CHARTERED ACCOUNTANTS EXAMINATIONS

PROFESSIONAL LEVEL

P1: ADVANCED FINANCIAL REPORTING

MONDAY 12 JUNE 2017

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

INSTRUCTIONS TO CANDIDATES

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

2. This paper is divided into TWO sections:

   Section A: Attempt this ONE (1) compulsory question.
   Section B: 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 question paper.

SECTION A

This question is compulsory and must be attempted

QUESTION ONE

The following consolidated financial statements relate to Malate Plc Group for the year to 31 May 2017.

Consolidated Statement of Profit or loss for the year ended 31 May 2017

	K'000
Revenue	1 180
Cost of sales	(442)
Gross profit	738
Other income	20
Distribution cost	(333)
Administrative cost	(265)
Finance cost	(45)
share of associate loss	(60)
Profit before tax	55
Taxation	(22)
Profit for the period	33
Other comprehensive income	
Net actuarial gain	4
Total comprehensive Income	37
Profit for the period attributable to:	
Equity holders of parent	26.40
Non-controlling interest	6.60
	33.00
Total comprehensive income attributable to:	
Equity holders of parent	30.40
Non-controlling interest	6.60
	37.00

Consolidated Statement of Financial Position as at 31 May

	2017 K'000	2016 K'000
Assets		
Non-current		
Property, plant and equipment	800	700
Goodwill	88	90
Investment in associate	142	150
Deferred tax	-	10
	1,030	950
Current		
Inventory	100	86
Trade Receivables	140	146
Cash & cash equivalents	-	13
	240	245
Total Assets	**1,270**	**1,195**
Equity and liabilities		
Equity		
Equity shares of K0.50 each	330	220
Share premium	66	16
Retained earnings	(9)	(24)
	387	212
Non- controlling interests	127	116
Total Equity	**514**	**328**
Liabilities		
Non-current		
Employee benefits	224	298
Deferred Tax	17	-
20% Loan Notes	232	340
	473	638
Current		
Trade payables	130	134
Taxation	29	47
Finance cost payable	80	48
Bank overdraft	44	-
	283	229
Total Liabilities	**756**	**867**
Total equity and liabilities	**1,270**	**1,195**

The following information is relevant:

(1) On 31 May 2017, Malate Plc acquired 80% of the equity shares of Lalana Plc for a cash consideration of K126,000. The fair value of net assets of Lalana Plc at acquisition was K14,000. This is summarised below:

	K'000
Property, plant and equipment	13.60
Trade receivables	1.70
Bank	1.20
Trade payables	(2.00)
Taxation	(0.50)
	14.00

There was no disposal of subsidiary during the year to 31 May 2017.

(2) Malate Plc acquired 10% additional equity shares in Laba Plc for a cash consideration of K14,000 on 31 May 2017. This increased its shareholding to 80%. Malate Plc acquired 70% of the equity shares in Laba Plc on 1 June 2014 for a consideration of K89,000. The fair value of the net assets of Laba Plc was K130,000 and K110,000 on 31 May 2017 and 1 June 2014 respectively. Goodwill in Laba Plc had not been impaired since its acquisition. The movement on equity arising from this transaction was taken to share premium.

(3) Malate Plc acquired 25% of equity shares in Nala Plc on 1 November 2016 for a cash consideration of K72,000. Malate Plc has significant influence in Nala Plc. Malate Plc received total dividends of K8,000 from all of its associated companies for the year to 31 May 2017. No investments in associated companies were disposed off during the year.

(4) On 30 March 2017, Malate Plc disposed of equipment with a carrying value of K38,000 for K58,000 cash. On 1 April 2017, Malate Plc disposed off a piece of plant for K6,000 cash. This had a carrying value of K7,000.

Depreciation charge for the year amounted to K68,000. This was charged to cost of sales. Further, profit on disposal of equipment was taken to other income while loss on disposal of plant was charged to administrative cost.

(5) Malate Plc introduced a defined benefit plan on 1 June 2014. During the year to 31 May 2017, it paid pension contributions of K100,000 . No pension benefits were paid out during the year. Net pension expenses were charged to administrative costs. Net actuarial gains were taken to share premium.

(6) Consolidated goodwill and investment in associate were both impaired during the year to 31 May 2017, with the exception of goodwill in Laba Plc in (2) above.

(7) The 20% loan note was issued on 1 June 2015. It was correctly classified as '***financial liability through profit or loss***'. All changes in fair value are taken to administrative expenses. There was no acquisition nor disposal of any financial liability classified as '*through profit or loss*' during the year.

(8) Malate Plc issued equity shares for cash on 31 December 2016.

(9) Malate Plc, its subsidiaries and associated companies paid dividends on 1 December 2016.

(10) It is Malate Plc's group policy to value non – controlling interests using proportion of net assets method.

(11) The following exchange rates are relevant:

Date	**K to $1**
1 November 2016	12.000
31 May 2017	10.000
Average rate	11.000

(12) Kwacha is the functional and reporting currency of Malate Plc.

Required:

(a) Prepare a consolidated statement of cashflows of Malate Plc Group using the indirect method, for the year ending 31 May 2017 in accordance with the requirements of IAS 7 '*Statement of cash flows*'. (**Notes to the statement of cashflows are not required**). (35 marks)

(b) Current purchasing power accounting is an accounting measurement showing the effect of inflation on the value of money. Current purchasing power is arrived at by converting historical costs into current prices by using an index such as consumer price index or general price index. This accounting measurement has advantages and disadvantages.

Required:

Explain the advantages of current purchasing power accounting. (5 marks)

[Total: 40 Marks]

SECTION B

Attempt only three (3) questions from this section

QUESTION TWO

Eland Ltd prepares financial statements to 31 March each year. The financial statements for the year ended 31 March 2015 are to be authorised for issue on 30 June 2015. The following events are relevant to these financial statements:

(a) On 1 April 2014, Eland purchased 1 million options to acquire shares in Fox, a listed entity. Eland paid K0.25 per option, which allows Eland to purchase shares in Fox for a price of K2.00 per share. The exercise date for the options was 31 December 2014. On 31 December 2014, when the market value of a share in Fox was K2.60, Eland exercised all its options to acquire shares in Fox. In addition to the purchase price, Eland incurred directly attributable acquisition costs of K100,000 on the purchase of the 1 million shares in Fox. Eland regarded the shares it purchased in Fox as part of its trading portfolio. However, Eland did not dispose of any of the shares in Fox between 31 December 2014 and 31 March 2015. On 31 March 2015, the market value of a share in Fox was K2.90. (9 marks)

(b) On 1 April 2014, Eland sold a property for K48 million to raise cash to expand its business. The carrying value of the property on 1 April 2014 was K50 million and its fair value was K55 million. The estimated future useful life of the property on 1 April 2014 was 40 years. On 1 April 2014, Eland began to lease this property on a 10 year lease. The annual lease rentals for the first five years of the lease were set at K1 million. For the final five years of the lease, the rentals were set at K1.5 million. Both of these rental amounts were below the market rental for a property of this nature. (7 marks)

(c) On 31 March 2015, the inventories of Eland included a consignment of components which Eland had been supplying to a number of different customers for some years. The cost of the consignment was K10 million and based on retail prices at 31 March 2015, the expected selling price of the consignment would have been K12 million. On 15 May 2015, a competitor completed development of an alternative component which seems likely to make Eland's consignment obsolete. Directors of Eland estimate that the consignment (all still currently unsold) will now be sold for only K2 million. (4 marks)

Required:

Explain and show how the three events should be reported in the financial statements of Eland Ltd for the year ended 31 March 2015.

[Total: 20 Marks]

QUESTION THREE

(a) Mabala Plc is a manufacturing company that was formed 20 years ago. It has been fighting various cases in courts of law and outside relating to environmental pollution, bad working environment and poor working conditions for its employees. The company has never seen the importance of publishing its sustainability report. This is because the Directors of Mabala Plc does not know how this report would influence the company's perception by its various stakeholders.

The Directors of Mabala Plc need to know the advantages and disadvantages of sustainability reporting.

Required:

Explain the advantages and disadvantages of sustainability reporting to Mabala Plc. (10 marks)

(b) IFRS 2: "Share-based Payment", defines a share-based payment transaction as one in which an entity receives goods or services from a third party (including an employee) in a share-based payment arrangement. IFRS 2 further defines a share-based payment arrangement as an agreement between an entity and a third party which entitles the third party to receive either:

- Equity instruments of the entity (equity-settled share-based payments); or
- Cash or other assets based on the price of equity instruments of the entity (cash-settled share-based payments).

Share-based payment arrangements are often subject to vesting conditions which must be satisfied over a vesting period.

Required:

For **both** cash-settled and equity-settled share-based payment arrangements, explain:

(i) The basis on which the arrangements should be measured; (4 marks)

(ii) The criteria which are used to allocate the total value of the arrangement to individual accounting periods; (2 marks)

(iii) The accounting entries (debit and credit) required during the vesting period. (4 marks)

[Total: 20 Marks]

QUESTION FOUR

You work for Sama Chartered Accountants as one of the firm's financial consultants. Your two major client companies, Leka Plc and Jenga Plc have approached you for advice on the accounting treatment of the following matters in their financial statements in accordance with applicable accounting standards.

Client 1-Leka Plc

Leka Plc acquired a block making machine on 1 April 2016 at a cost of K400,000. The machine qualified for an immediate government grant equal to 10% of its purchase price net of any trade discount on condition that it remained in use over its useful life. The grant was received by Leka Plc on 1 April 2016. The machine was ready for its intended use on 1 July 2016.

The cost of K400,000 consists of the following:

	K'000
Purchase price (note 1)	300
Installation costs (note 2)	70
Performance guarantee cost (note 3)	20
Delivery cost (note 4)	10
Total cost	400

Notes

(1) The purchase price is before taking into account trade discount of 8%.

(2) Installation was done by both supplier's and Leka Plc's staff. K26,000 of the cost shown above relates to what the machine supplier paid Leka Plc for installation works done by its workers. Leka Plc did not pay its workers any additional amount for being involved in installing the new machine.

(3) This relates to a two – year maintenance service to be provided by the supplier. It was paid on 1 April 2016. It is refundable if no works are carried out on the machine. No maintenance works were provided by supplier in the period to 31 March 2017.

(4) This is simply an estimate of what it would have been charged by machine supplier to deliver the machine. The machine was however delivered free of charge as it was on promotion. Leka Plc depreciates machines at an annual rate of 20%. Assume nil scrap value. Leka Plc has a policy of using deferred income to account for government grants.

The Directors of Leka Plc need your advice on how the transaction should be treated in their financial statements for the year ended 31 March 2017.

Client 2 – Jenga Plc

The Managing Director of Jenga, who is not an accountant, recently attended a seminar and seeks clarification on the following issue discussed at the seminar;

One of the delegates at the seminar, a director of an entity which operates a number of different farms, informed the gathering that there was a financial reporting standard which applied to farming entities, IAS 41.

The Managing Director of Jenga now would like to know why a special standard is needed for farming entities. He adds that: " given that we have IAS 41, does this mean that other IFRSs do not apply to farming entities? Please explain the main recognition and measurement requirements of IAS 41 without bothering yourself with details about disclosures." The Managing Director is interested in any areas where the provisions of IAS 41 differ from general IFRSs. The Managing Director concludes by stating that he believes he correctly heard that farming entities treat grants from the government in a different way from other entities adding that he was particularly interested to hear about this.

Required:

Provide answers to the questions raised by the two client company's directors.

[Total: 20 Marks]

QUESTION FIVE

You recently attended a workshop on various International Accounting Standards (IASs) and International Financial Reporting Standards (IFRSs). The Managing Director of your company, Nama Plc, wants you to write a report covering various accounting standards and accounting treatment of several transactions in accordance with applicable accounting standards.

Transaction One

During the year ended 31 May 2017, Nama entered into the following transactions:

On 1 April 2017, Nama sold a machine to a customer for which it agreed that the machine would be on free service warranty until 31 July 2019. The total amount payable by the customer for this arrangement was agreed to be:

(i) K560,000, if the customer paid by 31 August 2017.
(ii) K567,000, if the customer paid by 30 September 2017.
(iii) K574,000, if the customer paid by 31 October 2017.

Directors of Nama consider that it is highly probable the customer would pay for the machine in August 2017. The stand-alone selling price of the machine was K490,000 and Nama would normally expect to receive K98,000 in consideration for servicing the machine in the service warranty period. The alternative amounts receivable are to be treated as variable consideration. (10 marks)

Transaction Two

Nama Plc owns another building which it acquired five years ago at a cost of K800,000. The building was acquired for its investment potential. However, Nama Plc has been unable to let it out because of being in a deplorable state and the company not having adequate resources to carry out repair works.

On 1 June 2016, Nama Plc entered into an agreement with Vana Plc to finance and repair the building. The terms of the agreement were as follows:

(1) The agreement will take effect on 1 June 2016;
(2) Vana Plc is responsible for repairing the building. This is expected to be completed on 30 May 2017 at an estimated cost of K1,200,000;
(3) Nama Plc will relinquish the right to collect rentals for four years commencing on 1 June 2017;
(4) The cost of routine repairs and maintenance works to the building and its insurance during the period referred to in (3) above will be borne by Vana Plc;
(5) The building will be handed over to Nama Plc on 1 June 2021.

Vana Plc completed repair works on 20 May 2017 at a cost of K1,300,000. The building was successfully let out to various tenants on 1 June 2017. Total rentals were locked at K652,000 per year for four years starting 1 June 2017 and no tenant is expected to vacate the building for a period of four years.

The Directors of Nama Plc have not accounted for this transaction and need your advice on how to treat it in their financial statements for the year ended 31 May 2017 and beyond.

(10 marks)

*Note: Nama Plc has a policy of depreciating buildings at 5% on cost as appropriate***.**

Required:

Write a report to the Managing Director that discusses the accounting treatment of the two transactions for the year ended 31 May 2017 in accordance with applicable international accounting standards. **(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

JUNE 2017- ADVANCED FINANCIAL REPORTING (P1)
SOLUTIONS

SOLUTION ONE

Part (a)

Malate Group
Consolidated Statement of Cashflow for the year ended 31 May 2017

	K'000	K'000
Cash flow from operating activities		
Profit before tax		55.00
Add back:		
Share of associate loss		60.00
Finance cost expense		45.00
Depreciation		68.00
Net pension expense **W9**		30.00
Loss on disposal of plant (6 -7)		1.00
Profit on disposal of equipment (58 -38)		(20.00)
Decrease in fair value of loan note (340 - 232)		(108.00)
Goodwill impairment **W2**		116.80
Investment in associate impairment **W3**		12.00
Increase in inventory (100 - 86)		(14.00)
Decrease in trade receivables (140 -146 - 1.7)		7.70
Decrease in trade payables (130 - 134 - 2)		(6.00)
Cash generated from operations		247.50
Pension contribution paid		(100.00)
Taxation paid **W4**		(13.50)
Interest paid **W10**		(13.00)
Net cash inflow from operating activities		**121.00**
Cash flow from investing activities		
Purchase of Lalana Plc (126 - 1.2)	(124.80)	
Purchase of shares in Laba Plc	(14.00)	
Purchase of shares in Nala Plc	(72.00)	
Purchase of PPE **W1**	(199.40)	
Proceeds from disposal of PPE (58+6)	64.00	
Dividends received from associates	8.00	
Net cash outflow from investing activities		**(338.20)**
Cashflow from financing activities		
Proceeds from issue of shares **W6**	157.00	
Cash received from NCI **W8**	14.60	
Other dividends paid **W7**	(11.40)	
Net cashinflow from financing activities		**160.20**
Decrease in cash & cash equivalents		**(57.00)**
Opening cash & cash equivalents		13.00

Closing cash & cash equivalents	(44.00)

WORKINGS

W1 Property, plant & equipment

	K'000
Opening balance	700.00
Depreciation charge	(68.00)
New subsidiary	13.60
Disposals (38+7)	(45.00)
Acquisition (bal. fig.)	**199.40**
Closing balance	800.00

W2 Goodwill

	K'000
Opening balance	90.00
New subsidiary 126 – (80% x 14)	114.80
Impairment (bal fig.)	**(116.80)**
Closing balance	88.00

W3 Investment in associate

	K'000
Opening balance	150.00
Acquisition	72.00
Share of loss	(60.00)
Disposal	-
Impairment (bal. fig)	**(12.00)**
Dividends received	(8.00)
Closing balance	142.00

W4 Taxation

	K'000
Opening balance (47 - 10)	37.00
Profit or loss	22.00
New subsidiary	0.50
Cash paid (bal. fig)	**(13.50)**
Closing balance (29+17)	46.00

W5 Movement on Equity - 10% shareholding

	K'000
NCI at 31 May 2017 before disposal (30% x 130)	39
Decrease in NCI 10/30 x 39	13
Consideration paid	14
Negative movement on equity	**(1)**

W6 Issue of shares

	K'000
Opening balance (220 + 16)	236.00
Net actuarial gain	4.00
Shares issued for cash (bal. fig)	**157.00**
Movement on equity **W5**	**(1.00)**
Closing balance (330 + 66)	396.00

W7 Retained Earnings

	K'000
Opening balance	(24.00)
Profit or loss	26.40
Dividends paid (Bal. fig)	**(11.40)**
Closing balance	(9.00)

W8 Non - Controlling Interest

	K'000
Opening balance	116.00
New subsidiary 20% x 14	2.80
Profit or loss	6.60
Decrease in NCI **W5**	(13.00)
Cash received (Bal. fig)	**14.60**
Closing balance	127.00

W9 Employee Benefits

	K'000
Opening balance	298.00
Net actuarial gain	(4.00)
Net pension expense (Bal. fig)	**30.00**
Contribution paid	(100.00)
Closing balance	224.00

W10 Interest Payable

	K'000
Opening balance	48.00
Profit or loss	45.00
Cash paid (Bal.fig)	**(13.00)**
Closing balance	80.00

Part (b)

Advantages of current purchasing power accounting include the following:

1) It provides a more meaningful basis of comparison with other companies. This is because asset values are restated in terms of a stable money value. Further, current year's performance may be compared with previous year if previous year's profits are re –valued into current purchasing power terms.

2) Inflationary value increments are excluded as profits are measured in real terms. This enables better forecasts of future prospects to be made.

3) It avoids the subjective valuations associated with current value accounting by applying a single price index to all non-monetary assets.

4) Raw data is easily verifiable and measurements of value can be easily audited as it is based on historical cost accounting.

5) It provides a stable monetary unit with which to value profit and capital.

SOLUTION TWO

(a) Under provisions of IFRS 9: *Financial Instruments,* the option to acquire shares in Fox would be regarded as a derivative financial instrument.

This is because the value of the option depends on the value of an underlying variable (Fox's share price), it requires a relatively small initial investment and it is settled at a future date.

A derivative financial instrument is initially measured at its fair value.

In this case fair value will be the price paid – which is K250,000 at 1 April 2014.
Derivative financial instruments are remeasured to fair value at the reporting date and gains or losses on remeasurement recognised in the statement of profit or loss.

However, in this case the derivative is derecognised on 31 December 2014, when the option is exercised.
On 31 December 2014, the investment in Fox's shares would be regarded as a financial asset.

Under IFRS 9, financial assets are initially measured at fair value, so the initial carrying value of the shares in the books of Eland will be K2·6 million (1 million X K2·60).

The difference between the carrying value of the new asset – K2·6 million and the price paid plus the derecognised derivative – K2·25 million (K2 million + K250,000) will be taken to profit or loss for the year ended 31 March 2015 as investment income. In this case K350,000 will be included as investment income.

Given the investment in Fox is an equity investment, it will continue to be remeasured to fair value at each year end.

And since the investment is part of a trading portfolio, the investment is measured at fair value through profit or loss.

Therefore the acquisition costs of K100,000 must be recognised as an expense in the statement of profit or loss for the year ended 31 March 2015.

The investment is included in the statement of financial position at 31 March 2015 as a current asset at its fair value of K2·9 million.

The increase in fair value of K300,000 (K2·9 million – K2·6 million) is taken to the statement of profit or loss.

(b) The lease-back of the property will be regarded as an operating lease because the lease is for only 25% (10/40) of the future life of the property.

Therefore the property will be derecognised by Eland.

The apparent loss on sale of K2 million (K48 million – K50 million) will not be recognised immediately because Eland is being compensated by reduced rentals for the whole lease term. The amount will instead be regarded as a pre-payment.

The total lease rentals over the whole term are K12·5 million (5 x K1 million + 5 x K1·5 million).

Rental expense of K1·25 million (K12·5 million X 1/10) will be recognised in profit or loss for the year ended 31 March 2015.

A proportion of the apparent loss on sale will be recognised in profit or loss for the year ended 31 March 2015.

The amount recognised will be K160,000 – [K2 million X (K1 million/K12·5 million)].

The closing pre-payment will be K1,590,000 (K2 million – K160,000 + K1 million (rent paid) – K1·25million (rent charged)).

(c) The information about the obsolescence of the components is an event after the reporting date because it occurs after the reporting date but before the financial statements are authorised for issue.

This event would be a non-adjusting event because it does not give information about conditions existing at the reporting date.

At the reporting date, the inventory should be measured at the lower of cost (K10 million) and net realisable value (K12 million).

The after-date obsolescence of the inventory and its financial implications for Duiker should be disclosed in a note to the financial statements.

SOLUTION THREE

a) Advantages

Here are some of the advantages of corporate sustainability reports:

1. Enhances company image and reputation. This can help Mabala plc to either overcome some negative publicity it has received, or support an image it has already developed.

2. Attracts and retains employees. Employees tend to be happier working with companies that take care of them, and give them the opportunities to give back to, and volunteer in, their local communities. Such happy employees stay longer, and attract other people that are likeminded and want to work for such organisation.

3. Increases understanding of risks and opportunities for sustainability projects. Similar to a swot analysis in marketing, a report, because it is so detailed and tied in with overall company goals, can help direct Mabala plc to either seize opportunities to improve operations, or mitigate risks that they have identified in relation to sustainability.

4. Engages stakeholders. The report is meant not only for consumers, but also for a Mabala plc's stakeholders. It opens the door for conversation, accountability, and feedback.

5. Creates competition with industry peers. Issuing a report and following sustainability policies is a point of differentiation from Mabala plc's competitors. It may also force Mabala plc's competitors to do the same, at which point you would be forced to create other points of sustainability differentiation – all in the name of competition.

6. It can help Mabala plc to articulate its sustainability vision and strategy, and ensure that they are in line with its goals. Because the report typically includes the sustainability goals that the company wants to achieve, writing it forces the company to ensure that the goals are clear and they match with the company's overall mission and vision.

Disadvantages

Most of the advantages with sustainability reporting revolve around how the report is actually created and presented. There appears to be no downside to creating a report, unless it is not done well. The following are some of the mistakes that Mabala plc can make when creating its reports:

1. Weak goals. Having weak goals for the report, for sustainability policies in general, and for the organisation as a whole is a portion for disaster. The report must be built around strong organisational goals.

2. Mismanaged data. To present results accurately in the report, the data collection and presentation must be efficient, accurate and meaningful.

3. Disordered priorities. A good company will prioritise sustainability in the reports by weighing it equally to financial, environmental and societal performance – the Triple Bottom Line – instead of just focusing on financial performance.

4. Discounting feedback. Listen to clients and stakeholders when they provide advice, data verification, or comments on the report.

5. Breaking the rules. The report should follow good guidelines for sustainability reporting, such as those set by the Global Reporting Initiative.

6. Tenuous comparisons. State how Mabala plc sustainability efforts compare to other companies in the same industry, as opposed to presenting results based on Mabala plc's own benchmarks.

7. Unreachable targets. Make the reporting goals relevant and achievable, and in line with the overall goals of Mabala plc.

8. Under - reporting. Communicate sustainability performance across multiple media, in addition to the actual report. Mabala plc should make the message consistent across all platforms.

9. Thinking short term. Mabala plc should not turn down a sustainability opportunity simply because it has a higher price tag or longer payback period. Results will pay off in the end.

10. Inadvertent greenwashing. Results should be meaningful and truthful, with noted areas for self- improvement. While reporting company progress is a key component of the report, if all results are completely positive, customers and stakeholders may become sceptical.

(b) (i) For equity-settled share-based payment arrangements, the transaction should be measured based on the fair value of the goods or services received, or to be received.

Where the third party is an employee, 'fair value' should be based on the fair value of the equity instruments granted, measured at the grant date.

For cash-settled share-based payment arrangements, the transaction should be measured based on the fair value of the liability at each reporting date.

(ii) The amount recognised should take account of all vesting conditions other than (in the case of equity-settled share-based payments) market conditions (which are reflected in the measurement of the fair value of the instruments granted).

(iii) For both types of arrangement, the debit entry will normally be to profit or loss unless the relevant expense would qualify for recognition as an asset.

For an equity-settled share-based payment scheme, the credit entry would be recorded in equity, either as share capital or (more commonly) as an option reserve.

For cash-settled share-based payment arrangements, the credit entry would be recognised as a liability.

SOLUTION FOUR

Client 1 – Leka Plc

The block making machine should initially be recognised at cost in accordance with IAS 16'*Property, plant and equipment*'. Its initial cost should be made up of purchase price less any trade discount. To this figure, costs relating to bringing the machine into the premises of Leka plc and into working condition should be added.

The machine will be recognised under non – current assets at a carrying value of K272,000 **W1** in Leka plc's statement of financial position as at 31 March 2017. This is arrived at after adding installation cost of K44,000 **W1** based on what was incurred by Leka plc. K24,000 paid to Leka plc by the supplier for helping in installing the machine is an income to Leka plc and should be treated as such in its statement of profit or loss. Lastly, trade discount of K24,000 **W1** and depreciation charge for the period of nine months of K48,000 **W1** have been deducted in arriving at the carrying value. The depreciation charge should also be expensed to the statement of profit or loss for the year ended 31 March 2017.

Amount paid for performance guarantee amounting to K20,000 should be treated as prepayment in Leka plc's statement of financial position as at 31 March 2017 under non – current assets. An amount equal to the value of repair works provided by the supplier should be expensed to the statement of profit or loss and an equal amount transferred from K20,000. No amount is to be transferred to the statement of profit or loss nor expensed for the year ended 31 March 2017 as no repair works were done by the supplier on the machine for the year to 31 March 2017.

Government grant of K27,600 **W2** will be spread evenly over the machine's useful economic life of 5 years. This is in accordance with deferred income approach of IAS 20'*Accounting for government grants and government assistance*'. However, the period to 31 March 2017 is only nine months. Therefore, K4,140 **W2** will be transferred to the statement of profit or loss for the year ended 31 March 2017. This will leave deferred income balance relating to government grant of K23,460 **W2** recorded under liabilities in the statement of financial position as at 31 March 2017. This amount will be analysed into non – current liability of K17,940 **W2** and current liability of K5,520 **W2**.

Workings

W1 – Block making machine

	K'000
Purchase price	300
Less: trade discount @8%	(24)
Net purchase price	276
Add: Installation cost (70 – 26)	44
Total initial cost	320
Depreciation (20% x 320) x 9/12	(48)
Carrying value at 31 March 2017	**272**

W2 – Government Grant

	K'000
Net purchase price (W3)	276
Grant @10%	27.6
Transferred to Profit or Loss (27.6/5yrs) x 9/12	**(4.14)**
Balance at 31 March 2017	23.46
Current liability (27.6/5yrs)	**5.52**
Non – current liability	**17.94**

Client 2 – Jenga Plc

It is not true that, given the existence of IAS 41: *Agriculture* – other IFRSs do not apply to farming companies. The general presentation requirements of IAS 1: *Presentation of Financial Statements*, together with the specific recognition and measurement requirements of other IFRSs, apply to farming companies just as much as others.

IAS 41 deals with agricultural activity. Two key definitions given in IAS 41 are biological assets and agricultural produce.

A biological asset is a living animal or plant. Examples of biological assets would be sheep and fruit trees.

The criteria for the recognition of biological assets are basically consistent with other IFRSs, and are based around the Framework definition of an asset.

A key issue dealt with in IAS 41 is that of measurement of biological assets. Given their nature (e.g. lambs born to sheep which are existing assets), the use of cost as a measurement basis is impracticable.

The IAS 41 requirement for biological assets is to measure them at fair value less costs to sell. Changes in fair value less costs to sell from one period to another are recognised in profit or loss.

Agricultural produce is the harvested produce of a biological asset. Examples would be wool (from sheep) or fruit (from fruit trees).

The issue of measuring 'cost' of such assets is similar to that for biological assets. IAS 41 therefore requires that 'cost' should be fair value less costs to sell at the point of harvesting. This figure is then the deemed 'cost' for purposes of IAS 2: Inventories.

A consequence of the above treatment is that government grants receivable in respect of biological assets are not treated in the way prescribed by IAS 20: Government Grants. Where such a grant is unconditional, it should be recognised in profit or loss when it becomes receivable. If conditions attach to the grant, it should be recognised in profit or loss only when the conditions have been met.

The IAS 20 treatment of grants is to recognise them in profit or loss as the expenditure to which they relate is recognised. This means that recognition of grants relating to property, plant and equipment takes place over the life of the asset rather than when the relevant conditions are satisfied.

SOLUTION FIVE

To: The Managing Director
From: Accountant
Date:
Subject: **Accounting treatment of the two transactions**

1.0. Introduction

The report will cover accounting treatment of the two transactions in the financial statements of Nama Plc in accordance with international accounting standards.

2.0. Accounting treatment

2.1. Transaction One

Nama has TWO performance obligations: to provide the machine and provide the servicing.

The total transaction price consists of a fixed element of K560,000 and a variable element of K7,000 or K14,000.

The variable element should be included in the transaction price based on the probability of its occurrence. Therefore a variable element of K7,000 should be included and the total transaction price will be K567,000.

The transaction price should be allocated to the performance obligations based on their stand-alone fair values. In this case, these are K490,000:K98,000 or 5:1.

Therefore K472,500 (K567,000 x 5/6) should be allocated to the obligation to supply the machine and K94,500 (K567,000 x 1/6) to the obligation to provide twenty eight months' servicing of the machine.

The obligation to supply the machine is satisfied fully in the year ended 31 May 2017 and so revenue of K472,500 in respect of this supply should be recognised.

Only 2/28 of the obligation to provide the servicing is satisfied in the year ended 31 May 2017 and so revenue of K6,750 (K94,500 x 2/28) in respect of this supply should be recognised.

On 31 May 2017, Nama will recognise a receivable of K567,000 based on the expected transaction price. This will be reported as a current asset.

On 31 May 2017, Nama will recognise deferred income of K87,750(K567,000 - K472,500 – K6,750). K40,500 (K87,750 x 12/26) of this amount will be shown as a current liability. The balance of K47,250 (K87,750 – K40,500) will be non-current.

2.2. Transaction Two

The building being acquired for its investment potential qualified to be treated as an investment property in accordance with IAS 40 '*Investment property*'. Nama plc had a choice, after initial recognition at cost, to either continue with cost model and subject the building to depreciation and impairment review or carry it at fair value with changes in fair value being taken to statement of profit or loss as either gains or losses. However, the building was in a deplorable state making it not being ready for immediate occupation. This makes it accounting for it under IAS 40 '*Investment property*' inappropriate. The building should therefore being carried at cost subject to depreciation in accordance with IAS 16'*Property, plant and equipment*'.

Nama Plc should continue classifying the building under IAS 16 until it is ready for its intended use. The building will be shown under non – current assets in the statement of financial position of Nama plc as at 31 May 2017 at a total cost of K2,100,000 (800,000 + 1,300,000). The cost of repairs incurred by Vana plc on behalf of Nama plc should be capitalised as it was incurred to make the building usable. Nama plc should also recognise a liability amounting to K1,300,000. This is because Nama plc has an obligation to pay it back over the next 4 years, it is measurable and as a result of repair works which have already taken place. This is in accordance with IAS 37 '*Provisions, contingent liabilities and contingent assets*'. Further, no depreciation should be recognised in the financial statements of Nama plc for the year ended 31 May 2017.

On 1 June 2017, Nama plc should reclassify the building as an investment property in accordance with IAS 40. It should initially be recognised at K2,100,000. Subsequent measurement will depend on Nama plc's accounting policy. It could either use cost model or fair value model.

The amount of K1,300,000 will be treated as a loan from Vana plc repayable in 4 years. Total interest of K1,308,000 **W1** will be spread over 4 years on a straight line basis. This will result in K327,000 (K1,308,000/4 years) being charged to the statement of profit or loss in each of the 4 years starting in the year ending 31 May 2018. Nama plc may also use sum of digits method or any other method to spread interest cost over a period of 4 years. No interest should be capitalised as the building, at the time interest is being incurred, is no longer a qualifying asset. This is in accordance with IAS 23'*Borrowing costs*'. Annual loan repayment will amount to K652,000 **W1** for the year ending 31 May 2018 onwards. This will be broken down into principle repayment of K325,000 (652,000 – 327,000) and interest payment of K327,000. The principle repayment will reduce the loan amount of K1,300,000 while the interest component will be charged to statement of profit or loss. Further, K652,000 represents rental income and should be recognised in the statement of profit or loss for the year ending 31 May 2018 onwards.

3.0. Conclusion

IAS 16'*Non-current assets*', IAS 40'*Investment property*', IAS 23'*Borrowing costs*' and IAS 37'*Provisions, contingent liabilities and contingent assets*' and IFRS 15 are relevant in the accounting treatment of the two transactions. However, do not hesitate to contact me for further clarification regarding any information in this report.

Workings

W1. Liability

	K'000
Total rentals for 4 years (K652,000 x 4yrs)	2,608
Loan value (total repair costs)	1,300
Total interest	**1,308**
Annual loan repayment	652

END OF SOLUTIONS

CHARTERED ACCOUNTANTS EXAMINATIONS

PROFESSIONAL LEVEL

P2: ADVANCED MANAGEMENT ACCOUNTING

TUESDAY 13 JUNE 2017

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

INSTRUCTIONS TO CANDIDATES

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

2. This paper is divided into TWO sections:
Section A: One (1) compulsory 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. Discount Factor tables/Present Value and Annuity Tables are attached at the end of the question paper.

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

SECTION A

This is a compulsory question and it MUST be attempted.

QUESTION ONE

Kumbirima Ltd has an ambitious expansion program on board; this is despite the downturn in the economy. It currently operates two divisions. Kumbirima Ltd evaluates managers' performance using Return on Investment (ROI) ratios. The company uses Non-Current Assets plus Net Current Assets as part of the measure for ROI. The company has a minimum acceptable ROI of 12.5% a year and uses the straight line method of depreciation for non-current assets. It has been contemplating of increasing the minimum acceptable ROI to 19% per year. The new minimum acceptable ROI will only apply upon implementation of the proposed new investment projects. There have been talks also to use Residual Income as an alternative performance measure. Extracts from the divisional budgets for the year 2016 are as follows:

	Division A	Division B
	K'000	K'000
Divisional Profit (per month)	130	25
Non-Current Assets at cost	4,751	7,200
Net Current Assets	2,340	1,080

Two new investment projects have since been identified and are presented as follows to the divisional managers.

(a) Divisional Manager A has been authorised to buy new equipment costing K1,800,000 with a useful economic life of five years and expected savings of K540,000 per annum for the five years.

(b) A new product has been identified for Division B which will increase sales revenue by K1,500,000 each year over the next five years. This will necessitate an increase in advertising by K360,000 per year and inventories held will increase by K540,000. The contribution margin for this new product will be 35% of sales.

The new product will replace the current seemingly poor performing product. It is expected that average time per unit produced will fall as output increases. It is estimated that the following costs will be incurred on the first mainstream production unit. The costs per unit would be materials K450, labour K600, variable production overhead K300 and Fixed production overhead K300. The first unit will require 50 hrs of direct labour to make. The company produces 50 units each month. In producing a similar product, Division B have a learning effect of 80% for the first 50 units and to cease after this quantity has been produced, i.e. time for every subsequent unit will be equal to the time for the 50th unit. Selling price has been set at manufacturing cost plus a markup of 20%.

Required:

(a) Calculate the expected return on investment (ROI) for each division assuming:
(i) the investment opportunities are not taken up; (4 marks)
(ii) the investment opportunities are taken up. (4 marks)

(b) Calculate the expected residual income (RI) for each division assuming:
(i) the investment opportunities are not taken up; (3 marks)

(ii) the investment opportunities are taken up. (3 marks)

(c) Explain why return on investment (ROI) is preferred to residual income. (6 marks)

(d) Calculate the profit for:

(i) the first month on the new product if sales and production are as expected. (6 marks)

(ii) the second month if a further 50 units are produced and sold and learning curve is as expected. (6 marks)

(iii) Explain **FOUR (4)** applications of the learning curve effect (4 marks)

(e) Comment on **FOUR (4)** non-financial factors that Division B should consider before dropping the current product. (4 marks)

[Total: 40 Marks]

SECTION B

There are FOUR (4) questions in this section. Answer any three (3).

QUESTION TWO

Chitobetobe Ltd is a group of restaurants in the northern part of Zambia. At a recent management meeting the finance department was asked to evaluate the possibility of extending the service into other parts of the country. An initial investigation into the potential markets has been undertaken by a firm of consultants at a cost of K50,000 but this amount has not yet been paid. The following estimates were done for the proposed project:

1. The initial investment required would be K23 million, payable on 01 January 2016. This comprises K15 million for non-current assets and K8 million for net current assets (working capital).

2. The value of net current assets at the end of the evaluation period can be assumed to be the same as at the start of the period.

3. For accounting purposes, non-current assets are depreciated on a straight line basis over three years after allowing for a residual value of 10% of cost.

4. Capital allowances will be allowed at 30% on cost per annum.

5. Net cash flows before taxation are estimated as follows:

Year	2016	2017	2018
Amount (K'000)	K7,000	K8,500	K11,000

The following information is also relevant:

- The proposed project is to be evaluated over a three-year time horizon.
- Chitobetobe usually evaluates its investments using an after-tax discount rate of 10%.
- The proposed project is considered to be riskier than average and so a risk-adjusted rate of 12% will be used for this project.
- Corporate tax is payable at 35%, with 50% in the same year in which the liability arises and the other 50% in the following year.
- Chitobetobe would need to borrow 50% of the initial investment cost.

Required:

(a) Calculate the net present value (NPV) (9 marks)

(b) Calculate internal rate of return (IRR) (3 marks)

(c) Discuss the advantages and limitations of MIRR in comparison with NPV and IRR. (8 marks)

[Total: 20 Marks]

QUESTION THREE

Tendai Minerals Exploration Corporation (TMEC) was recently granted a licence by the government to go ahead with its exploration in the south west of the country. TMEC has discovered some diamond deposits along the main river which passes through the game park. Its intended operations have received fierce resistance from environmentalists and the local community. TMEC, however, claims that the diamonds are of high grade and, therefore, has been sensitising the stakeholders on its activities and the economic benefits the project would bring to the locals and the whole country.

Forecasts show the following information.

		Present value of profit
Demand	*Probability*	*Km*
High	0.65	2,400
Medium	0.25	300
Low	0.10	(900)

It is possible, however, to commission a market research survey which will forecast either a successful or unsuccessful operations for TMEC. The probability of an unsuccessful operation is 0.2.

Probabilities of high, medium or low demand for TMEC's diamonds under each of the two market research results are as follows.

	Demand		
	High	Medium	Low
Successful	0.5	0.2	0.3
Unsuccessful	0.1	0.3	0.6

The survey would cost K400,000.

Required:

(a) Draw a decision tree to show the choices facing Tendai Minerals and advise whether or not the company should commission the research. (12 marks)

(b) Explain the disadvantages of using expected values and decision trees as decision-making tools. (3 marks)

(c) Explain **FIVE (5)** main characteristics of a Total Quality Management (TQM) programme.

(5 marks)

[Total: 20 Marks]

QUESTION FOUR

Finger Licking Soups Ltd (FLS Ltd) produces a range of processed foods which it sells to restaurants.

One of these, a Yummy Soup (YS), has the following standard ingredient list for 50 litres of soup.

Ingredients	W	X	Y	Z
Volume (litres)	14	13.5	4	21
Std. cost per litre	K2.8	K2.4	K7.3	K5.2
Std. cost per unit	K39.20	K32.40	K29.20	K109.20

During Quarter 1 of 2016, Finger Licking Soups Ltd produced 3,900 litres of its YS soup using the following ingredients.

Ingredient	Volume (Litres)	Actual Cost/Litres
W	1,400	K3.00
X	1,350	K2.60
Y	500	K8.00
Z	950	K5.00

There was no opening or closing inventories of ingredients.

Required:

(a) Calculate the individual ingredient price variances, individual ingredient mix variances and the total ingredient yield variance for Quarter 1. (7 marks)

(b) Prepare a statement that reconciles the standard material cost to the actual material cost for Quarter 1. (3 marks)

(c) FLS Ltd employs highly qualified and skilled employees to operate the equipment that converts the ingredients into YS. The standard direct labour hours for each 50 litres of YS produced are 4 direct labour hours at K48 per hour.
During Quarter one, 320 hours of direct labour were operated costing K16,240. The standard labour rate of K48 had been set before the final outcome of negotiations with the

congress of trade unions. Once the negotiations were completed it was clear that a more realistic standard hourly rate would have been K52 per hour.

Required:

(i) Calculate the labour rate planning variance for Quarter 1. (2 marks)

(ii) Calculate the operational labour rate variance and the operational labour efficiency variance for Quarter 1. (3 marks)

(d) FLS Ltd operates a responsibility centre accounting system. This is a system of accounting based upon identification of individual parts of a business which are a responsibility of a single manager – a budget holder.

Required:

Discuss the motivational factors in encouraging budget holders to participate in the preparation of functional budgets. (5 marks)

[Total: 20 marks]

QUESTION FIVE

The Chief Executive Director of Kasempa Consolidated Copper Mines Ltd (KCCM Ltd) has asked you, as the Management Accountant, to prepare a report for him titled "Divisional Financial Performance Measures".

Required:

Prepare the report for the Chief Executive Officer, which should also include the following areas:

- A distinction between functional and divisionalised organisational structure.
- A discussion of the advantages and disadvantages of divisionalisation.
- A description of the pre-requisites necessary for successful divisionalisation.
- An explanation why the use of return on investment may lead to dysfunctional decision.

[Total: 20 Marks]

END OF PAPER

Formulae Sheet

Learning curve

$Y = ax^b$

Where Y = cumulative average time per unit to produce x units
a = the time taken for the first unit of output
x = the cumulative number of units produced
b = the index of learning (log LR/log2)
LR = the learning rate as a decimal

Demand curve

$P = a - bQ$

$b = \frac{\text{change in price}}{\text{change in quantity}}$

a = price when Q = 0

$MR = a - 2bQ$

Modified Internal Rate of Return

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

Present Value Table

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

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

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	0·980	0·961	0·943	0·925	0·907	0·890	0·873	0·857	0·842	0·826	2
3	0·971	0·942	0·915	0·889	0·864	0·840	0·816	0·794	0·772	0·751	3
4	0·961	0·924	0·888	0·855	0·823	0·792	0·763	0·735	0·708	0·683	4
5	0·951	0·906	0·863	0·822	0·784	0·747	0·713	0·681	0·650	0·621	5
6	0·942	0·888	0·837	0·790	0·746	0·705	0·666	0·630	0·596	0·564	6
7	0·933	0·871	0·813	0·760	0·711	0·665	0·623	0·583	0·547	0·513	7
8	0·923	0·853	0·789	0·731	0·677	0·627	0·582	0·540	0·502	0·467	8
9	0·914	0·837	0·766	0·703	0·645	0·592	0·544	0·500	0·460	0·424	9
10	0·905	0·820	0·744	0·676	0·614	0·558	0·508	0·463	0·422	0·386	10
11	0·896	0·804	0·722	0·650	0·585	0·527	0·475	0·429	0·388	0·350	11
12	0·887	0·788	0·701	0·625	0·557	0·497	0·444	0·397	0·356	0·319	12
13	0·879	0·773	0·681	0·601	0·530	0·469	0·415	0·368	0·326	0·290	13
14	0·870	0·758	0·661	0·577	0·505	0·442	0·388	0·340	0·299	0·263	14
15	0·861	0·743	0·642	0·555	0·481	0·417	0·362	0·315	0·275	0·239	15

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

Annuity Table

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

Where r = discount rate
n = number of periods

Periods (n)	*Discount rate (r)* 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

JUNE 2017-ADVANCED MANAGEMENT ACCOUNTING (P2) SOLUTIONS

SOLUTION ONE

(a) Return on investment (ROI)

(i) Division A
Current ROI= 1,560,000* / 7,091,000 =22%
*Operating profit should be annualized : 130,000 x 12 = K1,560,000

(ii)Increase in Profit K (540,000 – 360,000*) = K180,000
*Depreciation = K1,800,000/5years = K360,000
New Profit K180,000 + K1,560,000= K1,740,000
New total Assets K (7,091,000 + 1,800,000)= K8,891,000
New ROI = 1,790,000/8,891,000 = 19.57%

NB: K1, 800,000 is used because the non-current assets are at cost.

(i) Division B
Current ROI = 300,000 / 8,280,000 = 3.62%

(ii) Contribution from new sales
K1,500,000 X 0.35=525, 000
Less Adv=(360,000)
Extra profit = 165,000
ROI = (300,000+165,000) / (8,280,000 + 540,000)= 5.27%

(b) Residual Income (RI)
(i) Division A
Current RI = K1,560,000 – (12.5% of K7,091,000) = K673,625

(ii) Division A
Proposed RI = K1,740,000 – (19% of K8,891,000) = K50,710

(i) Division B
Current RI = K300,000 – (12.5% of K8,280,000) = (K735,000)

(ii) Division B
Proposed RI = K465, 000 – (19% of K8, 820,000) = (K1, 210,800)

(c) Return on investment (ROI)
ROI is generally regarded as the key performance measure. The main reason for its widespread use isthat it ties in directly with the accounting process, and is identifiable from the income statement andbalance sheet. The following are some of the reasons why it preferred to Residual Income (RI):

- It relates the profit of the division to the capital employed and the division manager is responsible for both profit and capital employed.

- ROI is a percentage measure and can be used to compare the performance of divisions of different sizes.
- It is an easily understood measure of financial performance.
- It focuses attention on capital as well as profit and encourages managers to sell unused non-current assets and avoid excessive working capital

(Inventory and receivables).

(d) Profit

(i) For the first month

Y = 50(50) ^-0.3219 = 14.19hrs

Labour rate per hour = K600/50 Hrs = K12/hour

Variable overhead rate = K300/50Hrs =K6/hour

Profit statement

	Total K	Per Unit K
Materials	22,500.00	450.00
Direct Labour	8,514.00	170.28
Variable Overheads	4,257.00	85.14
Fixed overheads	15,000.00	300.00
Total Costs	50,271.00	1,005.42
Total Sales	60,325.00	1,206.50
Profit mark up 20%	10,054.00	201.08

For the second month

Time for 50th unit = total time for 50 less total time for 49

	Avg per unit	Total
50	14.19	709.50
49	14.29	700.21
Time for 50th Unit		9.29

Profit statement

	K	K
Materials	22,500.00	450.00
Direct Labour	5,574.00	111.48
Variable Overheads	2,787.00	55.74
Fixed overheads	15,000.00	300.00
Total Costs	45,861.00	917.22
Total Sales	55,033.20	1,100.66
Profit mark up 20%	9,172.20	183.44

(iii) APPLICATIONS OF THE LEARNING CURVE EFFECT

- Pricing decisions – an ability to accurately predict costs of a new product is often a very important factor when pricing a new product.
- Work scheduling – understanding the learning curve allows correct scheduling of labour and enables deliveries to take place on time.
- Standard setting – it is difficult to set labour standards where a learning curve applies. Standards should not be set until the 'steady state' has been achieved.
- Budgeting – cash budgets should take into account the effect of the reduction in variable costs.

(e) Non- financial factors

Some of the factors to be considered include;

i. The use of the spare capacity created if product A is ceased. Will some of the staff involved be made redundant?
ii. The impact on the other products, B and C. Will the cessation of A affect the sales of the other two products?
iii. The impact on the customers that demanded product A. Will they still remain loyal to the company?
iv. The perception of the company might be affected, in that, stakeholders may view it as not a going concern or shutting down the company.
v. Before ceasing product A, could there be some internal strategies that the company could employ to enhance the throughput of the product?

SOLUTION TWO

(a) Net present value (NPV)

As the project is considered to be riskier than average, use the risk-adjusted rate of 9% to discount the cash flows.

Year	0	1	2	3	4
	K'000	K'000	K'000	K'000	K'000
Operating Cash flows		7,000	8,500	11,000	
Taxation (35%)		(1,225)	(1,225)	(1,487.50)	(1,925)
			(1,487.50)	(1,925)	
Non-current assets	(15,000)			1,500	
Working capital	(8,000)			8,000	
Tax relief (W1)	-	787.5	1,575	1,575	787.5
Cash flow after tax	(23,000)	6,562.5	7,362.50	18,662.50	(1,137.50)

DCF 12%	1.000	0.893	0.797	0.712	0.636
Present value	(23,000)	5,860.91	5,867.91	13,287.70	(723.45)

Net present value = K1,292,470

Working

Year	Investment K'000	Capital allowances	Tax Relief
1	15,000	@ 30% = K4,500	@ 35% = K1,575
2	15,000	@ 30% = K4,500	@ 35% = K1,575
3	15,000	@ 30% = K4,500	@ 35% = K1,575

(b) Internal rate of return (IRR)

IRR = a + $\frac{NPVa}{NPVa - NPVb}$ (b-a)

NPV at 20%

Year	0	1	2	3	4
	K'000	K'000	K'000	K'000	K'000
Cash flows after tax	(23,000)	6,562.5	7,362.50	18,662.50	(1,137.50)
DCF 20%	1.000	0.833	0.694	0.579	0.482
Present value	(23,000)	5,466.56	5,109.58	10,805.59	(548.28)

Net present value = K(2,166,550)

IRR = 12 + [1,292,470/(1,292,470 + 2,166,550)] x (20 – 12) = **14.99%**

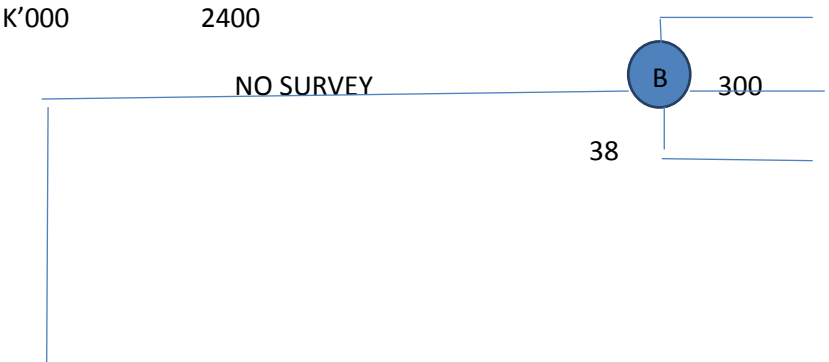
(c) Advantages and limitations of MIRR compared with NPV and IRR

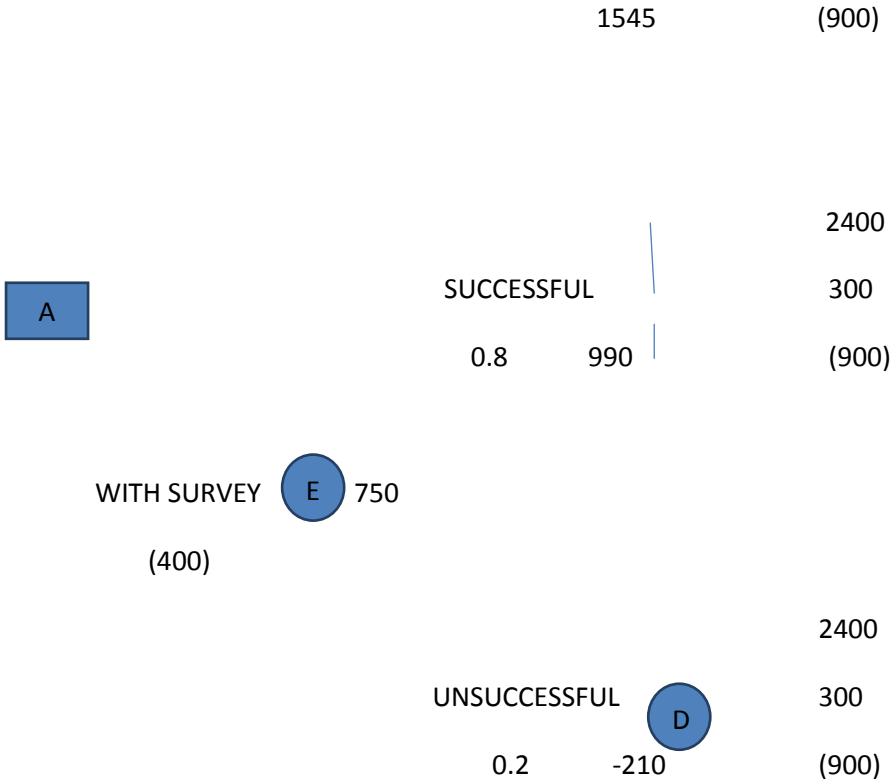
MIRR does not suffer from the problem of multiple returns that is an issue with IRR. A project will only ever have one MIRR which reduces confusion. It also assumes that an organisation will reinvest its capital at its own cost of capital, rather than at the IRR itself. This brings the reinvestment assumption into line with that of NPV and ensures that the MIRR decision outcomes are consistent with those of NPV. IRR does not always give the same result as NPV.

One of the limitations of MIRR that it may lead an investor to reject a project with a low rate of return but which actually generates high levels of wealth. This may occur if the MIRR is greater than the cost of capital – the technique will underestimate the project's true return. Also if the difference between the IRR and the organisation's cost of capital is large, the project's length can have a significant effect on actual MIRR.

In a similar way to IRR, MIRR favours projects with short paybacks whereas NPV looks at the cash flows over the entire life of the project. It could be argued that this approach will release funds earlier for reinvestment but it gives no indication of the size of the project or the likely increase in shareholders' wealth (whereas NPV does give such information).

SOLUTION THREE





Advice: They should not commission the research because the expected value without of K1,545,000 is higher than that of with at K350,000.

(b) Whenever a decision is made when the outcome of the decision is uncertain, there will always be some doubt that the correct decision has been taken. If a decision is based on selecting the option with the highest EV of profit, it can be assumed that in the long run, that is, with enough repetition, the decision so selected will give the highest average profit. But if the decision involves a once-only outcome, there will be a risk that in retrospect, it will be seen that the wrong decision was taken.

A decision tree is a simplified representation of reality, and it may omit some Possible decision options, or it may simplify the possible outcomes. For example, in this question, 'success' and 'failure' are two extreme outcomes, whereas a variety of outcomes between success and failure may be possible. The decision tree is therefore likely to be a simplification of reality.

The probabilities associated with different branches of the 'tree' are estimates and may be inaccurate.

The recommended outcome based on the EV in part (b) was not to commission a survey, a decision which has more risk attached. Managers may be reluctant to take risks which may lead to losses.

(c) TQM

In a nutshell, Total quality management (TQM) is a management philosophy, aimed at continuous improvement in all areas of operation. A TQM initiative aims to achieve continuous improvement in quality, productivity and effectiveness.

It does this by establishing management responsibility for processes as well as output.

Principles of TQM

(i) Prevention

Organisations should take measures that prevent poor quality occurring.

(ii) Right first time

A culture should be developed that encourages workers to get their work right first time. This will save costly reworking.

(iii) Eliminate waste

The organisation should seek the most efficient and effective use of all its resources.

(iv) Continuous improvement

The Kaizen philosophy should be adopted. Organisations should seek to improve their processes continually.

(v) Everybody's concern

Everyone in the organisation is responsible for improving processes and systems under their control.

(vi) Participation

All workers should be encouraged to share their views and the organisation should value them.

(vii) Teamwork and empowerment

Workers across departments should form team bonds so that eventually the Organization becomes one. Quality circles are useful in this regard. Workers should be empowered to make decisions as they are in the best position to decide how their work is done.

SOLUTION FOUR

a)

i) Ingredient Material Price Variances

	W	X	Y	Z
	K	K	K	K
Std. Price	2.8	2.4	7.3	5.2
Actual Price	3.0	2.6	8.0	5.0
Variance	0.2 (A)	0.2 (A)	0.7 (A)	0.2 (F)
	x	x	x	X
Actual Litres	1,400	1,350	500	950
Total Variance	K280 (A)	K270 (A)	K350 (A)	K190 (F)

ii) Ingredient mix variance

Ingredient	Std. Mix	Actual Mix	Variance (Litres)	Std. Price per litre	Variance K

W (14/52.5)	1,120	1,400	280 (A)	K2.8	784 (A)
X (13.5/52.5)	1,080	1,350	270 (A)	K2.4	648 (A)
Y (4/52.5)	320	500	180 (A)	K7.3	1,314 (A)
Z (21/52.5)	1,680	950	730 (F)	K5.2	3,796 (F)
	4,200 ◄——	4,200	–		1,050 (F)

iii) Ingredient Yield Variance

4,200 litres	should have yielded 4,200x $\frac{50}{52.5}$	4,000
4,200 litres	yielded	3,900
		100 (A)
		x$\frac{K210}{50}$
		K420 (A)

b) Statement Reconciling Standard Ingredient Material Cost To Actual Ingredient Material Cost

			K
Standard Material Cost [3,900 x K210 ÷ 50 litres]			16,380
	F	A	
Material Price Variances			
– W		280	
– X		270	
– Y		350	
– Z	190		
Materials Mix	1,050		
Materials Yield		420	
	1,240	1,320	80 (A)
Actual Material Cost			**16,460**

c)

i) Labour Rate Planning Variance

	K
Revised labour rate	52
Original labour rate	48
	4 (A)
	X
Stdlabour hours $\frac{K3,900}{50}$ x 4hrs	312
	K1,248 (A)

ii) Operational Labour Rate Variance

	K
Revised standard cost (320 hrs x K52)	16,640
Actual Cost	16,240
	400 (F)

Operational Labour Efficiency Variance

	Hours
Revised std. hours 4hrs x $\frac{K3,900}{50}$	312
Actual hours	320
	8hrs (A)
	X K52
	K416 (A)

d) The advantages of involving functional managers in setting the budgets are that they know the functional area well and can set realistic goals. There is nothing more de-motivating than being set an unachievable target. Also, since they have been part of the goal setting process, managers are more likely to feel personal ownership of the targets. Therefore, they may feel more motivated to prove that they can achieve what they said they could.

On the other hand, involvement with budget-setting managers means that they have more scope to build in budget slack, and since they know they can easily meet their targets, they will not be inspired to make any performance improvements.

SOLUTION FIVE

To : The CEO, KCCM Ltd
From : Management Accountant
Date : 27 June, 2016
Subject : Divisional Performance Measures.

1.0 Introduction

As instructed, I have set out below a report covering the items in sections 2.0,3.0,4.0,5.0 and 6.0

2.0 Functional and divisional structures can be differentiated as follows:

2.1 Functional Structure

The organization is structured according to functional areas instead of product lines.

The functional structure groups specialise in similar skills in separate units. This structure is best used when creating specific, uniform products. A functional structure is well suited to organisations which have a single or dominant core product because each subunit becomes extremely adept at performing its particular portion of the process. They are efficient, but lack flexibility. Communication between functional areas can be difficult.

2.2 Divisional Structure

Divisional structure is formed when an organization is split up into a number of self-managed units, each of which operates as a profit centre. Such a division may occur on the basis of product or market or a combination of the two with each unit tending to operate on functional or product lines, but with certain key function (e.g. finance, personnel, corporate planning) provided centrally, usually at a company headquarters.

3.0 Advantages of Divisionalization

Divisionalisation can improve the decision-making process both from the point of view of the quality of the decision and the speed of the decision. The quality of the decisions should be improved because decisions can be made by the person who is familiar with the situation and who should therefore be able to make more informed judgments than central management who cannot be intimately acquainted with all the activities of the various segments of the business. Speedier decisions should also occur because information does not have to pass along the chain of command to and from top management. Decisions can be made on the spot by those who are familiar with the product lines and production processes and who can react to changes in local conditions in a speedy and efficient manner. In addition, delegation of responsibility to divisional managers provides them with greater freedom, thus making their activities more challenging and providing the opportunity to achieve sell-fulfilment. This process should mean that motivation and efficiency will be increased not just at the divisional manager level but throughout the whole division.

4.0 Disadvantages of Divisionalization

If a company is divisionalised, there is a danger that the divisions may compete with each other excessively and that divisional managers may be encouraged to take action which will increase their own profits at the expense of the profits of the other divisions. This may adversely affect co-operation between the divisions and lead to a lack of harmony in

achieving the overall organizational goals of the company. This in turn may lead to a reduction in the total company profits. It is also claimed that the costs of activities that are common to all divisions may be greater for a divisionalised structure than for a centralized structure. A further argument against divisionalisation is that top management loses some control by delegating decision making to divisional managers. It is argued that a series of control reports is not as effective as detailed knowledge of a company's activities.

5.0 Pre-requisites for Successful Divisionalization

For successful divisionalization, it is important that the activities of a division be as independent as possible of other activities. However, some writers argue that even though substantial independence of divisions from each other is necessary condition for divisionalization, if carried to the limit it would destroy the very idea that such divisions are an integral part of any single business. Divisions should be more than investments – they should contribute not only to the success of the company but to the success of each other. A further condition for the success of divisionalisation is that the relations between divisions should be regulated so that no one division, by seeking its own profit, can reduce that of the company as a whole. He states that this is not the same as seeking profit at the expense of other divisions, but the amount that a division adds to its own profit must exceed the loss that it inflicts on another division.

6.0 Return on Investment –Dysfunctional Decisions

ROI suffers from the disadvantages that the managers of those divisions with an existing ROI in excess of the cost of capital may incorrectly reject projects with positive NPVs. Similarly, managers with an existing ROI that is lower than the cost of capital may accept projects with returns that are less than the cost of capital. ROI is therefore an unsatisfactory method of measuring managerial performance in investment centres or those of profit centres where a manager can significantly influence the amount invested in working capital.

If you need further clarifications, please do not hesitate to contact the undersigned.

Signed: Management Accountant

END OF SOLUTIONS

CHARTERED ACCOUNTANTS EXAMINATIONS

PROFESSIONAL LEVEL

P3: STRATEGIC FINANCIAL MANAGEMENT

FRIDAY 16 JUNE 2017

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

INSTRUCTIONS TO CANDIDATES

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

2. This paper is divided into TWO sections:
Section A: One (1) compulsory 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. Formulae, Present Value, Annuity and normal distribution tables are attached at the end of the question paper.

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

SECTION A

Attempt this one compulsory question.

QUESTION ONE

The Zambezi Resorts & Hotels is evaluating a proposal from its investments committee to build a 450 bedroom hotel on Lake Bangweulu in Samfya, Zambia. The town's tourism prospects have been tremendously boosted, after the government designated it as a development area for tourism. The holding company for the company is based in Singapore. The Zambezi Resorts Group prepares its reports and accounts for all its transactions in Kwacha and translates them in Singapore dollars (SG$) for the holding company. The current Kwacha/dollar spot rate is K5.35/SG$. The variable operating costs per occupied room for the hotel are expected to be K315 per day and a fixed cost of K17.85 million per annum expressed in current prices. The proportion of bedrooms occupied, on the basis of opening for 365 days in a year, is expected to be as follows:

Year ended		Occupancy (%)
31 December 2016	Y_1	Under construction
31 December 2017	Y_2	45
31 December 2018	Y_3	55
31 December 2019	Y_4	85
31 December 2020	Y_5	75
31 December 2021	Y_6	70

Inflation in Zambia is currently projected at 8% per annum and in Singapore at 2% per annum. These rates are expected to be constant over the term of the project. The holding company's real cost of capital is 7.84%.The construction cost for this hotel is estimated to be K65.1 million and it would be built during the year to 31 December 2016.

Capital allowances of 20% on a straight line basis, are available for tax purposes on building projects in tourism development areas. Corporate tax is 35% per annum and is payable in the year profits arise. There is no additional tax liability on remittances to or from Singapore. The company has sufficient profits on its existing business operations to absorb the capital allowances on this project.

The Zambezi Hotel & Resorts Group has the following investment guidelines for real estate:

1. All cash flows including construction costs are assumed to arise at the end of the year concerned and are to be projected in nominal (money) terms over the investment horizon.

2. The residual value of an investment property at the end of the investment horizon of less than ten years is assumed to be equivalent to the construction cost in real terms at disposal.

3. The net present value of projects should be based upon a 100% remittance of net cash flows to Singapore and should be calculated in dollars.

4. Average room rates should be set at the level required to recover variable cost plus 100%.

Required:

(a) Assuming that the property would be held for six years, and it is now 1st December 2015, determine the following:

(i) The nominal dollar projection of the after tax cash flows for this project distinguishing between cash flows arising from its investment phase and those arising from its return phase. (20 marks)

(ii) An estimate of the project's dollar net present value, the modified internal rate of return and an assessment of the viability of the project. (10 marks)

(b) Explain:

(i) Two (2) relative advantages and disadvantages of the net present value and modified internal rate of return methods in investment appraisal.

(ii) The strategies that the hotel group could use to deal with restrictions in remittances. (10 marks)

[Total: 40 Marks]

SECTION B

Attempt any Three (3) questions out of four (4) in this section.

QUESTION TWO

According to an article on dividend policy in a Business newspaper, a financial specialist explained that the dividend capacity of a firm is measured by its free cash flow to equity (FCFE). He further stated that the dividend policy depends upon the type of shareholders that the company has, and that dividends should be paid according to shareholders' needs. He explained that the company's shareholder clientele must be identified and dividends fixed according to their marginal tax brackets. He provided selected financial information for the last five years relating to a company in the manufacturing industry, VBF limited as shown below:

Year	Earnings after tax (K'm)	FCFE (K'm)	Number of issued ordinary shares (million)	Dividend per share (ngwee)	Cost of capital
1	29	14	120	5.76	10%
2	27	15	120	5.41	11%
3	32	(4)	120	6.36	12%
4	39	(3)	155	6.00	12%
5	43	11	155	6.60	12%

Required:

(a) In relation to the dividend policy article in the business newspaper, discuss the financial specialist's explanations. (8 marks)

(b) Analyse the dividend policy of VBF limited using the financial information given above. (8 marks)

(c) Estimate the value per share of VBF limited using the FCFE. You may assume that the free cash flow to equity is expected to grow at a constant rate of 7% per annum. (4 marks)

[Total: 20 Marks]

QUESTION THREE

Cream Plc a large super market company has for some time wanted to expand into the Manufacturing sector and a number of companies have been examined as potential take-over targets. Recently, AGA Inc a small manufacturing unquoted company has been identified for take-over. The following financial information relating to AGA Inc has been provided:

Statement of Financial Position:

	K'm	K'm
Assets		
Non-current assets		10.0
Current Assets:		
Raw material stock	3.0	
Finished products stock	4.0	
Receivables	6.0	
Cash & Cash equivalents	2.5	15.5
Total assets		25.5
Equity & Liabilities		
Equity:		
Issued ordinary shares (K0.5)		8.0
Reserves		5.5
Long term liabilities:		
10% Bank loan		6.0
Current liabilities:		
Trade payables	4.0	
Accruals	2.0	6.0
Total equity & liabilities		25.5

Comprehensive Income statement (extract)

	K'm
Profit after tax	5.0
Dividend	(4.0)

Retained earnings 1.0

The non-current assets include equipment which had an initial cost of K3 million. Market analysts have estimated equipment has a realisable value of K1.5 million. Other non-current assets have a sale value of K6 million. The raw material and finished stock would have a realisable value of K5 million and industry-standard level of bad debts is 2% of sale value.

The average equity beta for manufacturing companies is 1.02 and the average price earnings ratio is 8. The average gearing is 70% equity and 30% debt by book value. The risk free rate is 6% and the equity premium is 8%.

Corporate tax is 30% per year.

Required:

(a) Based on the above information, estimate the value per share of AGA Inc using the following methods:

(i)	Net asset valuation	(4 marks)
(ii)	Dividend valuation model	(7 marks)
(iii)	P/E based valuation	(3 marks)

(b) Discuss three (3) strategic implications of making a take-over bid for AGA Inc compared with organic growth. (6 marks)

[Total: 20 Marks]

QUESTION FOUR

To finance its loan portfolio in Zambia, Vantage Financial Services (VFS) raised US $10 million internationally through the issue of 7-year floating rate notes at 240 basis points over LIBOR, with interest payable semi-annually. Given the negative outlook in interest rates, VFS's board is concerned about the potential impact of rising LIBOR on the firm's future cash flows. The loan now has 5 years before maturity.

The Chief Financial Officer (CFO) believes that a swap would be the ideal course of action, but board members would like to be briefed on the benefits and de-merits of the alternative strategies to managing the company's interest rate risk and an estimate of the company's six monthly Value at Risk (VaR), if no action is taken.

You have been tasked as CFO to review the strategic options that are now available to VFS and to recommend the best course of action. Five-year swap rates are quoted at 2.60 – 2.80. VFS has a policy of 99% confidence level on its exposure to non-core risk and that the annual volatility of LIBOR is currently 200 basis points.

Required:

(a) Evaluate three (3) alternative strategies the company may use for managing its interest rate exposure and recommend with reasons the course of action it should adopt. (9 marks)

(b) Calculate the semi-annual interest rate and the effective annual rate payable if a vanilla interest rate swap is agreed. (5 marks)

(c) Compute the semi-annual Value at Risk on the interest rate exposure associated with this borrowing and explain the result. (6 marks)

[Total: 20 Marks]

QUESTION FIVE

(a) Dubai Technical Services (DTS) is a multi-national company involved in oil exploration in Zambia with a parent company based in Dubai. The company intends to import into Zambia equipment from Hitachi Corporation of Japan in three months' time on 30th December. The invoice amount of ¥220 million will be paid in Yen.

The following data is available today on the first day of October:

Spot foreign exchange rate	¥110/$

Yen currency futures contracts on BaDEx (Bond and Derivative Exchange of Zambia) are as follows:

Contract size	¥12,500,000
Contact price in US$/¥	
September	0.009009
December	0.009119

Future contracts mature at the end of each month.

Required:

(i) Briefly explain how the company might set up its hedge to manage its foreign exchange risk using currency futures. (2 marks)

(ii) Evaluate the efficiency of a futures hedge in reducing the loss resulting from changes in exchange rates, given that the spot rate is 100 Yen/$ and the futures contract price is $0.009667/¥ on 30 December.

(8 marks)

(b) Whilst the financial plans of a business are based on a single objective, it faces a number of constraints that put pressure on the company to address more than one objective.

Required:

Explain the type of constraints a company might face when assessing its long-term plans. Refer in your answer to:

(i) Responding to various stakeholder groups. (5 marks)

(ii) The difficulties associated with managing organisations with multiple objectives.
(5 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

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.

JUNE 2017-STRATEGIC FINANCIAL MANAGEMENT (P3)
SOLUTIONS

SOLUTION ONE

1(a)

(i) Projection of $value cash flows for both the project investment and the project return.

The cash flow for the project has been created using a forecast of the capital requirement, the six year operating cash flow and the residual value of the property at the end of the project, using the specified occupancy rates and a target nightly rental of K630**,** the projected revenues for the hotel and the expected costs. These are projected at current prices to give a real cash flow before conversion to nominal using the Zambian rate of inflation. Tax is calculated both in terms of the offset available against the construction costs but also at 35% 0f the operating surplus from the project.

The solution assumes that the benefit of the capital allowances will be recovered irrespective of the success of the operating phase of the project. They are therefore considered a credit to the investment phase. However, candidates who assume that they are part of the recovery phase should not be penalised.

Finally, using purchasing power parity, future spot rates are estimated. The rate specified is direct with respect to the Singapore dollar and declines as it strengthens.

The computation of the present value of the investment phase has been separated from that of the return phase as follows:

Investment phase		Y1	Y2	Y3	Y4	Y5	Y6
	1 Jan 2016	31 Dec 2016	31 Dec 2017	31 Dec 2018	31 Dec 2019	31 Dec 2020	31 Dec 2021
Nominal project cash flow(K'000)		(65,100)					
Capital allowance (tax saving)(K'000)		4,557	4,557	4,557	4,557	4,557	
Nominal project cash flow after tax (K'000)		(60,543)	4,557	4,557	4,557	4,557	-
Exchange rate	5.3500	5.6646	5.9979	6.3507	6.7243	7.1199	7.5387
Value of investment phase ($'000)	-	(10,688)	760	718	678	640	-

Return phase	Y0	Y1	Y2	Y3	Y4	Y5	Y6
Occupancy rate		0	0.45	0.55	0.85	0.75	0.70
Terminal value of property(K'000)							103,307
Rooms let (450 × occ. rate × 365)		-	73,913	90,338	139,613	123,188	114,975
Revenue (rooms let × K630) K'000		-	46,565	56,913	87,956	77,608	72,434
Variable operating costs (rooms let × K315) K'000		-	(23,282)	(28,456)	(43,978)	(38,804)	(36,217)
Fixed costs (K'000)		-	(17,850)	(17,850)	(17,850)	(17,850)	(17,850)
Project operating cash flow (real) K'000			5,432	10,606	26,128	20,954	18,367
Projected inflation in Zambia (8.0%)		1.080	1.1664	1.2597	1.3605	1.4693	1.5869
Project operating cash flow (nominal)		-	6,336	13,361	35,547	30,788	29,147
Tax on operating cash flows (at 35%)		-	(2,218)	(4,676)	(12,441)	(10,776)	(10,201)
Nominal project cash flow after tax (K'000)			4,119	8,685	23,106	20,012	122,253
Rate of exchange	5.3500	5.6646	5.9979	6.3507	6.7243	7.1199	7.5387
Value of return phase ($'000)			687	1,367	3,436	2,811	16,217

(ii) Project evaluation

Net present value

Given that the Singapore rate of inflation is 2.0% per annum and the company's real cost of capital is 7.84% per annum, the nominal cost of capital can be estimated using the fisher formula as follows:

$i_{nom} = (1 + inf)(1 + real) - 1$

$i_{nom} = (1{\cdot}02)(1{\cdot}0784) - 1 = 0.1 = \underline{10\%}$

Discounting the project cash flows (investment plus return) at this nominal cost of capital gives a project net present value as follows:

	Y0	Y1	Y2	Y3	Y4	Y5	Y6
Nominal project cash flow	1 Jan 2016	31 Dec 2016	31 Dec 2017	31 Dec 2018	31 Dec 2019	31 Dec 2020	31 Dec 2021
(investment plus return) SG$'000	-	(10,688)	1,446	2,085	4,114	3,451	16,217
Nominal cost of capital (10%)		0.909	0.826	0.751	0.683	0.621	0.564
Discounted cash flow(G'000)		(9,715)	1,195	1,566	2,810	2,143	9,146
Net present value (G'000)	7,144						

Given the positive NPV of SG$7,144,000 from the investment appraisal, the Zambezi Hotels & Resorts Group, should undertake the project, as it will add value to shareholder wealth.

Modified internal rate of return

The modified internal rate of return can be estimated by calculating the internal rate of return of the sum of the return cash flows compounded at the cost of capital to give a year six terminal value. The discount rate which equates the present value of this terminal value of return cash flows with the present value of the investment cash flows is the modified internal rate of return.

$$MIRR = \left| \frac{PV_R}{Pv_i} \right|^{1/n} (1+r_e) - 1$$

		Y1	Y2	Y3	Y4	Y5	Y6
Nominal project cash flow(investment)	-	(10,688)	760	718	678	640	-
Nominal cost of capital (10%)		0.909	0.826	0.751	0.683	0.621	0.564
Net present value -investment (G'000)	**(7,689)**	(9,715)	628	539	463	397	-
Nominal project cash flow(return)			687	1,367	3,436	2,811	16,217
Nominal cost of capital (10%)		0.909	0.826	0.751	0.683	0.621	0.564
Net present value - return (G'000)	**14,833**	-	567	1,027	2,347	1,745	9,146

MIRR = $[14,833/7,689]^{1/6}(1.10) - 1 =$ **22.73%**

Capital Allowances

	K'000	Tax benefit (35%)	Yr received
Cost of construction	65,100		
Capital allowances (20%)	(13,020)	4,557	1
WDV	52,080		
Capital allowances (20%)	(13,020)	4,557	2
WDV	39,060		
Capital allowances (20%)	(13,020)	4,557	3
WDV	26,040		
Capital allowances (20%)	(13,020)	4,557	4
WDV	13,020		
Capital allowances (20%)	(13,020)	4,557	5
WDV	-		

b)

(i) The net present value technique does generate an absolute measure of increase in shareholder value and as such avoids scale and other effects associated with percentage performance measures. The MIRR is useful in that it measures headroom . In this case the modified internal rate of return of 22·73% is 14·89% greater than the firm's cost of capital. MIRR measures the economic yield of the investment (i.e. the discount rate which delivers a zero net present value) under the assumption that any cash surpluses are reinvested at the firm's current cost of capital. The standard IRR assumes that reinvestment will occur at the IRR which may not, in practice, be achievable. MIRR does not suffer from the multiple root problem when calculating IRR on complex cash flows.

Although MIRR, like IRR cannot replace net present value as the principle evaluation technique, it gives a measure of the maximum cost of finance that the firm could sustain and allow the project to remain worthwhile. For this reason it gives a useful insight into the margin of error, or room for negotiation, when considering the financing of particular investment projects.

(ii) Strategies include:

- **Interest on loans** to a foreign subsidiary can be fixed at a high rate so as to recoup profits.
- **A management fee may** be charged for consultancy and technical assistance.
- **Royalties** may be charged for use of patents and brands.
- **Transfer pricing** may be used to move profits through selling goods and services.
- **Parallel loans** to subsidiaries of other companies and vice versa

SOLUTION TWO

a) Dividend capacity of a firm measured by its FCFE

Free cash flow to equity is the funds that remain after the company has undertaken all capital investment expenditure, any changes in non-cash working capital and debt issues and redemptions. Therefore, it's the amount left for equity holders after the company has met all others needs and could be paid as dividends. Paying dividends beyond the FCFE would result into the company issuing new securities or reducing the existing cash balances because it has paid more than it can afford. However, a company might pay more than the FCFE in order to maintain the existing dividend per share and avoid signalling effects.

Shareholders needs and dividend policy

Tailoring the dividend policy to the needs of shareholders depends on the way dividends and capital gains are taxed and cash flow requirements. Some shareholders may prefer immediate cash so as to manage their cash flow requirement and therefore would prefer dividend. Divided income may attract higher tax liability compared to capital gain because of the difference in tax treatment. On the other hand, an alternative would be to sale the shares in order to realise the capital gain and thus provide income. However, this action would attract transaction costs and dilution of shareholding. As indicated above, capital gain may attract lower tax liability and therefore some shareholders would prefer capital growth. Therefore, different shareholders may have differing preferences concerning dividend policy. However, the clientele effect suggests that through following a certain set dividend payout strategy, the company has attracted a clientele of shareholders to whom this policy is suited and no benefit would be derived through altering the policy to meet individual needs.

b) Analysis of VBF ltd dividend policy

Year	Earnings after tax (K'm)	No of shares (million)	DP	Total Dividend paid (K'm)	Payout (%)
1	29	120	0.0576	6.91	0.24
2	27	120	0.0541	6.49	0.24
3	32	120	0.0636	7.63	0.24
4	39	155	0.0600	9.30	0.24
5	43	155	0.0660	10.23	0.24

VBF limited has adopted a policy of paying dividend at a constant percentage rate (24%) of earning after tax. This is not normally recommended as it might lead to fluctuating levels of dividend per share if earnings are volatile. If shareholders are interested in a certain amount of dividend, fluctuations would send a bad signal. However, it appears shareholders have preference for capital gains rather than dividend considering that the payout percentage is quiet low. This could be that capital gains tax is more favourable.

c) Po = 11(1.07)/ 0.12 – 0.07 = K235.4million

Value per share = K235.4m/155 = K1.52 per share

SOLUTION THREE

a) (i) Net asset valuation

K'm			
Non-current assets (6+1.5)	=	7.50	
Raw materials & Finished stock		=	5.00
Receivables (6 x 0.98)		=	5.88
Cash	=	2.50	
Total assets	=	20.88	
Less liability (6+6)		=	(12.00)
Net assets			8.88

Value per share = K8.88m/16m = K0.56 per share

(ii) Dividend valuation model

Dividend per share = K4m/16m = K0.25 per share

G= br

b= 1/7 x 100% = 14.28%

r = 5/25.5 = 19.60%

G= 0.1428 x 0.1960 = 2.8%

Ba = Be x Ve/Ve+Vd (1-t)

Ba =1.02 x 0.7/0.7 + 0.3(1-0.3)

Ba =0.78

Re-gear		%
Equity book value	= K13.5m	69
Debt book value	= K 6.0m	31
	K19.5m	100

0.78 = Be x 0.69/0.69+0.31 (1-0.3)

Be = 1.03

Ke = 6% + 1.03(8%) = 14.24%

Value of AGA inc = 0.25 (1.028) / 0.1424- 0.028 = K2.25 per share

iii) P/E for AGA inc = 8 x 2/3 = 5.33

Value of company = 5.33 x 5 = K26.65m

Value per share = K26.65m/16m = K1.67 per share

b) If cream Plc and AGA Inc do not have perfectly correlated cash flows, acquisition of AGA Inc will offer diversification opportunity and a reduction in the cost of capital. This should increase the value of the group and therefore increase shareholder wealth. However, many acquisition or mergers are planned in anticipation of generating synergies but, in practise these synergies often fail to appear.

It would be much quicker for Cream Plc to expand into the manufacturing industry than organic growth but there may be cultural clashes following the acquisition of AGA Inc between the two sets of employees. Management of Cream Plc might not have the required skills to run a manufacturing company like AGA Inc more especially if skilled employees become demotivated as a result of cultural clashes.

SOLUTION FOUR

(a)(i) Do nothing: with this strategy the company would be assuming that future interest rates would remain unchanged or may even fall. However, the success of this strategy would depend on the degree of interest rate diversification and on the magnitude of any interest payable by the company on its overseas debt.

(a)(ii) Re-finance floating rate notes with fixed rate debt: with this strategy the company would issue fixed rate bonds and use the proceeds to retire the floating rate notes. This would eliminate any downside risk associated with increasing interest rates, unfortunately as well as any potential benefits that would result from a reduction in interest rates. It can also be an expensive option as commissions, arrangement and underwriting fees that would apply on the new issue can be quite costly.

(a)(iii) Arrange a fixed for variable interest rate swap: with this strategy the company would enter into a swap agreement with a market maker for the term of the loan. This would mean swapping the LIBOR debt component of the swap for a fixed rate liability. The benefit of a swap agreement is that it is easy to establish through the OTC swap market. The downside is that the company would be committed for the term of the swap which means that the company would have to reverse the swap if there was need for it to retire the floating rate loan notes earlier than planned.

Moving from variable to fixed interest rates is unlikely to make a significant impact upon the company's weighted average cost of capital or its valuation. However, it would reduce cash flow volatility, which would make it easier for the company to predict and manage its financing cash flows, making forward planning and budgeting easier.

In choosing between the three alternatives consideration should be made of the impact on key stakeholder groups. The board should consider the benefits of each strategy against an assessment of the inherent risks and their cost implications on stakeholders. Options (ii) or (iii) could reduce the risk faced by employees by reducing the volatility of the cash flows from which their remuneration and other compensation is drawn. From an equity investor point of view, given its zero costs of hedging, option (i) may be the preferred strategy. However, from the perspective of other stakeholders, option (iii) is likely to be the least costly alternative for achieving stability in future financing cash flows. From a managerial perspective, option (iii) is therefore the recommended course of action.

(b)

The semi-annual interest rate under a vanilla swap given the quoted spread would be as follows:

Payment	(LIBOR/2 + 1.2%)
Receipt under a vanilla swap	LIBOR/2
Payment on fixed component(2.80/2)	(1.4)
Net payment	(2.6%)

The semi-annual rate is therefore 2·60% or an effective annual rate:
EAR = $1{\cdot}026^2 - 1$ = 5.27%
(5)(c)
Given that the annual interest rate volatility is 2%, the semi-annual interest rate volatility or standard deviation of semi-annual rates is:
$\sigma = (2\%) \times \sqrt{1/2} = 2\% \times 0.7071$ = 1.4142%
The Value at Risk (VAR) is calculated as follows:
VAR = Loan × σ6 × CL = \$10 million × 1·4142% × 2.33 = \$329,509

Where the confidence level of 99% is taken from the standard normal tables and is, assuming a single tail, 2.33 standard deviations away from the mean.

VAR is used in measuring the probability of a decline in the market value of a portfolio of assets for a given probability and time horizon. Currently the annual interest rate is LIBOR plus 240 basis points. Assuming that LIBOR is 6% per annum, the semi-annual interest on this loan would be 4.2% or \$420,000. There is a 1% chance that the actual interest paid would be greater than (\$420,000 + \$329,509) \$749,509.To put it another way, there is a 99% likelihood that the actual interest payable will be less than this figure.

SOLUTION FIVE

5 (a)(i)

DTS is importing equipment in three months' time, and therefore needs to hedge against the risk of the Yen appreciating against the US Dollar. It should therefore, buy Yen futures contracts with the intention of selling them at a higher price and realize a gain, if the Yen Strengthens. This will enable the company to off – set any loss on the currency spot market that will result when a stronger Yen is purchased in three months' time.

5(a)(ii).

Three months: payment of ¥ 220 million
Now (1 Oct): buy 18 December Yen futures at \$0.009119/¥

Computation of contracts:

1. Buy Yen futures – pay Yen at \$0.009119/¥
2. Close contract (after 30 Dec – exposure date): December futures at \$0.009667/¥
3. # of contracts = ¥220/¥12.5 = 17.6 or **18 contracts**
4. Tick value: \$0.000001 x 12,500,000 = **\$12.50**

Evaluation of futures hedge

Futures transaction:

Buy	$0.009119/¥	1 October
Sell	$0.009667/¥	30 December
Profit	$0.000548/0.000001 = **548 ticks**	

Profit = 548 ticks x $12.50 x 18 contracts = **$123,300**

Hedge Efficiency

Loss due to changes in exchange rate = ¥ 220 m/¥ 110 - ¥220m/¥100 = $2m - $2.2m = **$0.2m**

Hedge efficiency (%) = profit/loss *100 = $123,300/$ 200,000*100 = **62%**

Futures were only 62% efficient in reducing the loss due to changes in exchanges rates.

5(b)(i)

Responding to stakeholder groups

Organisations have a number of stakeholders including internal stakeholders, such as employees and managers. External stakeholders include shareholders, customers, creditors, and the government.

Conflict between stakeholders

Perhaps the main conflict that businesses can face is between shareholders, who wish to maximize the long-term value of the company, in order to increase their wealth and other stakeholders. Employees and managers will wish to maximise their own rewards, which can lead to greater costs and reduce shareholder value. Other stakeholders such as suppliers and lenders will wish to secure their receivables and loans, which may limit the cash available for investment. External stakeholders such as the government or community at large, may want the business to be a good corporate citizen, which may involve additional costs in return for very minimal or even no financial benefits at all.

Results of conflict

In drawing up long-term plans the directors must take into account the consequences of conflict. If the company is not doing well, shareholders may wish to sell their shares and the value of the company may fall. Stakeholders such as employees can reduce their productivity or withhold their services altogether, if their demands are not satisfied. Providers of finance can apply sanctions of their own such as not providing additional resources, customers may not buy goods and services, and the government may force the business to incur legal burdens or costs.

Other demands on managers

Managers will need to constantly review the needs of their key stakeholders to ascertain whether all stakeholders are content and to identify any additional stakeholders whose concerns will need to be addressed.

5(b)(ii)

Conflicting demands of objectives

Long-term and short-term profits
One possible conflict is between the basic objectives to maximise the company's value long-term whilst making enough profits each year to satisfy shareholders' expectations of income. Shareholders' expectations that dividends remain constant or increase steadily may result in insufficient internal funds being available to finance the investment required to maximise long-term profitability.

Different financial objectives
As well as maximising profits, the company may set other objectives such as limiting financial risk by limiting the level of debt the company takes on or achieving other financial targets such as increasing turnover. There may be conflicts between these objectives, for example long-term investments being limited by an unwillingness to take on new funds, or turnover targets being achieved at the expense of keeping levels of working capital low.

Financial objectives and non-financial objectives
As indicated above, the company will need to consider non-financial objectives to satisfy certain external stakeholders. The costs of these may be quantifiable (such as the costs of employing extra staff to operate controls or the costs of taking anti-pollution measures) but it may be less easy to quantify the long-term benefits. This will make long-term planning more difficult, as the company may have to decide whether to do the minimum it needs to do, or whether there will be advantages from going beyond the minimum and showing itself to be an 'ethical' company.

Resolving conflicts
Some conflicts may have to be resolved by compromise, in which case managers will need to decide how far the company can afford to fall short on each objective.
Compromises will not always be possible, and managers may need to rank the importance of objectives in order to decide which have to be fulfilled.

Management time
Managers will need to spend time and incur costs monitoring the fulfillment of different objectives.

END OF SOLUTIONS

CHARTERED ACCOUNTANTS EXAMINATIONS

PROFESSIONAL LEVEL

P4: AUDIT AND ASSURANCE SERVICES

THURSDAY 15 JUNE 2017

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

INSTRUCTIONS TO CANDIDATES

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

2. This paper is divided into TWO sections:

   Section A: One (1) compulsory question.

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

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

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

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

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

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

8. Present legible and tidy work.

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

SECTION A

QUESTION ONE

This question is compulsory and must be attempted.

You are a Senior Partner in Alu & Co., a firm of ZICA accountants. The firm was formed ten (10) years ago by Francis Mwansa. Alu & Co. initially specialised in offering non-audit services, but four(4) years ago, the firm was granted a full audit practising certificate by ZICA. This has added value to their business as they now include the statement, "Registered as auditors by the Zambia Institute of Chartered Accountants", on their business stationery.

A number of issues have come to your attention in respect of the following four (4) clients:

1. Mandebwe Ltd
2. Kafeka Ltd
3. Zerrick plc
4. SRA

Mandebwe Ltd

The Manging Director has asked for advice on the requirement for an annual audit. The company was formed on 1 January 2014, and the Managing Director owns 30% of the share capital. The first accounts for the year ended 31 December 2014 have just been completed and the Finance Director would like to present them to the board. A memo from the Managing Director advises that the accounts should first be audited, as he is keen in ensuring the company embraces good corparate governance principles from the outset. He knows that good corporate governance can attract new investments into the company and promote accountability and transparency.

The Finance Director argues that since the turnover of the company is K900,000 and Statement of financial position total is K1.2 milllion, then it is exempt from the requirement for an annual audit. He believes that a review could achieve the same purpose at a lower cost. Mandebwe Ltd manufactures and markets various basic agricultural equipment. The company expects to establish business linkages with the government and other key players in the agricultural sector. The budgetary allocation to this sector by the government has been increasing every year and its current contribution to the Country's GDP is impressive.

Kafeka Ltd

Kafeka Ltd is a company that specialises in supplying spares to the mining industry. The spares are imported from Asia but the significant fluctuations in the exchange rate has made the imports very expensive. The exchange rate of the kwacha to the US dollar has moved from an average of K5.42 per US dollar to K13.18 per US dollar. The company does not engage in hedging activities.

Mining companies in Solwezi account for 80% of the company sales. Kafeka Ltd has been an audit client of Alu & Co. for eight (8) years. Alu & Co. has even invested in an expensive custom audit software which has greatly improved operational efficiency.

Kafeka Ltd was recently acquired by a Canadian Multinational, which directed it to change the inventory valuation to standard costing. A standard cost can be defined as a predertemined estimated unit cost.

Last week, the Finance Director, received a telephone call from the Board Chairman who thought the use of an estimated cost in the published accounts was unacceptable and directed him to search for any real circumstances which might lend support to his view .The Chairman's intergrity is considered to be beyond question.

Your firm has almost completed the audit and proposes to issue a modified report, but the directors would like a second opinion. You have noticed that the modification is mainly due to the valuation of inventory but no meaningful audit work has been done on inventory valuation.

Zerrick Plc

Zerrick Plc is a successful Zambian company which wishes to acquire 60% of the ordinary share capital of a company in one of the developing countries in Eastern Europe. The Eastern Europe country does not follow IFRSs in the preparation of financial statements.

The directors of Zerrick Plc have commissioned Alu & Co., to conduct a due diligence and critically examine the company's financial performance.The market intelligence reports considered so far, have revealed that the acquisition could result in significant synergistic gains.

SRA

This is an organisation mandated by the authorities in Southern province to collect various levies and taxes on behalf of the Central government. It is one of your longest audit clients. It has undergone automation in the past three (3) years and manual audit procedures are proving to be inadequate and inappropiate in many areas.

You are aware that audit software performs the sort of checks on data that auditors might otherwise have to perform manually. However, you are not sure of the major matters to consider when deciding whether to use the interrogation audit software. Automation has been commended as a solution to the reduction required in fraud and error. Alu & Co. is impressed with the automation mainly because when a fraud comes to light, there is a perception that the auditor must be at fault.

Required:

(a) Explain one (1) key benefit of an audit to shareholders. (1 mark)

(b) (i) Evaluate whether Mandebwe Ltd is mandated to have an annual audit. (2 marks)

(ii) Advise whether the Managing Director could veto any audit exemption. (1 mark)

(c) (i) Discuss any five (5) benefits that Alu & Co would obtain by using automated audit software. (5 marks)

(ii) Compare and contrast an audit and a review. (2 marks)

(d) (i) Advise whether standard costing is allowed in the valuation of inventories. (1 mark)

(ii) Discuss principal objective(s) of the auditor when auditing the valuation of inventory valued at standard cost. (2 marks)

(iii) Suggest six (6) approriate audit procedures which must be carried out by Alu & Co. on the inventory valuation. (6 marks)

(iv) Discuss main the dangers of opinion shopping. (2 marks)

(e) (i) Critically evaluate the need for a due diligence assignment conducted by professional accountants. (2 marks)

(ii) Analyse any two (2) benefits of due diligence to Zerrick Plc. (2 marks)

(iii) Advise on the possible problem(s) Zerrick Plc may encounter in consolidating the financial statements of its newly acquired subsidiary. (2 marks)

(iv) Recommend appropriate action(s) on how the problem(s) in (e) (iii) can be solved. (4 marks)

(f) (i) Discuss two (2) ways in which automation can reduce or eliminate incidences of fraud and error. (4 marks)

(ii) Suggest four (4) matters to be considered by Alu & Co. when deciding whether or not to use the interrogation audit software. (4 marks)

[Total: 40 marks]

SECTION B

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

QUESTION TWO

You are a manager in Nambi Associates, a firm of ZICA accountants offering audit and other assurance services. At a recent management meeting, one of the partners argued that Nambi Associates were not in compliance with the requirements of ISQC 1 *Quality Control for firms that perform audits and reviews of financial statements and other assurance and related services engagements*. He believes partners must take specific responsibility for the quality on each audit engagement which that partner is assigned. In support of his case, he cited a recent audit where one of the partners failed to provide more practical supervision to junior staff.

The partner who was in charge of the cited engagement argued that the partner who raised the issue was misguided in his reasoning and needed to take his Continuing Professional Development (CPD) seriously.

In addition, the partner questioned the adequacy of the insurance cover for the firm and the outdated specimen engagement letter used by the firm.

There is no individual or group in charge of quality in the firm.

Required:

(a) Discuss the specific ZICA requirements on insurance covers for audit firms. (4 marks)

(b) Suggest one (1) advantage to Nambi Associates and two (2) disadvantages to the public of such insurance covers. (3 marks)

(c) Discuss the ISQC 1 provisions on firm and leadership responsibilities for quality within an audit firm. (3 marks)

(d) Evaluate whether Nambi Associates is in compliance with the provisions under ISQC 1. (2 marks)

(e) Discribe the importance of an engagement letter. (2 marks)

(f) Draft an extract of an engagement letter for any company of your choice, including four(4) major contents, as required by ISA 210 *Agreeing the terms of audit engagements.* (5 marks)

(g) Evaluate the significance of Continuous Professional Development (CPD) (1 mark)

[Total: 20 marks]

QUESTION THREE

Keepwell Ltd is a major private hospital located in Kabulonga. It mainly deals with life threatening illnesses and charges premium prices.You are a manager in T & Co., a firm of ZICA accountants, responsible for the audit of Keepwell Ltd. The audit was completed last week and the directors have submitted the draft annual report for your comments. Keepwell Ltd has already instructed the printing company to start the printing process for the financial statements, since they do not expect T & Co. to raise any issue.The directors have included the following details:

(i) Planned capital expenditure

(ii) Names of officers and directors

(iii) Employment data

(iv) Financial summarised highlights

On reading the information included, you noticed that the financial summaries contained a material inconsistency with the financial statements, which needed to be corrected. When your views were presented to management, the Finance Director declared that, he could not instruct the printers to stop printing the financial statements , since this would be costly. The Finance Director has assured you that there is no need to worry since the financial statements are not affected. However, you still feel one of the auditing standards give detailed guidance in this area, which contradicts the Finance Director's view.

Your firm has also been recommended by another audit firm to be considered for the audit of a new Public hospital. The firm is requesting a commission for referring the would be client to you.

Required:

(a) Discuss two (2) main benefits of including other information in the annual report.

(2 marks)

(b) Using a relavant ISA , discuss the responsibilities of T & Co. regarding other information included in the annual report. (3 marks)

(c) Advise whether T & Co. could be engaged separately, or required by statute to report on other information in the financial statements. (3 marks)

(d) Recommend appropriate action(s) to be taken in view of the Finance Director's refusal to amend the other information. (6 marks)

(e) Advise whether or not ISAs are relavant in the audit of the public sector.

(4 marks)

(f) Recommend appropriate action(s) to be taken regarding the requested commission. (2 marks)

[Total: 20 marks]

QUESTION FOUR

ISA 240 *The auditor's responsibilties relating to fraud in an audit of financial statements*, does not attempt to provide a definitive list of risk factors but, in the appendix, identifies and gives examples of two types of fraud that are relavant to auditors:

(i) Fraudulent financial reporting

(ii) Misstatement arising from mis - appropriation of assets

A new audit supervisor has recently joined Ambuya & Co. a firm of ZICA accountants and you are an audit manager in the firm. The new audit supervisor has been asked by the engagement partner responsible for the audit of NEK Ltd to consider the following issues:

(i) The rumour that senior management's morale is low.

(ii) One senior manager was dismissed because he was selling sensitive data to competitors.

(iii) The calculation of value in use is incorrect.

(iv) The presumption that there is a risk of fraud related to revenue recognition is not applicable.

The new audit supervisor has confessed to you that he has no experience in issues of fraud and has asked you for advice. He also suspects that the engagement partner will ask him to prepare a presentation on expectation gap, which the partner is expected to deliver at the next ZICA Annual General Meeting.

Required:

(a) Write a memo advising the new audit supervisor on any four (4) relevant issues to be documented in relation to fraud. (6 marks)

(b) (i) Evaluate possible reasons why some accountants may be ignorant about the term " expectation gap". (2 marks)

(ii) Recommend two (2) ways of narrowing the expectation gap. (2 marks)

(c) Compare and contrast mangement and auditors responsibilities regarding the impairment of non-current assets. (4 marks)

(d) Recommend six (6) audit procedures to be carried out on the calculation of value in use for non – current assets in NEK Ltd. (6 marks)

[Total: 20 marks]

QUESTION FIVE

GLT Plc is a furniture manufacturer listed on the Lusaka Stock Exchange. As a result of increasing demand for its products, the directors, in June 2014, authorised capital expenditure worth K200 million. This amount was spent during the month of September 2014 before the company's year end of 31 December 2014.

You are the manger responsible for the audit of GLT Plc and you have satisfactorily completed reviewing the figure for provisions and you consider it to be fairly stated. However, you consider the deferred tax movement to be minimal compared to the level of capital expenditure and capital allowances claimed.

The following details relating to deferred tax have been provided by GLT Plc:

(i) The carrying amount in the financial statements is K276 million.

(ii) The tax base at that date is K150 million.

(iii) The movement in the deferred tax account is K4 million.

GLT Plc has invested in e – commerce but has experienced the following problems:

(i) Significant losses due to credit card frauds.

(ii) Loss of sales as a result of computer viruses.

(iii) Corruption of a few computer files by unknown individuals.

Required:

(a) Discuss three (3) matters to consider in relation to deferred tax. (3 marks)

(b) Recommend six (6) audit procedures to be performed in respect of the amounts relating to deferred tax. (6 marks)

(c) Evaluate three (3) key stages of a typical process for risk management for businesses. (3 marks)

(d) (i) Advise on the main causes of the financial statement risks applicable to GLT Plc. (2 marks)

(ii) Link the business risks mentioned in GLT Plc to the the financial statement risks. (6 marks)

[Total: 20 marks]

END OF PAPER

JUNE 2017- AUDIT AND ASSURANCE SERVICES (P4)

SOLUTIONS

SECTION A

SOLUTION ONE

a)

Key benefits of an audit	**Discusions**

1. Impartial review provided by the auditors	The auditor gives an independent explanation on whether the financial statements give a true and fair view. This therefore adds credibility to the financial statements.
2. Recommendations made to improve accounting and control systems	This effectively contributes greatly towards protecting the shareholders investiment.
3. Provides credibility to the financial statements.	Readers of financial statements require assurance that the financial statements prepared by the directors can be relied upon. An objective view can only be given by external auditors.
4. Financial statements more acceptable to the taxation authorities.	Audited financial statements will be more acceptable to the tax authorities having been independnetly audited by professionals.

b) (i)

Mandebwe Ltd is not required to have an audit because the turnover for the year is not more than K1 million and its balance sheet (statement of financial position) total is not more than K1.4 Million.

(ii)

The Managing Director can veto the exemption since his shareholding is at least 10%. He owns 30%, which is above the given threshold.

c) (i) Benefits to Alu & Co of using automated software:

1. Alu & Co will be able to test program controls and the related internal controls. This cannot be done manually.
2. Auditors can test a greater number of items faster and accurately. This could result in a sustainable competitive advantage to Alu & Co since the firm could pass over the benefit to clients through reduced audit fees.
3. The company can test transactions rather than paper records. This is important because paper records are prone to manipulation.
4. Audit software is more cost effective in the long term if the client does not change. This could result in an increase in profitability.
5. The results from audit software can be compared with results from traditional testing. This can be used to identify any shortcomings and assist in making the relevant improvements where necessary.

(ii) In an audit, the auditor provides a high but not absolute level of assurance that the information audited is free of material misstatement. This is expressed positively in the audit report as reasonable assurance. In a review, however, the auditor provides a limited level of assurance that the information subject to the review is free of material misstatement. This is expressed in the form of negative assurance.

It is important to note that the differences may not be apparent to the public. In the eyes of the public all assignments conducted by an auditor are audits. Hence there is need for the accountancy profession to sensitise the public on the various assignments carried out by the auditors or accountants in general.

d) (i) IAS 2 *Inventories* does allow standard costs to be used where prices are fluctuating.

(ii) When standard costing is being used, the auditor will have two objectives:

- Ensure that standard costing is an appropriate basis for valuing inventory. The auditor will consider a number of factors which may include the type of environment,

industry, product and so on.

- Ensure that the calculation of the standard cost is reasonable. The auditor will need to utilise his or her costing skills, otherwise the audit work could be sub-standard.

(iii) The appropriate audit procedures to be carried out are:

- Review purchase invoices, consult a price index and enquire of management, to establish whether prices have fluctuated.
- Discuss with the directors whether standard costing is the best accounting policy.
- Consider the comparability of the accounts, since there has been a change in accounting policy from the previous year.
- Obtain a copy of the calculations of standard cost to check reasonableness of the figure computed.
- Verify the elements of the calculation to appropriate documentation e.g. purchase invoices.
- Consider whether calculation is reasonable e.g based on averages of costs over the year.
- Check the adequacy of the disclosure made in the financial statements about the changes of accountancy policy.

(iv) The dangers of opinion shopping include the following:

- Intimidation threat – appointed auditors may be under pressure to change the opinion. This could comprise the quality of the audit and leave the auditors open to possible legal suits.
- Self – interest threat – existing auditors will feel that they will lose next year's audit if they do not change this year's opinion. This is a real threat given the stiff competition audit firms are exposed to in the modern environment.
- Non compliance with recommended professional guidance – the appointed auditors may not communicate with the existing auditor in order to obtain and appraise all facts. There could be commercial reasons for this, since the firms are competitors. However, this could bring the accountancy profession into disrepute.

e) (i) This is an engagement whereby an advisor often an audit firm is engaged by one company planning to takeover another. The advisor is expected to perfrom an assessment of the material risks associated with the transaction.

Due dilligence review can be requested by the buyer or seller in the case of a sale/purchase of a buisiness. This exercise is important since it enables the concerned parties to make informed decisions. It could also assist in avoiding unnecessary future disputes and litigation.

(ii)The key benefits to Zerrick Plc are:

- Enables management to make informed decisions. Assumption and other claims will be verified.
- Significantly assists in the negotiation of the price. A range of acceptable prices could be given. This will enable Zerrick Plc to negotiate professionally.
- It reduces risks that the buying company may be exposed to. Risk management is very important. Modern organisations have elaborate risk management systems.
- Confirms the figures contained in the financial statements of the vendor. This adds to the reliability of the figures given.

(iii) Consolidating a subsidiary from a country that does not follow IFRSs may be a problem as the basis of preparation of the subsidiary's accounts may be so different to IFRS that the group auditor will not be able to conclude that the accounts show a true and fair view.

It is important to note that, this is only a problem if the accounts or the difference caused by the basis of preparation are material to the group.

(iv) The problem can be solved by requiring the directors of the newly acquired subsidiary to restate the accounts under IFRS. The group auditor might require that this restatement process is audited to ensure it is accurate.

The parent company may require that the presnetation currency of the subsiadiary should be that of the parent company.

f (i) The two (2) ways are:

- Manual human intervention in processing and to some extent decision - making, which generally is the cause of bribes and corruption is minimised or in some cases eliminated.
- There is more concentration on using skilled manual resources on investigations which could be useful in detecting incidences of bribes and corruption. In addition, such investigations if handled properly could act as a deterrent to bribes and corruption.

(ii) The matters to consider include:

- As a minimum, auditors will reqiure a basic understanding of data processing and enterprise's computer application together with a detaileld knowledge of the audit software and the computer files to be used.
- Depending on the complexity of the application, the auditors may need to have a sound appreciation of systems analysis, operating systems and, where program code

is used, experience of the programing language to be utilised.

- Auditor will need to consider how easy it is to transfer the clients data into the auditor's PC.
- The client may lack full knowledge of the computer system and hence may not be able to explain fully all the information it produces.

SECTION B

SOLUTION TWO

a) ZICA requires that firms holding practising certificates and auditing certificates have professional indemnity insurance with a reputable insurance company. If the firm has employees, it must also have fidelity guarantee insurance.

The insurance must cover all civil liability incurred in connection with the conduct of the firm's business by the partners, directors or employees. The cover must continue to exist for six (6) years after a member ceases to engage in public practice.

b) **Advantages to Nambi Associates:**
   - It provides some protection against bankruptcy in the event of successful litigation against the firm.
   - It can provide funds to Nambi Associates for an innocent party to be compensated in the event of a wrong having been done to a third party.

Disadavantages of insurance to the public:

- Quality may be adversely affected as this might encourage auditors to take

less care than would otherwise be the case and/or their professional duty require.

- The compensation for the affected may not be adequate.

c) There is a clear misunderstanding in Nambi Associates regarding the requirement of ISQC 1 and ISA 220. ISQC 1 applies to quality control at the firm level while ISA 220 applies to quality control on an individual audit.

The main focus of ISQC 1 is the development and implementation of policies such that the internal culture of the firm is one where quality is considered essential. Such a culture must be inspired by the leaders of the firm who must sell this culture and messages. This simply means the entire business strategy of Nambi Associates should be driven by the need for quality in its operations.

d) The issues raised in the scenario do not reveal that an appropriate culture has been developed. It is clear that the firm has not invested appropriate funds in training to ensure there is a complete understanding of the objectives and procedures under ISQC 1.

The issues in the scenario, generally relate to ISA 220. ISA 220 requires the engagement partner to provide overall supervision, while more practical supervision is given within the audit team by senior staff to more junior staff.

It is therefore clear that Nambi Associates has not complied with ISQC 1. There is need to appoint an individual or group of individuals to oversee quality in the firm, as per ISQC 1 requirement.

e) An engagement letter is important mainly because it minimises or eliminates misunderstandings which could lead to breakdown in the relationship, and eventually result in legal action being taken. An audit should only commence once the engagement letter has been agreed and signed.

f) **Draft " Engagement Letter"**

Nambi Associates,

P.O. Box WF 138,

LUSAKA.

7th May, 2015.

To: The Board of Directors of K Ltd.

1.0. Introduction

This and the attached terms of business dated 7th May set out the basis on which we are to provide services as auditors and your and our responsiblities.

2.0. The objective and scope of the audit

You have requested that we audit the financial statements of K Ltd, which comprise….

We are pleased to confirm our acceptance…. Our audit will be conducted with the objective of our expressing an opinion on the financial statements.

3.0. The responsibilities of the Nambi Associates

We will conduct our audit in accordance with International Standards on Auditing (ISAs). Those standards require….

4.0. The responsibilities of Management of K Ltd

Our audit will be conducted on the basis that Management acknowledge and understand that they have responsibility :

a) For the preparation and presentation of the financial statements in accordance with … .
b) For such internal controls ….

5.0. Fees

Our fees which will be billed as work progresses, are based on ….

6.0. Confirmation of your agreement

Please confirm your agreement to ….

Francis Nambi,

Nambi Associates.

Acknowledged and agreed on behalf of K Ltd by:

(Signed)

…….

Name and Title

Date.

g) CPD means "Continuing Professional Development". All members of ZICA have to submit a CPD declaration before 1 January, no matter what CPD route they follow. Alternatively they can complete the CPD declaration form received with the annual subsription notice. CPD is a flexible framework that enables a member of ZICA to manage his or her professional development. It provides recognition for the member's commitment to keeping up to date and continuously improving knowledge and skills. This is necessary to ensure clients receive value for money.
Accountancy is a dynamic field and any lack of relevant CPD could render the respective accountant(s) "obsolete".

SOLUTION THREE

a) The benefits of including other information are that:

- It will provide information required by law, regulation or custom. In some jurisdictions, this is a requirement and any omission could invalidate the annual report.
- It adds value to the annual report. Users are now demanding value for money.
- Users may want or even demand such information. There is an increasing demand by users for more information to be disclosed. This has also been emphasised by the various governance codes.

b) ISA 720 sets out the requirements of the auditor with reference to other information, on which the auditors have no obligation to report on documents contained in the financial statements.

The auditior has no duty to include in his report matters contained in other information. However, he is required by ISA 720 to read the other information and look out for any inconsistencies with the financial statements.

This means auditors must read the draft annual report and raise the relevant

concerns with management and those charged with governance.

c) It is possible for T & Co. to be engaged separately , or required by statute, to report on elements of other information. In any case, T & Co. should give consideration to other information as inconsistencies with audited financial statements may undermine T & Co.'s audit report.

d) According to ISA 720, if, on reading the other information, the auditor identifies a material inconsistency, the auditor shall determine whether the audited financial statements or the other information needs to be revised.

In the case of Keepwell Ltd, it is the other information which needs revision. Hence, if management refuses to make the revision, T & Co. shall communicate this matter to those charged with governance unless all those charged with governance are involved with managing Keepwell Ltd.

If those charged with governance insist that no change should be made to the other information the following action may be put in place:

- Review the impact of this inconsistency on the audit report.
- If the matter is considered material, the auditor may wish to include this in the Other Matter Paragraph of the audit report or
- He may consider witholding the report and in the extreme case
- May consider resigning from the engagement.

e) The ISAs are relevant to the engagements in the Public sector. The Public sector auditor's responsibilities, however, may be affected by the audit mandate or by obligations on Public sector entities arising from law, regulation or other authority (such as ministerial directives, government policy requirements, or resolution of the legislature), which may encompass a broader scope than an audit of financial statements in accordance with ISAs.

f) ZICA members may offer commissions (and by implication receive commissions) for introducing clients. However, they should only do so if there are appropriate safeguards such as making full disclosure. Commissions could be a threat to objectivity. In this case, a commision could be made since both firms must be aware of the professional guidance.

SOLUTION FOUR

a) **MEMORANDUM**

To: Audit Supervisor

From: Audit Manager

Date: 20 June, 2015.

Subject: **Documentation of issues relating to fraud**

1.0. Introduction

This memorandum explains the relevant issues relating to fraud to be documented. This is basically for audit purposes.

2.0. Issues to be documented

These include:

- The significant decisions reached as a result of the team's discussion of fraud.
- The identified and assessed risks of material misstatement due to fraud.
- The overall responses to assessed risks.
- Results of specific audit tests.
- Any communication with management.
- Reasons for concluding that the presumption that there is a risk of fraud relating to revenue recognition is not applicable.

3.0. Conclusion

I hope the above – mentioned will suffice. Kindly, refer also to ISA 230 for detailed guidance on documentation in general, which could be of great assistance as well.

Audit Manager

b) (i) Expectation gap means the difference between the actual legal duty of an auditor and the common perception of what is reasonable to expect an auditor to do. Accountants may be ignorant of their role if they have not been trained and are not aware of the role of the auditor. Unless they are uptodate with regards matters pertaining to the profession through CPD and other communication within the profession they will lack the necessary information with regards the role of the auditor.

It should be noted that the public perceptio on the role of the auditor is diffrenent from the legal position for the same reason that the public have no techoncal knowledge.

(ii) Two ways of narrowing expectation gap are:

- Education of users – ISA 700 has gone a long way in doing this. By stating the responsibilities of management and auditors, this helps reduce the expectatiion gap.
- Extending auditors' responsibilities including requiring auditors to report to boards and audit commitees on the adequacy of controls to prevent and detect fraud and increasing the requirement to report suspected fraud.

c) **Responsibilities of management regarding the impairment of non – current assets are:**

- Determine if there is any indication that assets are impaired.
- Calculate the amount of impairment.

Responsibilities of auditors are:

- To consider whether there are any indications of impairment when carrying out risk assessment procedures.
- If management have calculated the value in use of an asset or cash generating unit, then the auditors will have to audit that calculation.

d) **Audit procedures – value in use for non current assets:**

- Obtain management's calculation of value in use.
- Reperform calculation to ensure that it is mathematically correct.
- Compare to previous calculations of value in use to ensure that all relevant costs of maintaining the asset have been included.
- Ensure that the cost/income from disposal of the asset at the end of its life has been included.
- Compare discount rate used to published market rates to ensure that it correctly reflects the return expected by the market.
- Refer to Competitors' published information to compare how much similar assets are valued at by companies trading in similar conditions.
- Review calculation to ensure cash flows from financing activities and income tax have been excluded.
- Compare the cash flow projections to recent budgets and projections approved by the board to ensure that they are realistic.
- Calculate/Obtain from analysts the long – term average growth rate for the products and ensure that the growth rates assumed in the calculation of value in use do not exceed it.

SOLUTION FIVE

a) Matters to be considered in relation to deferred tax are:

- The fact that the movement in the deferred tax is minimal. This could be as a result of not following the "full provision" required by IAS 12.
- Whether the income tax rate used is correct. Deferred tax assets and liabilities are measured at the tax rate expected to apply to the period when the asset is realised or liability settled, based on the tax rates (and tax laws) that have been enacted (or substantively enacted) by the end of the reporting period.
- Whether the carrying amount and the tax base provided are correct. There is a possibility of these figures being misstated.
- The materiality of the figure for deferred tax. Auditors focus on matters which are material to the financial statements.

b) Audit procedures – deferred tax:

- Obtain a copy of the deferred tax workings.
- Check the tax rate used is the substantially enacted rate of tax.
- Check the arithmetic accuracy of the deferred tax workings.
- Agree the figures used to calculate the timing differences to those on the tax computation and the financial statements.
- Discuss with management why there is only a minimal movement of K4 million.
- Consider the assumptions made in the light of your knowledge of the business and any other evidence gathered during the course of the audit to ensure reasonableness.
- Agree the opening position on the deferred tax account to the prior year financial statements.
- Review disclosure notes to ensure that they comply with IAS 12.

c) The three (3) key stages of a typical process of risk management for a business are:

- Identify significant risks which could prevent the business achieving its objectives. A number of models (for example, SWOT analysis, PESTEL, Porter's Five Forces model and so on) can be used to assist in identifying significant risks. However, a business should avoid using these mechanically.
- Provide a framework to ensure that the business can meet its objectives. Attainment of business objectives is important to avoid wasting resources on useless systems.

- Review the objectives and framework regularly to ensure that objectives are met. Rapid changes in the environment could render a good system ineffective. Hence regular monitoring is a must for most businesses.

d) (i) Financial statement risk is the risk that the financial statements are materially misstated.

The main causes of the financial statements risks include:

- Errors in the amounts recorded in the statement of comprehensive income and/or statement of financial position.
- Errors in or omissions from the disclosure notes.

Existence of such risks could render the financial statements meaningless if

not properly addressed.

(ii) The link between business risks mentioned in the scenario and financial statement risk is as follows:

Business risk	Financial statement risk
• Significant losses suffered due to credit card frauds	• Losses arising from frauds may not be recognised in the financial statements.
• Loss of sales as a result of computer viruses	• Uncertainities over going concern may not be fully disclosed.
• Corruption of a few files by unknown individuals	• The figures in the financial statement may be misstated.

END OF SOLUTIONS

CHARTERED ACCOUNTANTS EXAMINATIONS

PROFESSIONAL LEVEL

P5: STRATEGIC MANAGEMENT

WEDNESDAY 14 JUNE 2017

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

INSTRUCTIONS TO CANDIDATES

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

2. This paper is divided into TWO sections:

   Section A: One (1) compulsory question.
   Section B: Four (4) Optional questions. Attempt any three (3).

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

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

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

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

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

8. Present legible and tidy work.

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

SECTION A

Question ONE (1) is compulsory and must be attempted.

QUESTION ONE

For a long time the steel industry was seen as a static and unprofitable one. Producers were nationally based; often state owned and frequently unprofitable – between the late 1990s and 2003 more than 50 independent steel producers went into bankruptcy in USA. The twenty first century has seen a revolution with Mittal Steel paying $35bn to buy European steel giant Arcelor, creating the world's largest steel company. The following year Indian conglomerate Tata bought Anglo Dutch Steel Company Corus for $13bn. These high prices indicated considerable confidence in being able to turn the industry round.

In the last 10 years, two powerful groups have entered world steel markets. First, after a period of privatisation and reorganisation, large Russian producers such as Severstal and Evrz entered export markets, exporting 30 million tonnes of steel by 2005. At the same time Chinese producers have been investing in new production facilities, in the period 2003-2005 increasing capacity at a rate of 30 per cent a year. Since the 1990s, Chinese share of world capacity has increased more than two times, to 25 per cent in 2006, and Chinese producers have become the worlds' third largest exporter just behind Japan and Russia.

Steel is a nineteenth-century technology, increasingly substituted for by other material such as aluminium in cars, plastics and aluminium in packaging and ceramics and composites in many high-tech applications. Steel's own technological advances sometimes work to reduce need; thus steel cans have become about one-third thinner over the last few decades.

Key buyers for steel include the global car manufacturers such as Ford, Toyota and Volkswagen, and leading can producers such as Crown Holdings, which makes one-third of all food cans produced in North America and Europe. Such companies buy in volume, coordinating purchases around the world. Car manufacturers are sophisticated users, often leading in the technological development of their materials.

The key raw material for steel producers is iron ore. The big three ore producers – CVRD, Rio Tinto and BHP Billiton – control 70 per cent; in 2006 they increased prices by 19 percent.

The industry has traditionally been very fragmented; in 2000, the world's top five producers accounted for only 14 percent of production. Most steel is sold on a commodity basis, by the tonne. Prices are highly cyclical, as stocks do not deteriorate and tend to flood the market when demand slows. In the late twentieth century demand growth averaged a moderate 2 percent per annum. The start of the twenty-first century saw a booming demand, driven particularly by Chinese growth. Between 2003 and 2005, prices of steel for cars and fridges trebled to $600 a tonne. Companies such as Nucor in the USA, Thyssen-Krupp in Germany as well as Mittal and Tata responded by buying weaker players internationally. New steel giant Mittal accounted for 10 percent of world production in 2007. Mittal actually reduced capacity in some of its Western production centres.

Adopted from: Johnson, Scholes and Whittington, (2010) Exploring Corporate Strategy; consolidating *steel industry.*

Required

(a) Apply an appropriate model to analyse the forces that are impacting the steel industry and comment on the attractiveness of the industry. (15 marks)

(b) Explain three generic strategies, that Michael Porter proposed that organisations can pursue, to deal with the threats identified in (a) above. Recommend one strategy that Mitttal Steel should pursue stating how it can achieve pursuing that strategy. (10 marks)

(c) Discuss the formal and emergent approaches to strategy formulation and suggest one that is most appropriate to Mittal steel. (10 marks)

(d) Evaluate Scenario planning as an alternative method to rational planning (5 marks)

(Total: 40 marks)

SECTION B

Attempt any three (3) questions in this section

QUESTION TWO

Cotco, a manufacturer of kitchen appliances is facing very difficult times. Many years of steady growth have recently ended with a sharp decline in its sales and a consequent fall in its share price. The CEO has decided in consultation with the finance Director that urgent action is required and has proposed a plan to turnaround Cotco Company from its current decline

This plan involves reducing the workforce by 50% to 2000 and closing six domestic assembly plants, four of which are in the same town. Most of the production is to be moved to other parts of the world where labour costs are lower. Cotco's loyal workforce is shocked by the proposals and the trade unions are determined to fight the proposed job cuts with all the at their disposal. The plan involves the sourcing of many components from overseas, a proposal which has shocked its long established suppliers.

Finally, the board of directors is not entirely united behind the plan and there are rumours that the production and marketing directors are considering resigning.

Required:

(a) Identify the stakeholder groups of Cotco that are likely to be affected by the implementation of the proposed plan. Describe the impact of the proposed changes on each stakeholder group. (12 marks)

(b) How may each group try to influence the outcome of the proposed plan? (8 marks)

(Total: 20 marks)

QUESTION THREE

Zambian Tourism Board (ZTB) uses market segmentation to identify similar characteristics in the visitors and to establish what types of visitors represent the most attractive market. Characteristics include demographic, level of education, stage in the family life cycle and sociological variables such as attitudes, values and interest.

ZTB distinguishes visitors according to whether they come from within Zambia or whether they are regional or international. However, ZTB has found that a key market segment is what is referred to as 'Experiential travellers', those that seek a holiday experience with meaning and purpose. They want an authentic holiday that is not just 'sight-seeing', but that which fulfils a particular reason for which they have travelled. This is often a holiday based around the country's natural and cultural strengths; one which will provide a traveller with a sense of personal enrichment. Experiential travellers also tend to be very environmentally and socially conscious and seek out ecological sustainable experiences.

For experiential traveller, the experience of the holiday itself matters more than the actual destination. Experiential travellers are willing to travel great distances and pay substantial amounts towards an experience. Consequently, they often yield higher profits for tourism operators, than many other market segments. However, in keeping with this experiential traveller also expect superior quality and value-for-money.

Required:

(a) Briefly explain six ways in which ZTB can segment the tourist market. (6 marks)

(b) Discuss factors that can be considered in evaluating the attractiveness of a segment citing an example from the scenario. (6 marks)

(c) How can organisations like ZTB use the knowledge about the key market segments? (8 marks)

(Total: 20 marks)

QUESTION FOUR

Mufasu is a small company in Southern Province of Zambia. It has a staff complement of 25 with annual revenue of K65million. From its recently formulated strategy, it has indicated that it is aspiring to expand into Namibia, a neighbouring country through internal (organic) growth.

A couple of years ago Mufasu had tried to expand its base through a merger with Kekezo another r business of its size in terms of revenue. Mufasu wanted to exploit on the capabilities and competences that Kekezo had that would complement Mufasu operations. One later the businesses demerged. The merger was a failure in that the two businesses were incompatible in real operations.

Upon analysing the probable reasons for the failure of the merger, it was concluded that; the two organisations had different corporate cultures; the two organisations had very

different accounting and control systems that they failed to combine; the two organisations had different management style, one was autocratic and the other democratic.

It has come to Mufasu's attention that Kezuba a competitor company in Namibia may shortly be up for sale at a good price. Kezuba is a renowned firm in its domestic market for good performance and the special attention it offers to its clientele and employees. Merging with Kezuba will offer Mufasu the opportunity to widen its skills.

Required:

(a) Discuss, in the context of Mufasu, the respective advantages and disadvantages of pursuing a strategy of expansion through

(i) Organic growth

(ii) Merger (10 marks)

(b) Recommend actions Mufasu should take to prevent the difficulties that occurred leading to the failure of the merger with Kekezo from happening if it mergers with Kezuba. (10 marks)

(Total: 20 marks)

QUESTION FIVE

Country Z is working very hard to improve the standard of living for its citizens. The citizens of this country appreciate the effort the government is putting in place to improve the infrastructure including roads. However they are not happy with the performance of the office of the registrar general where national registration cards, marriage/divorce certificates and birth/deaths certificates are issued. People are made to wait in queues for hours before they can be attended to. They are made to move from one office to another, at least three offices to complete the process of registration. If they have any complaints they are made to see three officers who will assess the gravity of their complaint before they can be attended to by the person responsible for handling complaints.

The Registrar General (RG) has announced that the his department is to under-go a process-reengineering exercise with the intention of modernising the service and hence reduce the bureaucratic nature of the system of registration and complaints handling, thereby improve on service delivery. The RG has also pointed out that the process re-engineering exercise will help registry department develop its vision and process objectives.

A number of employees have expressed concern about the process re-engineering and its implications for those who work at the registrar general.

Required:

(a) Briefly explain the principles of business process re-engineering (BPR) (7 marks)

(b) Discuss the improvements that the Registrar General might expect from the application of process-engineering. (13 marks)

(Total: 20 marks)

END OF PAPER

JUNE 2017 –STRATEGIC MANAGEMENT (P5)

SOLUTIONS

SOLUTION ONE

a) An analysis of the steel industry using Porter's five forces model
Porter identifies five competitive forces that influence the state of competition in an industry, and collectively determine the profit potential of the industry as a whole. These are:-

- The threat of new entrants to the industry
- The threat of substitute products or services
- The bargaining power of customers
- The bargaining power of suppliers
- The rivalry amongst current competitors in the industry.

The forces affecting the steel industry are therefore analysed below:-

New entrants

In the last 10 years it is noted that two powerful groups entered the world steel markets. These and the existing players are already experiencing economies of scale and hence creating a barrier to entry for new players. The industry also requires huge initial capital outlay and thus blocking small players who might not have the finances. Therefore the threats to new entrants are moderately low.

Substitutes

Aluminium can be used in place of steel on cars and in packaging. Plastics can also be use in place of steel in packaging. Ceramics can be used instead of using steel in high tech appliances. All these, make the threat of substitutes high.

Buyer power

Giant car manufacturers, e.g. Ford, Toyota and Volkswagen are the main buyers of steel. Leading can producers, e.g. Crown holding, are also the other group of buyers. These organisations buy in bulk, coordinating purchases around the world. The buyers have therefore high bargaining power in that they can lobby for better prices or can go for substitutes if their demands are not met.

Supplier power

The key raw material for steel is iron ore. There are only three big suppliers – CVRD, Rio Tinto and BHP Billiton that control 70% of international market. This gives them greater bargaining power as can be seen from the past years' demand led increase in prices

Competitive rivalry

The industry is very fragmented, meaning that it has a lot of players and hence rivalry is high. This is also supported by the fact that there are some instances that the market has been getting flooded with the product. Mittal and Tata's moves of buying up weaker players internationally are a strategy of reducing rivalry by increasing market share. If the giant player Mittal can only possess a market share of 10% it is another indication that there is rivalry in this industry. Therefore this threat is very significant in the industry.

Conclusion

With only one threat that is the threat of new entrants being moderate to low and all the other threats being significantly high, it can be concluded that this industry is not attractive. The organisations operating in this industry have developed strategies to deal with these threats if they are to have competitive advantage.

b) Porter suggests that there are three generic strategies for competitive advantage. These are; cost leadership, differentiation and focus. To be successful, he argues, a company must follow only one of the strategies.

Cost leadership strategy – means being the lowest cost producer in the industry as a whole. By producing at the lowest cost, the manufacturer can compete on price with every other producer in the industry, and earn the higher unit profits.

Differentiation strategy – assumes that competitive advantage can be achieved through particular characteristics of a firm's products that are different from competition offering. Thus this can be achieved through offering;-

- a radical performance advantage over competition,
- superior products to competition in terms of better performance at a competitive price
- Competitive products that derive their appeal from a particular compromise of cost and performance.

Focus (or niche) strategy – a firm concentrates its attention on one or more particular market segments or niches, and does not try to serve the entire market with a single product or service. A cost-focus strategy aims to be a cost leader for a

particular segment. A differentiation-focus strategy pursues differentiation for a chosen segment.

Mittal, the giant steel producer can pursue cost- leadership. This can be achieved by

- Making sure that the organisation works on reducing costs in every activity of the value chain.
- It can set up production facilities in countries where it's acquiring cheap iron ore and hence reduce on costs of transporting bulky raw materials.
- It can use technology; computerised stock and logistics control systems to reduce costs.
- Since it has been in this business for a long time now, it can have cost advantage through the learning curve effect. Improving productivity through improvement of processes and systems.
- It can take advantage of the relationship it has created with its suppliers to lobby for discounts
- It also has cost advantages through economies of scale in production and marketing

c) Approaches to strategy formulation

The rational model - is a comprehensive approach of strategy formulation. It suggests a logical sequence which involves analysing the current situation, generating choices (relating to competitors, products and markets) and selecting and implementing the chosen strategies.

The rational model can be seen as a formal approach to strategy. The advantages of the formal system to planning are:

- It identifies risks and helps in managing these risks.
- It encourages creativity and initiative by tapping the ideas of the management team
- It draws attention to the need to change and adapt to dynamic environment
- Management control can be better exercised if targets are explicit

The disadvantages are that:-

- There are no empirical studies that have proved that formal planning processes contribute to success
- It discourages strategic thinking. Once a plan is put in place, people are unwilling to question it
- Managers are not all-knowing and there are limits to the extent to which they can control the behaviour of the organisation

An emergent strategy – is one developed out of pattern of behaviour rather than being consciously imposed in advance by senior management there is a high degree of experimentation to find the most productive route. They usually take longer to develop than planned strategies, because they evolve rather than being formally planned in one go.

Advantages of emergent strategies

- Can sometimes be seen as survival-based theories of strategy. In order to survive in an environment which is shifting and changing, an organisation has to be fitter than its competitors.

- It is better for an organisation to change and develop as the market changes, letting its strategies emerge in the process.

Dangers in following an emergent strategy

- It may involve risks, it may interfere with other strategies.

- It needs to be managed if it commits the organisation to using resources.

d) **Scenario planning –** involves building plausible alternatives of how the business environment of an organisation might develop in the future based on key drivers for change about which there is a high level of uncertainty. It is a technique that helps organisations to allow for different possibilities and be aware of the range of plausible alternatives.

The rational model which is a prescriptive approach to strategy assumes there is a degree of predictability and control in the strategy process.

Scenario planning takes a different approach to strategic planning in that:-

- It suggests that there is an inherent ambiguity and uncertainty in future. Such an approach suggests that successful strategy can only be developed by acknowledging this uncertainty.

- It suggests that planning for the future should not be treated as a one-off activity, but should be an ongoing learning proposition.

- By looking at a number of alternative futures, scenario planning does not pretend to predict one of them- it is of more benefit to management learning processes to take a variety of perspective into account.

- By identifying a range of possible scenarios and outcomes, scenario planning can help management respond to real situations when they arise.

- It also encourages managers to challenge their assumptions and the way they think about their organisations

SOLUTION TWO

a) Stakeholders

Stakeholders are those individuals or groups of that have an interest or 'stake' in the organisation. The plan will affect internal and external stakeholders as follows:

Stakeholder	**How affected**
Internal stakeholders	
Directors, senior and junior Managers	Some will lose their jobs. For those that remain, the future prospects for promotion will be much reduced as the number of senior posts will be reduced
Assembly line workers	Will lose jobs in the plants that are to be closed
Employees in the countries to which production is being moved	New employment and prospects in the company
External Stakeholders Suppliers	Existing domestic suppliers will lose contacts, new suppliers in new countries will gain contracts.
Customers	Should see lower prices. A key concern for the firm will be whether they see a reduction in quality as well.
Trade Unions	Very affected, as they must work to save jobs And/or obtain the best severance package for the employees they represent.
Local communities	Local shops and services in the locality of the plants closing will lose business and may also close. The local economy in those towns to which production has been moved will benefit from the extra income that the new jobs will bring.
Local and national governments	the move will affect local regeneration plans in both countries concerned

Shareholders	If the plan is successful they will benefit from an increase in dividends and capital growth, if it fails they will lose wealth.

b) Stakeholder power

When assessing the power of stakeholders the following factors are usually considered:

- Status of the stakeholders
- Control of resources
- Formal representation in decision-making processes
- Possession of key knowledge and skills.

These can be applied to Cotco Company as follows:

Existing employees/trade unions

In the case of Cotco Company, the power of existing employees derives from their skills and expertise. Their power will be limited as Cotco Company has every right to move its operations overseas if it wishes to do so and, as the company can obtain a workforce in other countries at lower cost, it is not dependant on its existing workforce.

Threatened with job losses, employees will use industrial action and try to attract the interest of the local media to gain the public sympathy.

Directors

The production and marketing directors are against the plan. They possess not only skills and experience but can vote against plans. However, the board of directors as a whole has agreed the policy, so the production and marketing directors have limited power to change things.

If they do resign, Cotco Company should be able to recruit people with similar experience, so is not dependant on them.

The CEO and directors supporting the plan will use company resources to implement the plan and they will counter negative publicity by explaining the economic necessity for the plans.

Suppliers

The power of existing suppliers comes from being able to disrupt supplies to Cotco Company. They may also have power if there are long-term contracts that they can enforce. However, such power is limited in its effectiveness

Government

The local government has the power to influence Cotco Company by persuasion but ultimately has little power to interfere in the international operation of companies. On the other hand, government officials in the countries to which Cotco Company intends to relocate will welcome the plans and may offer tax concessions to make the move more attractive.

Shareholders

Shareholders could vote to support the plan or vote against it at the company's Annual General Meeting. If they did not support the plan, they could remove the CEO and appoint someone who would pursue an alternative policy

Shareholders thus have high power if they choose to use it. For most companies the shareholders rare unite to act against the directors.

SOLUTION THREE

a) Kotler defines market segmentation as 'the subdividing of a market into distinct and increasingly homogenous subgroups of customers, where any subgroup can conceivably be selected as a target market to be met with a distinct marketing mix'.

- demographic, level of education,
- stage in the family life cycle and
- geographic
- Sociological variables such as attitudes, values and interest.
- Level of education
- Socio-economic group, or social class

(Give a brief explanation on each of them)

b) Discuss factors that can be considered in evaluating the attractiveness of a segment citing an example from the scenario

Segment attractiveness

A segment might be valid and potentially profitable, but is it potentially attractive?

- A segment which has high barriers to entry might cost more to enter but will be less vulnerable to competitors.

- For firms involved in relationship marketing, the segment should be one in which a viable relationship between the firm and customer can be established
- The most attractive segments are those whose needs can be met by building on the company's strengths and where forecasts for demand, sales profitability and growth are favourable.

c) Discuss the uses of the knowledge about the key market segments. (8 marks)

- Inform the style and tone of marketing communications
- Locate the place communications in appropriate media channels
- Inform destination development needs
- Guide product development

(Brief discussion on each of the four)

SOLUTION FOUR

a) (i) Organic Growth: Advantages

Low risk – Organic growth is generally considered to involve less risk than a merger, and Mufasu's pas experience of it failed merger illustrates the risk involve in growing externally.

Mufasu is able to maintain its **style of management and corporate culture** and exploit its own strength

Growth in stages – Mufasu is a small company so may only have limited resources. A merger may require the organisation to build up its capacity to level of the target company and hence can be strenuous to the organisation. Organic growth can be managed gradually and in stages.

Disadvantages

Speed of growth – It is likely to take longer for a firm to grow organically than if it merges with another firm. With organic growth the speed of growth will be controlled by the level of profits available for reinvestment. This can be an issue with Mufasu as it is still a small company

Nature of growth – Organic growth is suitable for situations where a company is growing gradually and using its existing markets. However in this case Mufasu is looking to break into a new market – in a foreign country Namibia, representing a significant change in Mufasu's strategy.

Access – As Namibia is a new market for Mufasu, it is most likely to lack access to the key suppliers and customers which established competitors will already have there. There may also be language barriers which could make it harder for Mufasu to establish contacts in Namibia if its staff does not speak the local language.

(ii) Merger: Advantages

Speed of growth – Being involved in a merger would allow Mufasu to gain access to a new market much more quickly than growing organically.

Acquiring skills – XYZ already a very good reputation in Namibia and a merger will offer Mufasu the opportunity to widen its skills.

Disadvantages

Risk- Mergers are likely to involve greater risk than organic growth, especially with respect to the way the post-merger integration is managed.

Post-integration issues – Mufasu's experience has highlighted the potential problems involved in trying to integrate different cultures and systems. There could be clashes if the culture and management style of the acquired company is different to the acquisition one and the likelihood of this

happening could be increased by the fact that the company being acquired is in a foreign country. Post integration problems could mean that the expected benefits of the merger are not actually realised.

b) Actions to be taken to prevent the difficulties that occurred leading to a de-merger

Problem with accounting and control systems

Integration of the accounting systems – It is most likely that the two firms may have different systems; therefore Mufasu should aim at identifying the differences between the two systems and integrate Kezuba's system with its own as soon as the merger takes place.

Integration of control system – in addition to the accounting system, the organisations should aim at integrating the control systems. The management accountant plays a key role in this integration process

Corporate cultures

Cultural fit - Mufasu should do analysis of Kezuba's culture and gauge if the two cultures are compatible. If the cultures are too different leading to lack of cultural fit, this can lead again to a demerger, therefore the organisations should not proceed with the merger.

Managing differences – If Mufasu decides that the differences are manageable, then it needs to identify the key differences that need to be reconciled in order for the merger to be successful.

Autocratic management style

Staff resentment- it would appear that there lacked proper infusion of management from both organisations in the previous merger. Mufasu's senior management had more say than the managers from Kekezo; they made decision themselves and then told staff what to do, rather than encouraging any dialogue and discussion with the staff. As a result the staff resented this approach, and so it is likely that their motivation dropped and that may have resisted some of the initiatives management tried to introduce.

Collaboration and participation - To avoid similar problems to happen again, Mufasu's management need to be more flexible in their management styles. There may be cases where the management have to make decisions and impose it on staff, but equally there may be times where it will be beneficial to involve staff in decision making process.

SOLUTIONS FIVE

a) Business process re-engineering (BPR) is the fundamental redesign of business processes to achieve dramatic improvements in key measures of performance such as cost, quality service and speed.

Principles of Business Process Re-engineering (BPR)

(i) Focus on customer- focused outcomes – Processes should be designed to achieve a desired customer-focused outcome (for example, quality, service or speed) rather than being organised around existing tasks

(ii) People who use the output from a process should perform that process – if the staff who use the output of a process are involved in the operation of that process, the risk of errors should be reduced and so should time delays in the process

(iii) Information processing should be included in the work which produces the information. In other words, there should not be a distinction between information processing and information gathering. The development of online databases can be crucial here, allowing users to have access to real time information, thus minimising delays in response to queries.

(iv) Geographically- disperse resources should be treated as if they are centralised – for example, they should be centralised database of suppliers which all departments use, so that they benefit from the economies of scale achieved by the central negotiation of supply contracts.

(v) Parallel activities should be linked rather than integrated – As far as possible, activities should be processed in parallel rather than sequentially, bottlenecks and delays might arise while waiting for the output of a previous process.

(vi) People should be self- managing and exercise autonomy over their work – The traditional distinction between workers and managers should be abolished. BPR aims to allow decisions to be made as quickly as possible and as near to the end customer as possible. This allows increased responsiveness, and also empowered the individuals who make the decisions.

(vii) Information should be captured once, and at source – If information is transferred from one data source to another there is a risk of human error. If information is only input into a system once, and is input as early as possible, the risk of error is reduced, and consistent replies can be obtained in response for any queries about the information.

b) **More rapid information processing and error reduction** – It appears that the process at the Registrar general's office has not been updated to take advantage of the IT/IS systems that are available to it. In particular, relying on predominantly paper based system makes registration much slower than it needs to be and it also increases the threats for making a lot of errors as information is manually recorded and then transferred between systems. A new database led, system would prevent

the need for re-keying and transferring information, and so should reduce the scope for errors in the system.

This system will also mean that the organisation has reliable, up-to-date information about the citizens. Any details that the personnel captures will be captured in the central database on real time basis, and the system can be continually updated for other staff to use. In addition to that, no paper-based transfers of information from one part of the organisation to another will be necessary. Again this reduces delays.

Improved database system – If the registration office develops an electronic database which stores all customer data, this should enable staff to respond to telephone enquiries more quickly. For example if a phone operator receives a call, they can access the database and gather the relevant information to help them deal with the customer enquiry straight away. This faster response time should lead to improved service delivery.

Better support for service staff - Having an electronic (or online) database and improved technology should also enable staff that deal with queries to forward the customer queries to the rightful departments or personnel for quick response and immediate solutions.

Increase staff motivation – Staff motivation and job satisfaction are likely to suffer if the staff feels they are having to work with out-dated processes and technology. Therefore providing the staff with more up-to-date technology will not only allow them to do their job more effectively but it should also motivate them. Moreover the citizens will have a more favourable impression of the service staff if the staff is able to provide quick and efficient service. If this in turn, leads to staff attending to more members of the public in a short period of time, it will further motivates them.

Organisation Structure – BPR's principle of working back from a desired 'customer-focused outcome' will help the organisation to find the most efficient an effective way of delivering that outcome. This is likely to lead to a change in the registrar general's organisation structure of the tasks that individual people do, to reduce the level of internal communication required in response to telephone enquiries.

Greater process flexibility and speed – The current manual system means that the tasks have to be one sequentially. However, one of the principles of BPR is that linked activities should be conducted in parallels rather than sequentially. In this case if the registrar general's office improves its IT systems, and stores in parallel, thereby speeding up the transaction process.

END OF SOLUTIONS