks, including financial crises and the collapse of state-owned enterprises and subnational governments. These shocks are highly correlated with each other magnifying the impact of individual fiscal risks.
4. Their impacts can be highly nonlinear-the fiscal consequences of larger macroeconomic shocks are much greater than smaller shocks. This is partly because spending is usually either fixed or may even rise in response to shocks, while revenues decline significantly.

SOLUTION FIVE

S/N	Question
(a)	**Identify the critical reforms in the area of cash management that will assist government improve its liquidity.**
	• Centralisation of cash balances – Establishing a Treasury Single Account • Cash planning framework – Enable Government have a clear understanding of the coverage of • Cashflow Forecasting - Ability to make accurate projections of short term cash in flows and outflows • Integrated Financial Management Systems -An adequate transaction processing framework • Reporting framework - Timely information sharing between the central treasury , revenue – collecting agencies , spending ministries and treasury branch offices • Restructuring of Institutions - Appropriate institutional arrangements and responsibilities • Interface with Banking systems - Utilization of modern banking, payment and settlement systems • Domestic Markets - Use of short term financial markets instruments for cash management • Integration of debt and cash
(b)	**Identify five criteria that can be used when evaluating sourcing of financing and evaluate the PPPs against these five criteria.**
	• Financial cost - PPPs should offer value for money and therefore should appear attractive on financial cost. However, many have raised concerns about the long term cost of PPPs, as lack of transparency can hide the amount of profit made by private partners. • Flexible in use - PPPs are only suitable for large capital projects, therefore lack flexibility in use. • Flexible in availability - Negotiation around PPPs can ensure that financing can be used flexibly. • Administrative complexity - PPPs can be highly complex in terms of establishing the PPP and monitoring ongoing PPPs. • Political attractiveness - Political attractiveness may vary depending on the organisation's stance. However, as PPPs begin to appear more expensive, it is likely they will become less politically attractive.
(c)	**Explain sustainable debt service and explain the IMF's framework in relation to undertaking Debt Sustainability analysis.**
	This is looking at a long term and often inter- generational time scale (Inter temporal) and it considers whether debts that have been accumulated can be serviced i.e. can the interest and principal be paid when it falls due. If it cannot, that is when a country will either default or

	need to be supported by the IMF. For the debt to be sustainable it can be defined as: where the stock of debt can be paid by future revenues and can be represented by: Debt < Net Present Value of future cash flows. **The objectives of the IMF framework is threefold:** • Assess the current debt situation, its maturity structure, whether it has fixed or floating rates, whether it is indexed, and by whom it is held; • Identify vulnerabilities in the debt structure or the policy framework far enough in advance so that policy corrections can be introduced before payment difficulties arise; • In cases where such difficulties have emerged, or are about to emerge, examine the impact of alternative debt-stabilizing policy paths.

END OF SOLUTIONS