CHARTERED ACCOUNTANTS EXAMINATIONS

PROFESSIONAL LEVEL

P1: ADVANCED FINANCIAL REPORTING

MONDAY 12 DECEMBER 2016

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 draft statements of financial position relate to Taba Plc, Lama Plc and Gama Plc as at 31 March 2016.

	Taba Plc K'000	Lama Plc K'000	Gama Plc K'000
Assets			
Non – current assets			
Property, plant and equipment	430	530	420
Investments in:			
Lama Plc	276		
Gama Plc	20		
Investment property	34	.....	.....
	760	530	420
Current assets			
Inventories	30	40	50
Trade receivables	145	135	125
Cash and cash equivalent	105	95	85
	280	270	260
Total assets	**1,040**	**800**	**680**
Equity and liabilities			
Equity			
Equity shares of K1.00 each	200	180	100
Other components of equity	170	130	110
Retained earnings	230	90	70
Total equity	**600**	**400**	**280**
Liabilities			
Non – current liabilities	185	120	140
Current liabilities	255	280	260
Total liabilities	**440**	**400**	**400**
Total equity and liabilities	**1,040**	**800**	**680**

The following information is relevant in the preparation of group accounts.

1. Taba Plc acquired 80% of the equity shares in Lama Plc for cash consideration. The 80% shareholding was achieved as follows:

Date	Percentage acquired	Cost of investment
		K'000
1 April 2014	30%	96
1 April 2015	50%	180

The fair value of net assets of Lama Plc at 1 April 2015 was K330,000. On that date Lama Plc's retained earnings and other components of equity were K50,000 and K90,000 respectively. The excess in fair value of net assets relates to non – depreciable land.

Taba Plc did not have significant influence at 30% equity interests in Lama Plc. The fair values of 30% equity interests in Lama Plc and non – controlling interest at 1 April 2015 were K108,000 and K72,000 respectively.

30% equity interests in Lama Plc have been carried at fair value until 1 April 2015 when they were restated to their cost and have been recorded at their cost since then.

2. Taba Plc acquired 70% of Gama Plc's equity shares on 1 April 2013 for a share exchange of 3 shares in Taba Plc for 4 shares in Gama Plc. The fair value of net assets of Gama Plc on 1 April 2013 was K190,000. Its retained earnings and other components of equity on that date stood at K40,000 and K70,000 respectively. The deficit in fair value of net assets relates to an item of plant that had a remaining useful life of four (4) years at 1 April 2013.

The market price per share of Taba Plc equity shares and Gama Plc equity shares at 1 April 2013 were K2.40 and K1.60 respectively. The fair value of non – controlling interests at 1 April 2013 was K48,000.

3. On 31 March 2016, Taba Plc acquired additional 10% of Gama Plc's equity shares for a cash consideration of K20,000. Taba Plc has correctly recorded the cash consideration in the above statement of financial position.

4. Lama Plc and Gama Plc have not issued any additional shares since being acquired by Taba Plc. Further, fair value adjustments referred to in (1) and (2) above have not been incorporated in the above statements of financial position.

5. Investments in Lama Plc and Gama Plc are classified as financial assets through other comprehensive income in accordance with IFRS 9 '*Financial instruments*'. The fair values of investments in Lama Plc and Gama Plc had not significantly changed since acquisition date. They are therefore recorded in the above statement of financial position at their respective costs.

6. It is group policy to value non-controlling interests at fair value of net assets at acquisition.

7. Taba Plc has a policy of carrying its investment property at its fair value. Its fair value at 31 March 2016 was K37,000.

8. At 31 March 2016, goodwill in Lama Plc has been impaired by K10,000 while goodwill in Gama Plc has not been impaired.

Required:

Prepare a consolidated statement of financial position of Taba Plc group as at 31 March 2016 in accordance with International Accounting Standards and International Financial Reporting Standards. **[Total: 40 Marks]**

SECTION B

Attempt any three (3) questions from this section

QUESTION TWO

(a) The following are extracts of consolidated financial statements of Bama Plc:

Consolidated statement of profit or loss for the year ended 31 March 2016

	K'000
Revenue	1,800
Profit after tax	300
Income tax	60
Profit for the period attributable to:	
Equity holders of parent	200
Non – controlling interests	40

Consolidated statement of financial position as at 31 March 2016

	K'000
Equity	
Equity shares of K0.50 each	320

Total reserves	520
Non – controlling interests	160
Non – current liabilities	440

Bama Plc uses two key ratios, return on capital employed (ROCE) and earnings per share (EPS) to assess its performance. The ROCE and EPS for the year ended 31 March 2015 were 20% and K0.37 per share respectively.

Review of the individual financial statements of Bama Plc revealed the following:

Transaction One

Inventories that had cost Bama Plc K90,000 to purchase in December 2015 was sold in April 2016 for K85,000. Selling costs related to the transaction amounted to K5,000.
The inventories were recorded in Bama Plc's financial statements and in consolidated financial statements for the year to 31 March 2016 at their December 2015 value. The other inventories were sold at values more than their respective costs.
Consolidated and individual financial statements will be authorised for issue on 31 May 2016.

Transaction Two

On 1 April 2015, Bama Plc acquired a steel bending machine under a two year lease period for an annual lease rental of K20,000 payable on 31 March each year. The machine had an economic useful life of five years. It had a fair value of K80,000 at 1 April 2015. Annual interest rate implicit in the lease agreement was 10%.

The machine was treated in Bama Plc's and consolidated books as though it were acquired under a finance lease and depreciated over a five year period based on its fair value at 1 April 2015.

Note: Bana Plc had not issued any additional equity shares during the year to 31 March 2016.

Required:

(i) Calculate current ROCE and EPS for the year ended 31 March 2016. (4 marks)

(ii) Recalculate ROCE and EPS after taking into account transactions one and two above. (9 marks)

(iii) Comment on the effect on current ROCE and EPS for the year ended 31 March 2016 after taking into account transactions one and two in (ii) above. (2 marks)

(b) Current cost accounting is the method of accounting in which assets are valued on the basis of their current replacement cost, and increases in their value as a result of inflation are excluded from calculation of profit. The method has advantages and disadvantages.

Required:

Explain the advantages of current cost accounting. (5 marks)

[Total: 20 Marks]

QUESTION THREE

(a) Caba Limited completed construction of a factory to manufacture tyres for various vehicles on 30 June 2015 at a cost of K800,000. On the same date, it acquired one machine at a cost of K300,000.

On 30 March 2016, the factory caught fire. The machine was damaged to the extent of rendering it useless to Caba Limited. However, the damage to the factory was immaterial. Caba Limited intends to sell the damaged machine and has fixed the price at K46,000. It had a net fair value of K39,000 on 30 March 2016.The damaged machine was replaced on 31 March 2016 at a cost of K360,000.

Caba Limited has not yet made any efforts to locate a buyer of the damaged machine by 31 March 2016.

It is Caba Limited's policy to depreciate these machines and factory at an annual rate of 20% and 5% respectively using straight line method based on proportion of use.

Note: Assume nil scrap value for the factory and that cost figures given in transaction have been correctly calculated. The factory and the machine were not insured.

Caba Limited would like your advice on the accounting treatment of the transaction in its preparation of financial statements for the year ended 31 March 2016.

Required:

Advise Caba Limited on how the above transaction should be treated in its financial statements for the year ended 31 March 2016 in accordance with international accounting standards. (10 marks)

(b) You are a financial consultant who conducts workshops and talks on various topics on International Accounting Standards and International Financial Reporting Standards.

Next week you are going to have a presentation on IFRS 15 '*Revenue from Contract with Customers*' at 'Accountants' Forum' organised by the Zambia Institute of Chartered Accountants. The Forum organiser would like to have a look at your presentation today before it is delivered next week.

Required:

Write brief notes on IFRS 15 '*Revenue from Contract with Customers*' to be submitted to the 'Accountants' Forum' organiser. (10 marks)

[Total: 20 Marks]

QUESTION FOUR

You recently attended a workshop on various International Accounting Standards (IASs) and International Financial Reporting Standards (IFRSs). The Chief Executive Officer of your company wants you to explain the accounting treatment of several transactions in accordance with applicable accounting standards relating to one of your clients, Moota Limited.

(a) **Transaction One**

Moota Limited introduced two pension schemes, 'Yabo' and 'Stable' on 1 April 2014 for the benefit of its employees. The following information relates to the two schemes as at 1 April 2015:

Yabo Scheme

Under this scheme the company's obligation is limited to its fixed annual contribution of K600,000. The membership of this pension scheme is senior management staff of the company. In the year ending 31 March 2015, the company made a total contribution of K520,000. During the year to 31 March 2016, total contributions of K700,000 were made.

The only entry made in the books of Moota Limited in the year ended 31 March 2016 was to record cash payment of K700,000 in its cash book. All other entries prior to 2016 were correctly made.

Stable Scheme

Under this scheme, the company guarantees benefits to the employees when they reach 55 years or after working for the company for 25 years whichever comes earlier. The membership of this pension scheme is employees other than senior management staff.

The following relates to the pension scheme:

	K'000
Net plan assets at 1 April 2015	100
Current service cost	400
Contributions paid	160
Pension benefits paid	80
Net plan liability at 31 March 2016	40
Appropriate annual discount rate	**12%**

During the year to 31 March 2016, Moota Limited adjusted the formula used to calculate the benefits payable to employees. This resulted in a decrease of K102,000 in pension benefits payable to employees.
Contributions and pension benefits were all paid at 31 March 2016.

The company has only recorded contributions paid in its financial statements for the year to 31 March 2016.

Required:

Explain how the two schemes, Yabo and Stable should be treated in the financial statements of Moota Limited for the year to 31 March 2016. **(Include relevant calculations in your explanation).** (13 marks)

(b) **Transaction Two**

Moota Limited sold goods on credit to Nala Limited on 1 April 2015 for K400,000. The terms of the sales were as follows:

(i) Nala Limited only pays Moota Limited for the goods once they have been paid for by its customers.
(ii) Nala Limited has the right to return any unsold goods. This right has been exercised before by Nala Limited.
(iii) Moota Limited may not require Nala Limited to return unsold goods to it.

Nala Limited had only managed to sell one quarter of the goods bought from Moota Limited. Moota Limited makes a mark-up of 25% on all its sales.

Moota Limited has recognised a sale and a trade receivable in its financial statements for the year ended 31 March 2016.

Required:

Discuss the appropriateness of Moota Limited's accounting treatment of the above transaction and recommend, if any, the adjustments to be made to its financial statements for the year ended 31 March 2016 to show the transaction's correct accounting treatment.

(7 marks)

[Total: 20 Marks]

QUESTION FIVE

The directors of Sola Limited, a property development and management company, would like your advice on accounting treatment of various transactions in accordance with appropriate International Accounting Standards.

(a) Transaction One

Sola Limited intends to construct twenty (20), two-bed - roomed flats starting 1 April 2014. The flats will be let out to various customers at a monthly rental of K3,000 payable three (3) months in advance. Further, tenants will be required to make a security deposit equal to one month's rent at the time they take occupancy of the flats. The security deposit is refundable upon termination of tenancy agreement by either tenant or Sola Limited and after deducting repair costs relating to any damage to the property caused by the tenant.

Construction of flats commenced on 1 April 2014 and flats are expected to be ready for occupation on 31 March 2015.

The transaction has not been recorded in the books of Sola Limited.

(b) Transaction Two

Sola Limited issued a four (4) year 12% convertible loan stock on 1 April 2015 for K900,000. The company incurred issued costs of K90,000. The convertible loan stock will be redeemed at its book value at the end of a four year period.
The effective interest of a similar loan stock without conversion rights was 15%. The effect of the issue costs was to increase effective interest rate to 16%.
Interest for the year to 31 March 2016 was paid on 30 March 2016.

Sola Limited has not accounted for the transaction in its financial statements for the year ended 31 March 2016.

Note: The convertible loan stock met both the cash flow and business model tests.

Required:

Write a report to the directors of Sola Limited that:

(a) Explains how the flats will be treated in its financial statements during and after construction has been completed. (6 marks)

(b) Explains how Sola Limited would treat rentals and security deposit in the financial statements for the year ended 31 March 2016. Assume 40% of the flats are occupied the whole year to 31 March 2016 and that no tenant will stay in the flat for less than one year. (6 marks)

(c) Advise Sola Limited on how the convertible loan stock should be treated in its financial statements for the year ended 31 March 2016. (8 marks)

Note: You should include relevant calculations where applicable.

[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

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

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

December 2016 Examinations
P1 SOLUTIONS

SOLUTION ONE

Taba Plc group
Consolidated statement of financial position as at 31 March 2016

	K'000
Assets	
Non – current assets	
Property, plant and equipment 430+530+420 – 10**W1**+15**W2**	1,385
Goodwill **W1**	20
Investment property	37
	1,442
Current assets	
Inventory 30+40+50	120
Trade receivables 145+135+125	405
Cash and cash equivalents 105+95+85	285
	810
Total assets	**2,252**
Equity and liabilities	
Equity	
Equity shares of K1.00 each 200+52.5**W4**	252.5
Other components of equity **W5**	320
Retained earnings **W2**	304.5
	877
Non – controlling interests **W6**	135
Total equity	**1,012**
Liabilities	
Non – current liabilities 185+120+140	445
Current liabilities 255+280+260	795
Total liabilities	**1,240**
Total equity and liabilities	**2,252**

Workings

W1 – Goodwill

Lama Plc		K'000	K'000	K'000
Consideration:	30% (FV)			108
	50%			180
FV of NCI at acquisition				72
				360
FV of NAs at acquisition:				
Share capital			180	
Other components of equity			90	
Retained earnings			50	
FV adj. – land (bal. fig)			10	
				(330)
Goodwill				30
Impairment				(10)
				20

Gama Plc			
Consideration:			
Share exchange ¾ x70sharesxK2.4			126
FV of NCI at acquisition		48	
		174	
FV of NAs at acquisition:			
Share capital	100		
Other components of equity	70		
Retained earnings	40		
FV Adj. – plant (bal. fig)	(20)		
		(190)	
Negative goodwill			**(16)**

Net FV adj. 10,000 – 20,000 = -10,000

W2 – Retained earnings

	K'000
As per question – Taba Plc	230
Group share in:	
Lama Plc 80% x (90 – 50)	32
Gama Plc 70% x (70 – 40 +15 Note below)	31.5

Goodwill impairment 80% x 10	(8)
Negative goodwill in Gama Plc **W1**	16
Gain in FV of investment property (37 – 34)	3….
	304.5

Excess depreciation FV adj.- plant ¾ x 20 = 15,000

W3 – Movement of equity -10% additional shareholding in Gama Plc

	K'000
FV of NCI at acquisition	48
NCI share of acquisition reserves in Gama Plc:	
Other components of equity 30% x (110 – 70)	12
Retained earnings 30% x 45W2	13.5
	73.5
Decrease in NCI 10/30 x 73.5	24.5
Consideration paid	(20)
Positive movement on equity	**4.5**

W4 – Share exchange

	K'000
Share capital ¾ x 70 shares x K1	52.5
Share premium ¾ x 70 shares x K1.4	73.5

W5 – Other components of equity

	K'000
As per question – Taba Plc	170
Group share in:	
Lama Plc 80% x (130 – 90)	32
Gama Plc 70% x 40W3	28
Gain in FV of 30% shareholding 108 – 96	12
Share premium on share exchange **W4**	73.5
Positive movement on equity **W3**	4.5
	320

W6 – Non – controlling interest

	K'000	K'000
In Gama Plc 20/30 x 73.5**W3**		49
In Lama Plc:		
FV at acquisition **W1**	72	
Share of post acquisition reserves:		
OCE 20% x 40W5	8	

RE 20% x 40W2	8	
Goodwill impairment 20% x 10	(2)	
		86
Total		**135**

SOLUTION TWO

a) (i) ROCE = PBIT/CE = (300+60)/(320+520+160+440) = 360/1,440 =**25%**
EPS = PAT/Weighted average number of shares
= 200/640(320/0.5) = **K0.31 per share**
(ii) Revised ROCE = (360 - 6W2)/ (1,440 - 6 – 54.8W1) =**25.67%**
Revised EPS = (200-6)/640 = **K0.30 per share**

W1 – Obligations under finance lease

	K'000
1.4.15 FV	80
31.3.16 Interest @10%	8
31.3.16 Rental	(20)
31.3.16 Total liability	68
31.3.17 Interest @ 10%	6.8
31.3.17 Rental	(20)
31.3.17 Included in non – current liability	**54.8**

W2 – Calculation of profit adjustment

	K'000
Transaction One	
Inventory adjustment 90 – (85 – 5)	(10)
Transaction Two	
Depreciation reversal 80/5	16
Interest reversal W1	8
Rental	(20)
Profit adjustment	**(6)**

(iv) ROCE has increased from 25% to 25.67% representing 2.68% increase. EPS has reduced from K0.31 per share to K0.30 per share.

b) Advantages of Current Cost Accounting (CCA) include the following:

- CCA can be used to indicate whether dividends paid to shareholders will reduce the operating capability of the business by excluding holding gains from profit.
- CCA is a useful guide for management in deciding whether to hold or sell assets. This is because assets are valued after management has considered the opportunity cost of holding them, and expected benefits from their use.
- It is relevant to the needs of information users in:
    - Assessing the stability of the business entity
    - Assessing the vulnerability of the business, or the liquidity of the business
    - Evaluating the performance of management in maintaining and increasing the business substance
    - Judging future prospects
- It can be implemented fairly easily in practice, by making simple adjustments to the historical cost accounting profits. A current cost statement of financial position can also be prepared with reasonable simplicity.

SOLUTION THREE

a) Factory

Factory will be shown at a carrying value of K770,000 **W1** as at 31 March 2016 in the statement of financial position. This is after allowing for the depreciation charge for the period of nine months of K30,000**W1** which will be expensed to the statement of profit or loss for the year to 31 March 2016.

Damaged Machine

The damage caused by fire to the machine is an indicator of impairment. It should therefore be reviewed for impairment at 30 March 2016. At that date the machine has a carrying value of K255,000 (300 ,000 – 45, 000) after deducting depreciation charge of K45,000 (20% x 300,000 x 9/12). Its recoverable amount is the higher of fair value less costs to sell of K39,000 and value in use of zero. It has a value in use of zero as it is useless to Caba Limited. Its recoverable amount is therefore K39,000 in accordance with IAS 36 'Impairment of assets'. The carrying value of the machine is more than its recoverable amount by K216,000 (255,000 – 39,000) representing its impairment loss. Total amount to be taken to the statement of profit for the year to 31 March 2016 is K261,000, made up of depreciation charge of K45,000 and impairment loss of K216,000. The machine will be shown in the statement of financial position as at 31 March 2016 at K39,000 as part of property, plant and equipment subject to depreciation. The machine should not be classified as 'held for sale' because it has not met the conditions provided

for in IFRS 5' Non – current assets held for sale and discontinued operations'. Caba Limited has fixed its selling price at K46,000 which is more than its net fair value of K39,000. This makes the machine less likely to be sold. Further, no efforts have been made by the company to locate the buyer.

New Machine

This will be shown under non – current assets at a carrying value of K360,000. No depreciation will be charged as it was acquired at reporting date.

b) Notes to the 'Accountants' Forum' organiser

Step 1: Identify the contract with the customer

A contract with a customer will be within the scope of IFRS 15 if all the following conditions are met:

- the contract has been approved by the parties to the contract;
- each party's rights in relation to the goods or services to be transferred can be identified;
- the payment terms for the goods or services to be transferred can be identified;
- the contract has commercial substance; and
- it is probable that the consideration to which the entity is entitled to in exchange for the goods or services will be collected.

Step 2: Identify the performance obligations in the contract

At the inception of the contract, the entity should assess the goods or services that have been promised to the customer, and identify as a performance obligation:

- a good or service (or bundle of goods or services) that is distinct; or
- a series of distinct goods or services that are substantially the same and that have the same pattern of transfer to the customer.

Step 3: Determine the transaction price

- The transaction price is the amount to which an entity expects to be entitled in exchange for the transfer of goods and services.
- Where a contract contains elements of variable consideration, the entity will estimate the amount of variable consideration to which it will be entitled under the contract.

Step 4: Allocate the transaction price to the performance obligations in the contracts

Where a contract has multiple performance obligations, an entity will allocate the transaction price to the performance obligations in the contract

- By reference to their relative standalone selling prices.
- If a standalone selling price is not directly observable, the entity will need to estimate it.

Step 5: Recognise revenue when (or as) the entity satisfies a performance obligation

- Revenue is recognised as control is passed, either over time or at a point in time.
- Control of an asset is defined as the ability to direct the use of and obtain substantially all of the remaining benefits from the asset.

Workings

W1 – Factory carrying value

	K'000
Cost at 30 June 2015	800
Depreciation 5% x 800 x 9/12	(30)
Value at 31 March 2016	**770**

SOLUTION FOUR

Transaction One

Yabo Scheme

This is defined contribution scheme as Moota Limited's obligation is limited to its fixed annual contribution of K600,000. Moota Limited should recognise its fixed contribution of K600,000 as an expense in its statement of profit or loss for the year ended 31 March 2016. Moota Limited should also recognised a prepayment of K20,000 **W1** under current assets in its statement of financial position as at 31 March 2016.

Stable Scheme

This is a defined benefit plan as Moota Limited guarantees the benefits to which its employees are entitled under the scheme. Moota Limited will have to recognise a net plan liability of K40,000 under non – current liabilities in its statement of financial position as at 31 March 2016. A net expense of K286,000 **W2** should be expensed to the statement of profit or loss for the year ended 31 March 2016 while net actuarial loss of K14,000 **W2** should be taken to other comprehensive income.

Transaction Two

Treatment of the transaction in the books of Moota Limited will depend on whether risks and rewards associated with the goods have been transferred to Nala Limited or not. The risks and rewards associated with the goods have not been transferred to Nala Limited. This is because Nala Limited only pays for the goods once they have been paid for by its customers. Further, Nala Limited has the right to return any unsold goods to Moota Limited and has exercised this right before. These two terms show that risks associated with irrecoverable debts and inventory obsolescence are borne by Moota Limited. However, Moota Limited not having the right to require Nala Limited may suggest that the ownership of goods has been transferred to Nala Limited.

Conclusion

Most of the terms of the sale point to goods not having been transferred to Nala Limited. Moota Limited should not have recognised a sale and a trade receivable. Neither should it have derecognised inventory from its books.

Required Adjustments

Moota Limited's revenue and trade receivables should be reduced by K400,000. In addition, Moota Limited should increase its inventory by K320,000 (100/125 x 400,000) and reduce its cost of sales by the same amount. Overall, the net assets and profit of Moota Limited will be reduced by K80,000 (400,000 – 320,000).

Workings

W1 – Yabo Scheme Prepayment

	K'000
Opening liability (600 – 520)	80
Pension expense	600
Payment made during the year	(700)
Prepayment	**20**

W2 – Stable Scheme

Net actuarial gain/(loss) calculation

	K'000
Net plan assets at 1 April 2015	100
Net interest income (12% x 100)	12
Contribution paid	160

Past service cost	102
Current service cost	(400)
Net actuarial loss (bal. fig)	(14)
Net plan liability at 31 March 2016	(40)

Net expense calculation

	K'000
Net interest income	(12)
Past service cost	(102)
Current service cost	400
Net expense	**286**

SOLUTION FIVE

Report

To: The Directors of Sola Limited
From: Accountant
Date:

Subject: Accounting treatment of transactions one and two for the year ended 31 March 2016.

1.0 Introduction

The report covers the accounting of rentals and security, flats and convertible loan stocks in the financial statements of Sola Limited for the year to 31 March 2016.

2.0 Accounting Treatment

2.1.1 Flats (a)

During construction, they will be treated in the financial statements of Sola Limited as part of property, plant and equipment without depreciation and revaluation. Immediately after been completed, they should be reclassified as investment property. At this point, 31 March 2015, Sola Limited has a choice between two accounting policies; cost model and fair value model. If it chooses the cost model, then the property should be carried at cost subject to depreciation and impairment review. However, it should not be revalued. Fair value model on the other hand, requires the property to be carried in the statement of financial position at its fair value at reporting date and changes in fair values reported in the statement of profit or loss as either gain or loss.

2.1.2 Rentals and security deposits(b)

Sola Limited should recognise rentals for the year to 31 March 2016 as income in its statement of profit or loss. This amounts to K288,000 **W1**. Security deposits of K24,000 **W2** on the other hand, should not be recognised as income in the financial statement of Sola Limited. It will recognise income to the extent of repair costs incurred by it when the tenant vacates the flat. In the meantime, it should recognise them in its statement of financial position under current liabilities.

2.1.3 Convertible loan stock (c)

The convertible loan stock being a financial liability will be carried at amortised cost in the financial statements as it has met both cash flow test and business model test. The loan should first be split into liability and equity components using interest rate of a loan without conversion rights. This gives K823,140 **W3** and K76,860 **W3** respectively. The issue costs should then be allocated to the two components based on their carrying values. This results into K82,314 **W3** and K7,686 **W3** to liability and equity components respective. The liability component of K740,826 **W3**. This will be shown at amortised cost in the statement of financial position. The interest rate used relates to that which has taken into account effects of issue costs, 16%. Convertible loan stock will then be shown in the statement of financial position of Sola Limited under non – current liabilities at K 751,358.16 **W3** while equity under equity.. Interest of K118,532.16 **W3** will be expensed to the statement of profit or loss.

3.0 Conclusion

I am always at your service should you have any questions on what is contained in this report.

Workings

W1 – Rental income = 3,000 x 20 x 40% x 12months = K288,000

W2 – Security deposit = 3,000 x 8 x 1 month = K24,000

W3 – Convertible loan stock

Calculation of liability and equity components

	K	DF@15%	PV(K)
Interest (900,000 x 12%)	108,000	2.855	308,340
Repayment	900,000	0.572	514,800
Liability component			823,140
Equity component (bal. fig)			76,860
Loan proceeds			900,000

Allocation of issue costs

	Liability component	Equity component
	K	K
As per split above	823,140	76,860
Issue costs	(82,314)	(7,686)
	740,826	69,174

Amortised cost – Liability component

Opening bal	Interest @16%	Cashflow@12%	Closing bal.
K	K	K	K
740,826	118,532.16	(108,000)	751,358.16

END OF SOLUTIONS

CHARTERED ACCOUNTANTS EXAMINATIONS

PROFESSIONAL LEVEL

P2: ADVANCED MANAGEMENT ACCOUNTING

TUESDAY 13 DECEMBER 2016

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 MUST be attempted

QUESTION ONE

Goodluck plc (G plc) is considering entering a market for a new video camera, series VC2016. The anticipated life is four years and the following information has been gathered:

(i) The total market size for the VC2016 is estimated as follows: Year 1: 5 million units; Year 2: 10 million units; Year 3: 7.5 million units; Year 4: 2.5 million units.

(ii) It is expected that the introduction of the VC2016 model will result in the reduction in sales of the existing VC2014 series model of 1.5 million units in the first year and thereafter no sales will be made. The contribution per unit of this model is K80.

(iii) G Plc intends to use Computer Aided Design (CAD) and Computer Aided Manufacturing (CAM) techniques in producing the VC2016. The flexible manufacturing system will consequently produce up to 12 million units per annum.

(iv) The launch price in the first year will be K550 per unit and thereafter prices will be reduced by 15% per annum.

(v) Feasibility study and development costs amounting to K70 million have been estimated to be incurred. An additional investment of K500 million will be required (payable immediately) and will have an estimated scrap value of K80 million (receivable in year 4).

(vi) The variable cost per unit over the life cycle of the VC2016 will be K275.

(vii) An advertising campaign will be implemented by G Plc on the following basis: Years 1 – 2: K40 million each year.

(viii) Fixed costs directly attributed to the video camera (other than advertising costs) will be K400 million per year in years 1 and 2 and K100 million per year in years 3 and 4.

(ix) Expenditure on working capital will be K10 million immediately and a further K5m in year 1.

(x) The project would require a loan of K575 million to finance it and annual interest charges are likely to be in the region of K36 million.

(xi) Tax is paid at a rate of 30% one year in arrears.

(xii) Capital allowances are claimed at a rate of 25% on a reducing balance basis and claimed one year in arrears.

(xiii) G Plc. uses a post-tax cost of capital of 15% per annum to evaluate projects of this type.

(xiv) Bongo Division (BD) and Congo Division (CD) are two divisions of the G Plc. Bongo have offered to supply a sub-assembly to Congo at a transfer price of K30 per component. BD produces and sells the sub-assembly to external customers at K30 per unit. BD bases its transfer price on total cost plus 20% profit mark-up. 60% of total cost is variable and 40% of total cost is fixed.

Notes (i) to (xiv) should be used to answer the question requirements below.

Required:

(a) (i) Some information from notes (i) – (xiii) is irrelevant in the evaluation of the VC2016 model. Identify **TWO (2)** of these and briefly explain why they are irrelevant. (2 marks)

(i) Purely on financial grounds advise whether the VC2016 model is viable [work in 'millions of kwacha and to the nearest whole number.] (12 marks)

(ii) Calculate the IRR of this project. (3 marks)

(iii) Calculate the discounted payback period to two decimal places. (2 marks)

(iv) Note (iii) refers to CAD and CAM techniques. Briefly explain the benefits of using CAD and CAM in the manufacture of the VC2016. (4 marks)

(v) Explain the benefits to Goodluck plc of carrying out a post completion audit.

(4 marks)

(b) Discuss the transfer prices at which Bongo Division should transfer its sub-assemblies to Congo Division to maximise group profits in each of the following situations:

(i) BD has an external market for the whole output at a selling price of K30 per unit. Transfers to CD will result in savings in transport costs of K2 per unit.

(3 marks)

(ii) Information in part (i) above applies but BD has production capacity for 10,000 units. The maximum external sales are 2,500 units. (6 marks)

(iii) Information in part (i) and part (ii) above still applies but BD has an alternative use for some of its unutilised production capacity. This alternative use is equivalent to 4,000 units and would earn K20,000 total contribution.

(4 marks)

[Total: 40 marks]

SECTION B

Attempt any THREE (3) questions out of FOUR (4)

QUESTION TWO

Lushomo Limited makes and sells children's toys. Below is the standard cost of producing each toy.

Material	
Plastic	250g @ K25/kg
Wire	10cm @ K40.50/mtr
Labour	
Skilled	40 min @ K12/hr
Unskilled	15 min @ K6/hr

Overheads are absorbed based on the direct labour hours. The budgeted overheads were K330,000 and budgeted direct labour hours were 220,000.

Lushomo Ltd sells each toy at a price of K23.30. The company has always targeted the annual agriculture and commercial shows that take place throughout the country.

At the beginning of the new year, the company had budgeted to make and sell 120,000 toys which accounts for the company's market share. The company was aware that the market for toys has always been 320,000 every year. During the year, the company managed to make and sell only 110,000 toys for total sales revenue of K2,563,000. The drop in the sales was attributed to the new entrants in the market who are selling their toys at a lower price. The company used 27,000 kilograms of plastic at a total cost of K708,750 and 10,500 metres of the wire at a cost of K425,775. Total hours of skilled labour worked were 73,000 hours costing K912,500. On the other hand, total hours of unskilled labour worked were 26,500 hours costing K165,000.

In view of the increased competition, Lushomo Ltd changed the design of its toys. This resulted in an increase in the quantity of plastic required to make a toy by 5% and a reduction in the quantity of wire by 10%. In addition there has been a 3% rise in the prices of plastic on the world markets.

There has been also an increase of 10% in the market size for these toys.

Required:

(a) Calculate the following variances for both materials:

(i)	Price planning variances	(3 marks)
(ii)	Price operational variances	(3 marks)
(iii)	Usage planning variances	(3 marks)
(iv)	Usage operational variance	(3 marks)

(b) Calculate the following variances for both types of labour:

(i)	Labour rate variances	(2 marks)
(ii)	Mix variance	(2 marks)
(iii)	Yield variance	(2 marks)

(c) Calculate the market size variance. (2 marks)

[Total: 20 Marks]

QUESTION THREE

Chinoyi Plc (C Plc) makes four products P, Q, R and S making use of the same plant and processes. Currently C Plc uses a traditional simple absorption rate to attribute overheads to products. However, the company is contemplating using an activity based costing system (ABC).

The following data has been prepared for production period 3.

Product	**P**	**Q**	**R**	**S**
Production Volume (units)	250	2,500	300	3,500
Material cost per unit (K)	10	10	32	34
Labour cost per unit (K)	6	6	24	18
Direct labour time per unit	60 mins	60 mins	240 mins	180 mins
Machine time per unit	30 mins	30 mins	120 mins	180 mins

Production overheads are currently absorbed on a factory-wide machine hour basis.

Total production overheads recorded by the cost accounting system is analysed in cost pools as follows:

- Factory overhead related costs K74,848
- Set-up related cost K8,710

- Material ordering related costs K3,840
- Material handling related costs K15,160
- Spare parts management related costs K17,200

Management of C Plc examined carefully the nature of its production overhead activities for period 3 and the following data has been prepared:

	P	**Q**	**R**	**S**
Number of Set-ups	2	12	4	16
Number of material orders	2	8	2	8
Number of material handlings	4	20	6	24
Number of spare parts	4	10	2	8

Required:

(a) (i) Calculate the product cost per unit for each product using the current traditional method. (4 marks)

(ii) Calculate the product cost per unit for each product using ABC, tracing overheads to products by means of cost drivers. (8 marks)

(iii) Comment briefly on the differences between overheads traced by the traditional absorption costing system and those traced by ABC. (3 marks)

(b) The managing Director of C Plc is so much concerned with cost control whereas the Finance Director has been emphasising cost reduction.

Required:

(i) Distinguish between cost control and cost reduction. (2 marks)

(ii) State **TWO (2)** examples of cost control and **TWO (2)** examples of cost reduction.

(3 marks)

[Total: 20 marks]

QUESTION FOUR

Siyabonga Consulting (SC) specialises in two types of consultancy project, namely type Q and type R. Three types of researchers will be used on the projects in the first quarter of 2016. These are senior consultants, junior consultants and trainee consultants.

Research time for each one project will be as follows:

	Project Q	Project R
Senior researchers	40 mins	65 mins
Junior researchers	60 mins	90 mins
Trainee researchers	30 mins	15 mins

Hourly remuneration rates for senior, junior and trainee researchers are K180; K60 and K20, respectively.

Other data relating to the projects (per each project):

	Q	R
Fee income per each project	K400	K600
Direct project expenses/unit	K75	K155
Fixed overheads	K65	K28

Fixed overhead are absorbed at K10 per project hour.

Costs are not expected to increase until 2017.

The senior management of Siyabonga Consulting is preparing a budget for the first quarter. During this period, it expects senior research time to be restricted to 500 hours and junior research time to be restricted to 437.5 hours.

The trainee research work is carried out by final year undergraduate research students and management is guaranteed that it would easily get extra students if the existing trainee researchers were to fail to finish the budgeted work.

The maximum demand levels for each project will be 150 consultancy project units for project Q and 400 consultancy project units for project R.

SC would like to identify the most profitable use of resources at its disposal.

Required:

(a) Calculate the contribution per unit for each type of project. (2 marks)

(b) Determine the mix of projects that will maximise SC profits for the first quarter of 2016. Use the graphical linear programming approach. (7 marks)

(c) Calculate the total contribution that will be earned from the optimal plan. (2 marks)

(d) It has now come to the attention of SC management that trainee research hours will be in short supply. The resource constraints and objective function in (b) above have been processed in a simple linear programming algorithm model and the following solution printed. The slack/surplus variables for the senior research minutes, junior research minutes, trainee research minutes, Q demand projects and R demand projects are X1, X2, X3, X4 and X5 respectively.

Contribution (Z) = K 26,860.05

Variables	Value
Q	134.38
R	56.25

Constraints	slack/surplus	worth value
X1	20,968.55	0
X2	0	0.73
X3	0	2.38
X4	15.62	
X5	343.75	

Required:

As management accountant for SC, draft a report to the board that interprets the solution produced above, explains the use of linear programming to determine the optimal use of resources and makes appropriate recommendations. (9 marks)

[Total: 20 Marks]

QUESTION FIVE

Auto Africa Ltd (AA) is a Zambian company established in 1998. AA deals in motor vehicles spares, accessories and repairs. AA currently operates sixteen (16) outlets, thirteen in Zambia, two in the Democratic Republic of Congo and one in Malawi. The company board wishes to expand its operations into more neighbouring countries though the Chief Executive Officer is concerned with the high levels of costs being incurred as result this has led to a 15% profitability reduction in the last three years.

The Finance Director has suggested applying a cost reduction and carrying out a value analysis in order to improve the profitability. The other board members have wondered as to how this could work. You being the Management Accountant, the Finance Director has asked you to explain the following:

(i) Cost reduction and value analysis.

(ii) How could the above two techniques help in improving the profitability of Auto Africa.

(iii) How Value analysis would be implemented in Auto Africa Ltd.

Required:

Write a detailed report that addresses the issues raised by the Finance Director, taking into account the concerns of the Chief Executive Officer and makes appropriate recommendations. (20 marks)

[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

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

December 2016 Examinations

P2 Solutions

Solution One

i)

1. Feasibility Study Costs of K70 million
   These costs are irrelevant because they are sunk costs. They will be incurred whether or not the investment goes ahead.
2. Financing Loan of K575 million
   The loan cost is irrelevant because its cost is already included in the cost of capital.

ii) NPV Model (K'm)

Year	0	1	2	3	4	5
Asset Cost	(500)					
Scrap Value					80	
Working Capital	(10)	(5)			15	
Cash flow (w.1)		815	490	823	(58)	
Tax			(245)	(447)	(247)	(17)
Tax Savings			38	28	21	39
Net Cash flow	(510)	810	1,283	404	(73)	22
DF @ 15%	1.0	0.870	0.756	0.658	0.572	0.497
PV	(510)	705	970	266	(42)	11
NPV						1,400

Advice
Purely on financial grounds, the investment is viable because the NPV is POSITIVE

iii) IRR

Try 25 %

Year	0	1	2	3	4	K'm 5
Net Cash flow	(510)	810	1,283	404	(73)	22
DF @ 25%	1.0	0.8	0.64	0.512	0.410	0.328
PV	(510)	648	821	207	(30)	7
NPV						1,143

$$IRR = A\% + \frac{P}{P+N}(B\% - A\%)$$

$$= 15\% + \frac{1400}{1400-1143}(25\% - 15\%)$$

= 15% + (5.45) x 10%

= 69.5% = 70%

iv) Discounted Payback Period

Year	PV Cashflow	Cum. PV Cashflow
0	(510)	(510)
1	705	195

DPBP = $\frac{510}{705}$ = 0.72 Years

Workings

a) W.1 Total Contribution

	Y1	Y2	Y3	Y4	
Selling Price per unit [K550 x 1/ 0.85/ 0.7225/ 0.614125	550	468.0	398	338	
VC per unit	(275)	(275)	(275)	(275)	
Contribution per unit	275	193	123	63	
	x	x	x	x	
Sales volume (millions units)	5	10	7.5	2.5	
Total contribution	1375	1930	923	158	
Less:					
– Contribution foregone [K80 x 1.5m]	(120)				
– Advertising	(40)	(40)			
– Specific fixed costs	(400)	(400)	(100)	(100)	
Net Cashflow	815	1490	823	58	
Tax @ 30%	–	(245)	(447)	(247)	(17)

W.2 Tax Allowances (K,m)

		Tax Relief @ 30%			
		Y1	Y2	Y3	Y4
Y0	500				
Y1 @25%	(125)	38			
	375				
Y2 @ 25%	(94)		28		
	281				
Y3 @ 25%	(70)			21	
	211				
Less: Scrap	(80)				
	131				
Balancing Allowance Y4	(131)				39
	–				

v) Computer-Aided Design

Computer-aided design (CAD) allows huge numbers of alternative configurations to be analysed both for cost and simplicity. Simple designs lead to a more reliable product; and further, a simple product is easier to manufacture, thereby minimising the possibility of production errors. Thus CAD allows quality and cost reduction to be built in at the design stage of a product. The advanced graphics facilities of the typical CAD program enable the draughtsman not only to move parts around the design, and instantly appreciate the effect of these changes on the finished product, but also to manipulate the drawing, and view the design from any desired angle.

Computer-Aided Manufacturing

The manufacturing process is carried out by a range of machinery that, together with its related software, comes under the collective heading of computer-aided manufacturing (CAM). Significant elements of CAM are computer numerical control (CNC) and robotics. CNC machines are programmable machine tools that are capable of performing a number of machining tasks, such as cutting and grinding. A computer program stores all the existing manufacturing configurations and set-ups instructions for a particular machine or bank of machines, facilitating a change in configuration in a matter of seconds via the keyboard; changes to existing configurations and new configurations are easily accommodated. CNC

therefore offers great flexibility, and dramatically reduced set-up times. Furthermore, unlike human operators, who gets tired and are error prone, CNC machines are able to repeat the same operation continuously in an absolutely identical manner, to a completely consistent level of accuracy and machine tolerance; the implications for both quality and production control are obvious, and represent additional important benefits.

vi) Benefits of Post Completion Audit

Possible Discontinuation

If the appraisal takes place before the end of the project life, and if it is found that the benefits have been less than expected because of management inefficiency, steps can be taken to improve efficiency. Alternatively it might highlight the fact the project should be discontinued.

Highlights Good Managers

It can help to highlight those managers that have been instrumental in making the project a success.

Identifying Weakness

It might identify weaknesses in the forecasting and estimating techniques used to evaluate projects and so should help to improve the discipline and quality of forecasting for future investment decisions that the company might make.

Improving Estimates

Original estimates of cash flows might be more realistic if managers are aware that they will be monitored, but post-completion audits should not be unfairly critical.

b)

i. Since Bongo Division has an external market which is the opportunity cost foregone, the relevant transfer price would be the external selling price of K30 per unit. This will be adjusted to allow for the K2 per unit avoided on internal transfers due to transport costs not required.
The transfer price should be K30 – K2 = K28

ii. In this situation Bongo Division has no alternative opportunity for 7,500 units of its production of the sub-assembly. It should, therefore, offer to transfer this quantity at marginal cost. This is variable cost less transport costs avoided = K15 – K2 = K13 per unit
Note. Total cost = K30 x 83.33% = K25

Variable cost = K25 x60% = K15

The remaining amount of sub-assembly should be offered to Congo Division at the adjusted selling price of K28 per unit as in (i) above.

iii. Bongo Division has an alternative use for some of its production capacity which will yield a contribution equivalent to K5 per unit of sub-assembly (K20,000/4,000 units). The balance of its spare capacity (3,500 units) has no opportunity cost and should still be offered at marginal cost.

Bongo Division should offer to transfer:
4,000 units at K13 + K5 = K18 per unit, 3,500 units at K13 per unit; and the balance of requirements at K28 per unit.

Solution Two

(a) Variances

(i) Price planning

Plastic	K
Original: (0.025 x 262.50 x 110,000)	= 721,875.00
Revised: (0.02575 x 262.50 x 110,000)	= 743,531.25
Variance	21,656.25(A)

Wire: The price was not revised and therefore no variance.

(ii) Price operational

Plastic		K
Revised: K25.75 x 27,000	=	695,250.00
Actual:	=	708,750.00
Variance		13,500.00(A)

Wire		K
Revised: K40.50 x 10,500	=	425,250.00
Actual:	=	425,775.00
Variance		525.00(A)

(iii) Usage planning

Plastic	K
Original: (0.25 x 110,000 x K25)	= 687,500.00
Revised: (0.2625 x 110,000 x K25)	= 721,875.00
Variance	34,375.00(A)

Wire	K
Original: (0.1 x 110,000 x K40.50)	= 445,500.00

Revised: (0.09 x 110,000 x K40.50)	=	400,950.00	
Variance		44,550.00(F)	

(iv) Usage operational

Plastic		K
Revised: (0.2625 x 110,000 x K25.75)	=	743,531.25
Actual: (27,000 x K25.75)	=	695,250.00
Variance		48,281.25(F)

Wire		K
Revised: (0.09 x 110,000 X K40.50)	=	400,950.00
Actual: (10,500 X K40.50)	=	425,250.00
Variance		24,300.00(A)

(i) Labour variances

(i) Labour rate

Type of labour	standard labour cost K	Actual labour cost K	variance K
Skilled	876,000	912,500	36,500(A)
Unskilled	159,000	165,000	6,000(A)
Variance			42,500(A)

(ii) Labour Mix

	AQSM (Hrs)	AQAM (Hrs)	Difference in mix (Hrs)	Rate K	Variance K
Skilled	72,462	73,000	538(A)	12	6,456(A)
Unskilled	27,038	26,500	538(F)	6	3,228(F)
Variance					3,228 (A)

(iii) Labour Yield

	SQSM (Hrs)	AQSM (Hrs)	Difference in mix (Hrs)	Rate K	Variance K
Skilled	73,333.33	72,462	871 (F)	12	10,452(F)
Unskilled	27,500.00	27,038	462(A)	6	2,772(A)
Variance					13,224(F)

(C) Market size variance

= Revised budgeted sales less Original budgeted x revised standard profit

$= \left[\frac{120,000}{320,000} \text{ x } 352,000 \right] \text{ - } 120,000 \text{ x } 2.01$

=K24,120.00 (F)

Workings

Revised Standard cost

Material

Plastic (250 x 1.05) x $(\frac{25x1.03}{1000})$	6.76
Wire (10 x 0.9) x $(\frac{40.5}{100})$	3.65
Labour	
Skilled 40 x 12/60	8.00
Unskilled 15 x 6/60	1.50
Overheads 1.50 x 55/60	1.38
Standard cost	21.29
Selling Price	23.30
Profit	2.01

Solution Three

a)

i) Product Cost Per Unit Using Current Traditional Absorption Costing (TAC)

	P	Q	R	S
	K	K	K	K
Direct Material	10	10	32	34
Direct Labour	6	6	24	18
Overheads [K9.6 x $\frac{30}{60}$ x $\frac{30}{60}$ x $\frac{120}{60}$ x $\frac{180}{60}$]	4.8	4.8	19.2	28.8
Product Cost Per Unit	20.8	20.8	75.20	80.80

ii) Product Cost Per Unit Using ABC

	P	Q	R	S
	K	K	K	K
Direct Material	10	10	32	34
Direct Labour	6	6	24	18
Overheads	22.54	9.96	27.09	23.17
Product Cost Per Unit	38.54	25.96	83.09	75.17

Workings

W.1 Machine overhead absorption rate per hour

$$\text{OAR} = \frac{Total\ Budget\ Overheads}{Total\ Machine\ hours}$$

$$= \frac{K(74{,}848+8{,}710+3{,}840+15{,}160+17{,}200)}{[250x\frac{30}{60}+2{,}500\ x\ \frac{30}{60}+300\ x\ \frac{120}{60}+3{,}500\ x\ \frac{180}{60}]}$$

$$= \frac{K119{,}758}{125hrs+1{,}250hrs+600hrs+10{,}500hrs}$$

$$= \frac{K119{,}758}{12{,}475hrs}$$

= K9.60/hr

W.2 ABC Overhead cost per unit

Activity Cost Pool	Share Ratio	P	Q	R	S	Total
Factory Overheads	125:1,250:600:10,500	750	7,500	3,600	62,998	74,848
Set-ups	2:12:4:16	512	3,074	1,025	4,099	8,710
Material orders	2:8:2:8	384	1,536	384	1,536	3,840
Material handling	4:20:6:24	1,123	5,615	1,684	6,738	15,160
Spare parts	4:10:2:8	2,867	7,167	1,433	5,733	17,200

		5,636	24,892	8,126	81,104	119,758
		÷	÷	÷	÷	
Production volume (units)		250	2,500	300	3,500	
Overhead cost per unit		K22.54	K9.96	K27.09	K23.17	

iii) Comment on TAC and ABC Differences

	P	Q	R	S
TAC (K)	4.8	4.8	19.2	28.8
ABC (K)	22.54	9.96	27.09	23.17
Difference	17.74	5.16	7.89	5.63
Result	More	More	More	Less
Product Cost Per Unit	ABC	ABC	ABC	ABC

The activity-based costing approach attributes more to costs to products P, Q and R and less to product S than the traditional method of accounting for overhead costs. The activity-based costing method gives a more accurate cost by relating it to the resources used to manufacture each product; consequently these costs are more useful for decision-making than those provided by the traditional method.

b)

i) Cost control is the process of containing costs to some predetermined norm. This is usually carried on by the formal comparison of actual results with those planned – the routine of budgets and standard cost and operating statements and the investigation of variances.

Cost reduction is the wider-ranging attempt to reduce costs below the previously accepted norm or standard, preferably without reducing quality or effectiveness. This is a dynamic rather than routine process, quite possibly only carried out at infrequent intervals, e.g. at time of financial crisis.

ii) Cost Control and Cost Reduction Examples

Cost Control

- Budgetary control
- Standard costing

- Setting of spending limits by level of management
- Control of capital expenditure

Cost reduction

- Value analysis, value engineering
- Work study
- Operations research (OR)
- Standardisation of components and processes
- Product range standardisation/simplification
- Zero-based budgeting

Solution Four

a) Contribution per project

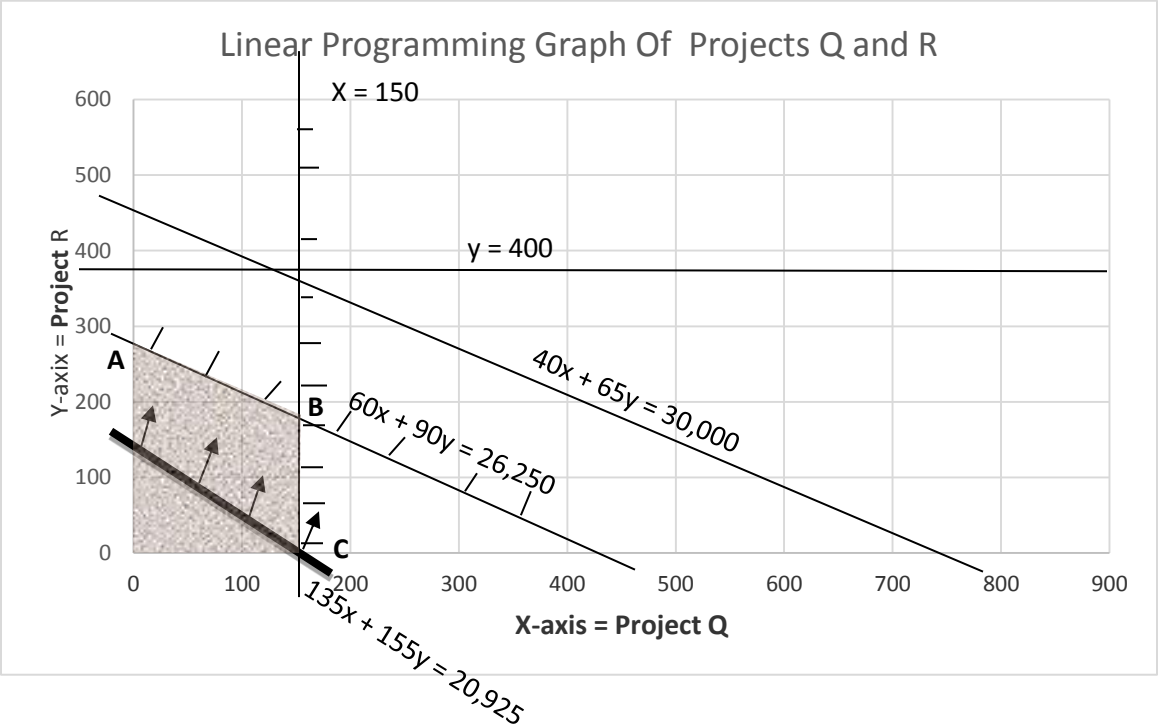
	Q	R
Fee Income	400	600
Direct Expenses	(75)	(155)
Senior Researcher (K180 x $\frac{40}{60}$ / $\frac{65}{60}$)	(120)	(195)
Junior Researcher (K60 x $\frac{60}{60}$ / $\frac{90}{60}$)	(60	(90
Trainee Researcher (K20 x $\frac{30}{60}$ / $\frac{15}{60}$)	(10)	(5)
Contribution	135	155

b)

Let x be units of Project Q
Let y be units of Project R

Maximise
(E5) 135x + 155y (Contribution)

Subject to the following constraints
(E1) 40x + 65y = 30,000(maximum SR minutes)
(E2) 60x + 90y = 26,250(maximum JR minutes)
(E3) x ≤ 150 (max. Q projects demand)
(E4) y ≤ 400 (max. R projects demand)
X, y ≥ 0 (Non-negativity constraint)



0ABC = Feasible region

Key for Constraint Line Equation

Constraint lines co-ordinates for plotting
E1 (750,462)
E2 (438, 292)
E3 (150, 0)
E4 (0, 400)
E5 (155, 135)

Optimal Solution by simultaneous equations

$x = 150$

$60x + 90y = 26{,}250$

$y = [26{,}250 - 60 \times 150] \div 90$

$= 191.67$

$\approx$ 192 projects

c) Total Contribution

	K
Q(x): 150 x K135 =	20,250.00
R(y): 191.67 x K155 =	29,708.85
	49,958.85

d) Report

To: The Board
From: Management accountant
Date: 20 June 2016
Subject: Linear Programming (LP) Output Interpretation

1.0 Introduction

This is the draft report to interpret the LP Output report as a result of trainee research hours constraints.

2.0 Interpretation

The trainee hours constraint decreases the budgeted contribution from K49,959 to K26,860. This confirms that trainee hours are a binding constraint.

2.1 Optimal Solution

134 Q project and 56 R projects should be conducted to yield a total contribution of K26 860 [134.38 x K35 + 56.25 xK155]. Consequently demand will go unsatisfied to the extent of 15.62 (150 – 134.38) Q projects and 343.75 (400 – 56.25) R Projects

20,968.55 senior research minutes will remain unused. However, both junior and trainee research hours will be fully used up. Hence junior and trainee hours have shadow prices of K0.73 and K2.38, respectively. This means that if junior and trainee hours were to increase by 1 minute, the contribution will increase by K0.73 and K2.38 respectively.

The use of linear programming to determine the optimum use of resources
Linear programming is a technique which determines the most profitable production mix, taking into account resource constraints and limitations faced by an organistion. All costs are assumed to be either fixed or variable in relation to a single measure of activity (usually units of output).
The problem is formulated in terms of an objective function and constraints are then graphed. This process highlights all possible output combinations given the resource constraints and limitations and allows for the identification of the output combination which would maximise contribution (the optimal solution).
If there are more than two types of output, the graphical approach is not possible and the Simplex method must be used instead.

2.2 Conclusion

Management should consider utilising the senior research minutes on the assumption that they can do junior and trainee research activities (though they may not accept because of prestige and status). This would reduce capacity problems.

Solution Five

(a) Report

To: Finance Director – Auto Africa ltd
From: Management accountant
Date: xx.xx.xx
Subject: Cost Reduction

This report looks at how cost reduction and value analysis could be used by Auto Africa to improve the profitability of its retail outlets.
Cost reduction is a planned and positive approach to reducing the unit cost of goods/services below current budgeted or standard levels without impairing their suitability for the use intended. It should not be confused with cost control, which is all about keeping costs within acceptable (standard or budgeted) limits.

A cost reduction programme in the Auto Africa therefore look at how to reduce the cost of serving each customer, without the customer perceiving any fall in the value of the service provided.
The company many reduce costs by:

(i) Improving on delivery of orders
(ii) Improving labour productivity (eg changing work methods to eliminate unnecessary procedures, perhaps in the work required to serve the customers)
(iii) It might be possible to find cheaper sources of spare parts without compromising on quality.
(iv) Increased automation of certain customer services, such search for inventory, would reduce labour costs.
(v) Increased control over spending decisions.

Value analysis focuses on cost reduction through a review of the processes required to produce a product or service. It tries to find the least cost method of making a product or providing a service that achieves the desired outcome. This could be done in Auto Africa without necessary reducing the value the product or service to the customer.

Value analysis of a particular service within the Auto Africa would involve the systematic investigation of both the costs connected with the service and the way in which it is provided, with the aim of getting rid of all unnecessary costs.
An analysis of a variety of options can be devised and the least cost alternative which maintains or improves the value of the service to the guests can be selected. The following are the steps in implementing value analysis.

(i) Select a product or service for study. The service provided by the firm is high quality, personalised financial strategy advice.

(ii) Obtain and record information. The questions to be asked include: What do the clients want from the service? Does it succeed? Are there alternative ways of providing it? What do these alternatives cost?

(iii) Analyse the information and evaluate the service. Each aspect of the service should be analysed. Any cost reductions must be achieved without the loss of use or esteem value. (Or at least, cost savings must exceed any loss in value suffered, and customers would then have to be compensated for the loss in use or esteem value in the form of a lower selling price.)

(iv)Consider alternatives. From the analysis, a variety of options can be devised. This is the 'new ideas' stage of the study, and alternative options would mix ideas for eliminating unnecessary services or standardising certain features of the service.

(v) Select the least cost alternative. The costs (and other aspects of value) of each alternative should be compared.

(vi) Recommend. The preferred alternative should then be recommended to the decision makers for approval.

(vii)Implement and follow-up. Once a value analysis proposal is approved and accepted, its implementation must be properly planned and co-ordinated. Management should review the implementation and, where appropriate, improve the new service in the light of practical experience.

To be successful, value analysis programmes must have the full backing of senior management of Auto Africa.

Signed

Management Accountant

END OF SOLUTIONS

CHARTERED ACCOUNTANTS EXAMINATIONS

PROFESSIONAL LEVEL

P3: STRATEGIC FINANCIAL MANAGEMENT

FRIDAY 16 DECEMBER 2016

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

KAKA Ltd is a cement production company, listed on the Lusaka stock exchange. It is specialised in supplying cement to the urban areas only. In the recent years, KAKA Ltd has been highly successful and has built a strong reputation based on high quality cement and meeting deadlines. As part of an expansion programme, the company has made an initial investment of K250 million in a pilot project called, Rural Project P, meant to supply cement to the rural parts of the country. The project involves the construction of a new small cement plant within a period of one year.

Rural project P

The pilot project is expected to produce 100,000 metric tonnes of cement annually over a period of five years after which a new major investment would be required. The construction of the new cement plant was completed at the end of the year 2014. The expected net realisable value of the plant after five years is K100 million. The production and selling is expected to start in the following year. Selling of cement will be made to selected distributors with contracts. Each distributor will be given a five year contract.

However, in recent months cement prices have fallen and interest rates have risen, making it harder to sell cement, even at significantly lower prices. The domestic currency has also depreciated against other major convertible currencies.

Forecast figures (revenue & costs)

Initially, the forecast selling price for a 20kg bag of cement before the recent fall in prices was K75. However, due to the recent fall in cement prices in the country, the forecast selling price is considered to be overstated by 45%. The company has also entered into a contract to export about 30% of the production at a net price of US$15 per 20kg bag of cement to a company in a neighbouring country.

The company had recently employed staff under the project and the estimated staff costs including other costs are given below:

Years	2015	2016	2017	2018	2019
	K'000	K'000	K'000	K'000	K'000
Staff costs	100,100	102,140	121,180	129,187	138,195
Other running costs	150,130	168,135	170,143	182,150	208,156

Electricity costs are, on average, 30% of the forecast domestic selling price.

All the figures above have taken into account inflation.

Other information:

1. In order to improve efficiency in the distribution of cement, KAKA Ltd intends to import five trucks at a total cost of £500,000 at the end of the year 2016.

2. Corporate tax is 30% on profits payable one year in arrears.

3. All costs and sales should be assumed to arise at the end of the year.

4. Distributors will be required to make a 50% cash deposit of the annual sales as security at the beginning of the contracts. The cash deposit will be refunded at the end of the contracts.

5. The initial investment cost includes specialised equipment amounting to K75 million. The equipment attracts capital allowance at a rate of 20% per year on a reducing balance basis.

6. KAKA Ltd uses discounted cash flow technique to evaluate investments at an after-tax nominal discount rate of 15%.

7. You may assume that one metric tonne (1 ton) is equivalent to one thousand kilograms (1000kg).

8. All the cement produced is expected to be sold.

9. Assume today is 1st January, 2015 and the exchange rate is as follows:

	ZMW	
	Buying	**Selling**
USD:	11.2785	11.4815
GBP:	15.7577	16.0414
EUR:	12.2546	12.4752

10. The inflation rate is given below:

	Zambia (%)	USA (%)	UK (%)
2015	8.9	2	1
2016	9.7	2	2
2017	12.9	3	2
2018	14.1	2	2
2019	16.8	2	1

Abandoning new cement plant (Rural Project P)

The fall in cement prices has created potential liquidity problems for KAKA Ltd and the board of directors are considering abandoning the project and selling the plant. If KAKA Ltd were to abandon the project, the plant would be sold and the staff would be made redundant. All this would be expected to take place at the end of 2015. The plant could be sold in 2015 for K280 million. It is estimated that it would cost K130 million to make the staff redundant at the end of 2015. All costs and salaries would be paid up to the end of 2015, at which point the plant would be closed.

Required:

(a) Evaluate the financial viability of the Rural Project P using the Net present value technique after the fall in cement prices. (26 marks)

(b) Assuming you are the Finance Director of KAKA Ltd, write a report to the Board of Directors addressing the following:

(i) Advise on whether to continue with the production of cement based on the financial evaluation in (a) above.

(ii) Discussion of whether or not to proceed with the sale of the new cement plant. As part of your answer include other factors that should be taken into account before making the decision. (14 marks)

[Total: 40 marks]

SECTION B

Attempt any THREE (3) questions out of FOUR (4) in this section.

QUESTION TWO

Kamp Life Ltd, a company in the hospitality industry has embarked on an expansion programme in order to enhance its growth. It is seeking to acquire another company in the same industry. Higher Life Ltd a similar company in the same industry was recently identified as a possible target by Kamp Life Ltd. During a recent senior management meeting it was resolved to make an offer to the shareholders of Higher Life. It was agreed to offer the shareholders of Higher Life Ltd 7 shares in Kamp Life for every 5 shares held.

The profit after taxation of Kamp Life Ltd and Higher Life Ltd for the most recent financial year was K22m and K6m respectively. Kamp Life Ltd book value of ordinary shares was K70m while Higher Life Ltd book value of ordinary shares was K18m.The recent price earnings ratio of Kamp Life Ltd and Higher Life Ltd was 25 and 15 respectively. The nominal value of each share was 40 ngwee for both companies. The potential synergistic benefits from the merger were estimated at K3m after tax.

Required:

(a) Estimate the value of the proposed offer and the revised earnings per share of Kamp Life Ltd after the proposed offer. (6 marks)

(b) Calculate the share price of Kamp Life Ltd assuming the synergistic benefits are achieved after the acquisition. (2 marks)

(c) Calculate the effect on the shareholder's wealth of each company as a result of the proposed acquisition. (6 marks)

(d) Assuming that Higher Life senior management are opposed to the takeover bid outline the tactics that they should use in order to oppose it. (6 marks)

[TOTAL: 20 Marks]

QUESTION THREE

All countries in the world borrow funds in order to facilitate development and growth in their respective nations. However, the global debt problem has increased significantly and has become a challenge to manage. Different countries are seeking ways of managing debt in their respective countries.

Required:

(a) Briefly explain five (5) methods of managing international debt problems. (10 marks)

(b) Companies manage debt in different ways including the use of the Macaulay duration and modified duration. Assume that a bond has an annual coupon rate of 4.5% and the bond will be redeemed at par in three years' time. The yield to maturity is anticipated to be 6%.

(i) Explain the terms "**Macaulay duration**" and "**modified duration**" .

(ii) Calculate the fair value of the bond, Macaulay duration and modified duration.

(iii) What will happen to the bond price if yields rise by 0.60%? (10 marks)

[Total: 20 Marks]

QUESTION FOUR

Bricks International is a multinational company based in the United Kingdom (UK). You have been appointed as a financial manager for Bricks Africa, a subsidiary of Bricks International. You have discovered that in the past, Bricks Africa has not hedged its currency risks and recently the exchange rate movements have become more volatile. Assume it is now 30 June. The company expects a receipt in US$ on 30 September of US$3,470,000.

The current quoted spot rate of exchange is £1 = US$1.7170 – 1.7210. The US$ discount on the three-month forward rate of exchange is 0.65 to 0.75 cents.

Option prices (cents per £, payable on purchase of the option, contract size £31,250):

Strike price	*Contracts*	
$	Calls	Puts
1.70	2.57	1.98
1.72	2.06	2.48
1.74	1.65	2.97

Assume that the spot rate in three months' time is £1 = $1.7500.

The company policy is to hedge the currency risk using either a fixed forward contract or a European currency option. Ignore transaction costs.

Required:

(a) Evaluate the alternative hedging methods that Brick Africa can use to hedge its foreign exchange risk for the next three months. (14 marks)

(b) Discuss the advantages of the methods used in (a) above. (6 marks)

[Total: 20 marks]

QUESTION FIVE

The Managing Director of JNC Ltd is reviewing the proposed expansion into a foreign country. There are two proposed methods of expansion being considered, licensing and foreign direct investment. The Managing Director's view is that the expansion project should not only meet the primary objective of the company which is to maximize shareholders' wealth but also non-financial objectives.

(a) Discuss the impact of the non-financial, ethical and environmental issues on the achievement of primary financial objectives such as the maximization of shareholder wealth. (13 marks)

(b) Discuss the benefits and drawbacks of licensing as an alternative to foreign direct investment. (7 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.

December 2016 Examinations
P3 SOLUTIONS

SOLUTION ONE(a) FINANCIAL EVALUATION OF RURAL PROJECT P FOR KAKA LTD

Year	2014 K'000	2015 K'000	2016 K'000	2017 K'000	2018 K'000	2019 K'000	2020 K'000
Local sales		144,375	144,375	144,375	144,375	144,375	
Exports		216,746	233,108	255,514	285,825	327,298	
Salaries & other staff costs		-100,100	-102,140	-121,180	-129,187	-138,195	
Other running costs		-150,130	-168,135	-170,143	-182,150	-208,156	
Electricity costs		-43,313	-43,313	-43,313	-43,313	-43,313	
Net cash flow before tax		67,579	63,896	65,254	75,550	82,009	
Tax@30%		-	-20,274	-19,169	-19,576	-22,665	-24,603
Initial cost	-250,000	-	-	-	-	100,000	
Trucks	-	-	9,301	-	-	-	-
Deposit	-	72,188	-	-	-	-72,188	-
Tax relief	-	-	4,500	3,600	2,880	2,304	6,912
Net cash flow	-250,000	139,766	57,423	49,685	58,854	89,460	-17,691
Discount rate@15%	0.870	0.756	0.658	0.572	0.497	0.432	0.376
Present values	-217,500	105,663	37,784	28,420	29,251	38,647	-6,652
NPV	15,613						

Based on the positive NPV of K15,613,000 the project is viable and can be undertaken

Workings:	2014	2015 K'000	2016 K'000	2017 K'000	2018 K'000	2019 K'000
W1. Local sales						
Selling price pertonne						
(1000/20)x75x55%		2,063	2,063	2,063	2,063	2,063
Production					70	

(100,000 x 70%)	70	70	70		70
Total sales	144,375	144,375	144,375	144,375	144,375
W2. Exports	K'000	K'000	K'000	K'000	K'000
Selling price per tonne (1000/20)x $15	600	600	600	600	600
Production (100,000 x 30%)	30	30	30	30	30
	18,000	18,000	18,000	18,000	18,000
Ext. Rate	12.0415	12.9505	14.1952	15.8792	18.1832
Total exports	216,746	233,108	255,514	285,825	327,298

W3. Exchange rate

Selling

2015 (11.2785 x 1.089/1.02)	12.0415
2016 (12.0415x 1.097/1.02)	12.9505
2017 (12.9505 x 1.129/1.03)	14.1952
2018 (14.1952 x 1.141/1.02)	15.8792
2019 (15.8792 x 1.168/1.02)	18.1832

Buying

2015 (16.0414 x 1.089/1.01)	17.2961
2016 (17.2961 x 1.097/1.02)	18.6018

W4. Cost of trucks	£500,000 x 18.6018	9,300,906

W4. Capital Allowances:

Year	Cost (K'000)	CA@20%	Tax@30%	Year available
2015	75,000	15,000	4,500.00	2
2016	60,000	12,000	3,600.00	3
2017				4

	48,000	9,600	2,880.00	
2018	38,400	7,680	2,304.00	5
2019	30,720	23,040	6,912.00	6

SOLUTION ONE (b)

To: The Board of Directors of KAKA Ltd
From: Finance Director
Re: Strategic choices facing HOR

Introduction

KAKA Ltd is facing potential liquidity problems following the recent fall in cement prices. This report offers advice on what the strategic response should be at this time. It will also consider whether or not to proceed with the sale of the Cement plant and what real options are available

Financial Evaluation

Based on the financial evaluation, the project should be undertaken because it gives a positive Net Present Value of K15.6million. However, the evaluation relies on a number of assumptions which may not be accurate. For example cement prices could fall even further than the 45% expected and costs could be higher than anticipated. The discount rate could be too low, especially given the rise in interest rates.

Other factors to be considered

KAKA Ltd has built a strong reputation and needs to protect this for the future success of the company. Any action which undermines this reputation should be avoided. A decision to abandon a project may make KAKA appear vulnerable and could encourage more aggressive behaviour from its rivals.

The project staff may have valuable skills which will be needed in a future upturn. By making these people redundant, these skills are lost. The export of cement could be adversely affected by the abandonment of project which appears to be attractive given the depreciation of the domestic currency.

KAKA has entered into a contract with a company from a neighbouring country to export and therefore it would be vital to assess the impact of the breach of contract. More especially if the existing capacity can't manage to supply the quantities required

Conclusion

The best option would be for KAKA to wait until the cement prices picks u again and then commence production. KAKA can also consider reducing the production (and workforce) to about 30% for the purpose of exporting. Therefore **abandoning of Rural Project P is not recommended.**

SOLUTION TWO

a) Value of proposed offer

Number of shares in Kamp life K70/0.4=175m shares

Earnings per share K22m/175=K0.126/share

Price earnings ratio =25

Share price =25xK0.126/share=k3.15

Number shares in higher life K18m/0.4=45m shares

Number of shares issued 7/5 x 45=63m shares issued.

Value of proposed offer 63m shares x K3.15=k198.45m

Revised earnings per share

Revised profits K22m+K6m+K3m=K31m

Revised number of shares 175m+63m=238m

Revised earnings per share K31/238m=K0.13/share

b) Share price of Kamp life
   Earnings per share=K0.13/share
   Price earnings ratio=25
   Share price = K0.13x25=K3.25/share

c) Effect on shareholder's wealth

   Kamp life Ltd
   Before the offer
   175m shares x K3.15/share=K551.25m
   New share price=K3.25
   New share value 175m x K3.25=K568.75m
   Gain in wealth of shareholders= K568.75-K551.25=K17.5m

   Higher life Ltd
   Before the offer
   Earnings per share
   K6m/45m shares=K0.1333/share
   Price earnings ratio=15
   Share price = 15 x 0.1333=K2/share
   Value before the offer=45m shares x K2=K90m

Value after the offer=63m shares x K3.25/share=K204.75m
Increase in shareholder wealth =K204.75m – K90m =K114.75m

d) The steps that might be taken to thwart a bid or make it seem less attractive are as follows:
    1) Revaluing assets or issuing a forecast of attractive future profits and dividends to persuade shareholders that to sell their shares would be unwise, that the offer price is too low, and that it would be better for them to retain their shares.

    2) Lobbying to have the offer referred to the competition authorities.
    3) Launching an advertising campaign against the takeover bid (one technique is to attack the accounts of the predator company.)

    4) Finding a "white knight", a company which will make a welcome takeover bid.
    5) Making a counter-bid for the predator company (This can only be done if the companies are of reasonably similar size)

    6) Arranging a management buyout
    7) Introducing a "poison- pill" anti-takeover device

    8) Introducing a "shark repellent" – changing the company constitution to require a large majority to approve the takeover

SOLUTION THREE

a. There are various methods of managing international debt problems, including:

    (i) Providing additional finance – the financing approach assumes that the debt problem stems from a temporarily, yet reversible, shortfall in foreign exchange, which additional funding will alleviate. However, this implies an additional debt burden if the problem does not resolve itself.

    (ii) Rescheduling of debt – the period of repayment is spread over a longer period of time, possibly coupled with interest rate capping.

    (iii) Debt forgiveness – this is a partial solution of reducing the burden of the debt crisis by writing off part of the debts owed. The nature of debt forgiveness may involve the principal sum owed reduced by direct write off or interest repayments cut below the market interest rates.

    (iv) Economic policy modifications – this implies greater productivity and growth with higher exports. This approach takes time to be realised.

    (v) Reducing the burden of debt service – this allows for the total debt or interest burden to be lowered. A number of schemes including selling debt in secondary markets at a discount could be undertaken. These approaches imply selling debt

for equity where a bank sells debt to an investor who pays dollars, the investor can change the debt for local currency and purchase equity shares in the debtor country. Alternatively Debt swaps could be used – these involve commercial banks exchanging debt for government bonds in the debtor nation. The bonds are sold at a discount with interest at market rates. This option has not been popular.

b. Macaulay and modified duration are used to mainly to calculate the durations of bonds. The Macaulay duration calculates the weighted average time before a bondholder would receive the bond's cash flows. Conversely, modified duration measures the price sensitivity of a bond when there is a change in the yield to maturity.

Modified duration is a modified version of the Macaulay model that accounts for changing interest rates. Because they affect yield, fluctuating interest rates will affect duration, so this modified formula shows how much the duration changes for each percentage change in yield. For bonds without any embedded features, bond price and interest rate move in opposite directions, so there is an inverse relationship between modified duration and an approximate 1% change in yield. Because the modified duration formula shows how a bond's duration changes in relation to interest rate movements, the formula is appropriate for investors wishing to measure the volatility of a particular bond.

Year	Cash flows	DF	PV	PV x T
T	K	6%	K	K
1	4.5	0.943	4.2435	4.2435
2	4.5	0.890	4.0050	8.0100
3	104.5	0.840	87.7800	263.3400
			96.0285	275.5935

(ii) Market price (value) of the bond = K96.03

Bond Duration (Macaulay duration)

$$= 275.5935/96.0285$$

$$= 2.87 \text{ years}$$

(i) Modified duration

$$\text{Modified duration} = \frac{\text{Macaulay duration}}{1 + \text{yield to maturity rate}}$$

$$= \frac{2.872}{1.06}$$

$$= 2.71 \text{ years}$$

(ii) % change in bond price

= -MD x % point change in r
= -2.71 x 0.60
= -1.626%

The bond price can be expected to change from K96.03 to K94.49.
(K96.03/1.01626= K94.49)

SOLUTION FOUR

a) The company expects to receive $3,470,000. At today's spot rate this would be converted to £ at $1.7210, giving $3,470,000/1.7210 = £2,016,269.61. This can be regarded as the company's target receipt.

Hedging using the forward contract
The company should take out a **three month forward contract** to sell $3,470,000 at $1.7210 + $0.0075 = $1.7285. This rate is agreed today for exchange in 3 months, converting to $3,470,000/1.7285 = **£ 2,007,520.97**

This amount is guaranteed, provided the dollars are received as expected.

Option

(i) **Contract date**
3 months time

ii) **Option type**
Call option; buy £ with $

(iii) **Strike price**

The option price to choose can be debated. $1.70 offers the best choice of option on the information given because you are spending as few dollars as possible (effective rate is lowest) when buying £. However another argument is that the spot rate equates to the forward rate of $1.7285 and it doesn't make sense to acquire an option at a price below $1.7285. You will only choose an option price of $1.70 if you expect to exercise it, but you buy an option in the expectation that it will not be exercised.

Therefore we choose $1.74 because option is not expected to be exercised

(iv) **Number of contracts**

$$\frac{3{,}470{,}000 \div 1.74}{31{,}250} = 64$$

Over-hedge in forward market = (31,250 x 64 x 1.74) – 3,470,000 = $10,000

(v) **Premium**
Premium = 64 x 31,250 x $0.0165
= $33,000 ÷ 1.7170
= £19,219.57

Outcome
Option will be exercised if dollar weakens to more than $1.74 in £.

(i) Exercise 64 contracts at $1.74
Outcome of options position
31,250 x 64 = £2,000,000

(ii)

Option outcome	£2,000,000
Option premium (sunk cost)	(£19,219.57)
Forward market payment (10,000/(1.7170 + 0.65)	(£5,802.15)
Net receipt	£1,974,978.28

Conclusion
The **forward contract** provides **better cover** than the **option** if the dollar weakens (£**£ 2,007,520.97** compared with £1,974,978.28).

b)

(i) Risk appetite
The forward rate offers a certain solution that isn't dependent on movements in exchange rates.

(ii) Budgeting
Since the exact amount can be known under the forward market, it is important for budgeting and other purposes. This may not be possible with the options.

(iii) Gain
The option allows the company to make a currency gain which is not possible under the forward contract which does not dependent on the movements in currency exchange rate.

(iv) Lapse of contract
A forward contract cannot be avoided if the contract is lost and could create a currency loss, compared with translating at spot, whereas a currency option can be allowed to lapse if it is not advantageous.

(v) Rigidity of settlement
The forward contract has to be settled on a fixed date, whereas an option need not be. However the company can take out an option forward contract which allows settlement over a range of dates.

QUESTION FIVE

a. Non- financial objectives 4 **marks**
Maintaining competitive position – some non -financial objectives may be designed ultimately to benefit the business financially. Spending money to maintain competitive position should mean that rivals do not become too large, and businesses can enjoy the cost advantages of economies of scale.

Fair dealing with employees or suppliers
Directors need to decide whether to improve relations with employees (by better remuneration packages) and suppliers (by paying well within credit terms). The extra costs may be countered by greater flexibility from employees prepared to work more overtime if required, or suppliers prepared to co- operate in tighter arrangements such as just in time.

Fair dealing with customers
Provision of quality products or good standards of service may be costly in terms of increased resource usage or labour costs, but it may also increase demand.

Ethical issues 5 marks

Health and safety
Businesses are required to obey health and safety legislation, but may have some discretion in deciding whether to introduce stricter procedures than required by law, or to locate to countries with laxer regimes. A policy of compliance with high standards might be costly. However, there will also be costs if problems arise, compensation and also costs from bad publicity, customers not wishing to buy a product that has the reputation of being unsafe.

Corporate governance
Organisations may, as with health and safety, decide to introduce stricter procedures. Increased costs of administration may be countered by benefits from greater organisation and clearer decision making.

However, in most jurisdictions corporate governance codes provide guidance rather than prescriptive rules. Companies thus usually have the option of not allowing most of the guidelines and disclosing why not, generally the reason being that they are inappropriate of the company's circumstances. The directors will do this believing that non compliance will not have a serious adverse effect on the company's share price.

Illicit payments
The decision whether to gain business abroad by providing payments or gifts that may be viewed as dubious in the company's own country can be difficult. In some cultures gifts are viewed as a legitimate part of civilised negotiation and it may be impossible not to provide them. In other situations companies may have to decide whether to offer payments that are legally dubious but are necessary to overcome bureaucratic resistance.

Investing in undesirable regimes
Businesses may face pressure not to invest or use the resources of countries whose political regimes have poor human rights records. Businesses may encounter government sanctions or consumer boycotts.

This may be extended to businesses investing in any country where labour is cheap (or cheaper than its home country) and working conditions are poor (or poorer than at home). Investment may decrease labour costs, however the directors must weight this against the economic impacts and possible boycotts, of being thought a poor employer and ultimately their own consciences.

Taxation
Manipulation of international tax haven and low tax regimes may lead to organisations paying less tax. However, they may run the risk of suffering penalties for tax evasion, or at any rate having their affairs closely scrutinised by their suspicious home governments.

Environment issues
Effects on resources
Organisations may be affected by the amount of physical resources available. A shortage of resources such as oil may increase costs or limit production.

Effects on demand
Customer demand may shift for example towards products that use resources in a more efficient way and away from products that are perceived to be environmentally harmful, for example aerosol cans damaging the business environment.

Effect on competitive position
Ability to manage resources and deal with a changing environment may improve an organisation's competitive position significantly.

Legislation
Government legislation may affect an organisation's use of resources and production. For example laws may forbid the use of certain environmentally harmful fuels or operate the polluter pays principle – requiring businesses to clear up themselves or pay for cleaning up the harmful effects of their operations such as discharge of waste.

<u>b) The main advantages of licensing are:</u>

1) It can allow fairly rapid penetration of overseas markets.

2) It does not require substantial financial resources.

3) Political risks are reduced since the licensee is likely to be a local company.

4) Licensing may be a possibility where direct investment is restricted or prevented by a country.

5) For a multinational company, licensing agreements provide a way for funds to be remitted to the parent company in the form of license fees.

The main disadvantages of licensing are:

1) The arrangement may give to the licensee know-how and technology which it can use in competing with the licensor after the license agreement has expired.

2) It may be more difficult to maintain quality standards and lower quality may affect the standing of a brand name in international markets.

3) It might be possible for the licensee to compete with the licensor by exporting the produce to markets outside the licensee's area.
4) Although relatively insubstantial financial resources are required, on the other hand relatively small cash inflows will be generated.

END OF SOLUTIONS

CHARTERED ACCOUNTANTS EXAMINATIONS

PROFESSIONAL LEVEL

P4: AUDIT AND ASSURANCE SERVICES

THURSDAY 15 DECEMBER 2016

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.

(a) In Zambia, the office of the Auditor General conducts financial audits of all government and semi government departments. A member of parliament raised a point of order asking why there is a duplication of effort in auditing government ministries because they also have internal auditors. He argued that this is a waste of resources which could be applied to other needy areas.

Required:

(i) State the main objective of the audits conducted by the Auditor General's office in government ministries. (2 marks)

(ii) Discuss how officers in the Auditor General's office maintain their objectivity in the conduct of audits of public entities. (3 marks)

(b) Flower Agric Products is a large agricultural company growing fresh flowers and vegetables for export to the European market. Chirwa & Associates have been auditors of Flower Agric Products for the past five years during which unmodified audit reports have been issued.

Your firm is auditor of Organic Fertilizers and Chemical Supplies Limited who are the major suppliers of fertilizers and agricultural chemicals to Flower Agric Products.

The audit of the financial statements of Flower Agric Products for the year ended 31 December 2015 has just been completed and the annual general meeting at which the financial statements will be approved is in two weeks.

You have seen an advertisement in the press that one of the lenders of funds to Flower Agric Products has enforced its collateral security and this has resulted in Flower Agric Products being liquidated. At a meeting of creditors with the liquidator, the creditors were informed that they would only receive K0.20 for every K1.00 that they are owed by Flower Agric Products.

Your client Organic Fertilizers & Chemicals Supplies Limited is owed K978 000.00 by Flower Agri Products at the end of December 2015. Non-payment of this debt will have far reaching consequences on the cash flow position of your client.

A board resolution has been passed that Organic Fertilizers & Chemicals Supplies Limited, sue Chirwa & Associates for professional negligence because they have been

issuing unmodified audit reports for a company that has been technically bankrupt for the past three years.

Required:

Advise Organic Fertilizers & Chemicals Supplies Limited on their intended litigation against Chirwa & Associates for professional negligence. (5 marks)

(c) Deep Drilling Company is a company in deep copper mining and is contracted to a mine in Kalulushi on the Copperbelt.

Deep Drilling Company has been contracted to install a new shaft at the mine and the project is in its third year of the five years project. The Mining Company has strict safety requirements for its contractors and the continued relationship is depended on clean safety audits conducted by independent auditors on all its contractors.

Deep Drilling Company has had clean safety reports in the past. This is despite the fact that the company has had two fatalities recorded and these were not reported in the safety audit reports. Investigations have revealed that Jim Jones the major shareholder in Deep Drilling Company has a 30% stake in the company that has been conducting safety audits.

On commencement of this deep drilling project, Deep Drilling Company acquired specialized equipment for use and this equipment cannot be used for any other purpose. Due to low commodity prices on the international market, the Mining Company has scaled down significantly its operations and intends to cease any expansion programs until the commodity prices improve. The Mining Company has stated that Deep Drilling Company can continue with this project. Due to poor cash inflows, the Mining Company has delayed in paying its contractors and suppliers and currently is three months in arrears.

Delayed payments from the Mining Company have put pressure on the cash flow position of Deep Drilling Company . This has prompted the company to seek external borrowing from its bankers. The bank has stated that it will only consider the application for a loan on receipt of unmodified financial statements. Meanwhile the bank has withdrawn the bank overdraft facility that existed due to poor cash inflows noted.

Deep Drilling Company has had to restructure its operations and this has resulted in a large number of support staff being laid off. As a result, segregation of duties is lacking and general internal controls are poor. The Chief Engineer has given notice of resignation because he has found a new job with another contractor.

There is a court case where the relatives of one of the workers of Deep Drilling Company who died in a mine accident have sued for compensation. This case has been in the courts for over one year now and is awaiting judgment in the high court.

An extract of the figure of Land & Buildings in the statement of financial position is as follows:

	2015	**2014**
	K'm	K'm
Opening balance at cost	5 960	4 910
Revaluation (note 1)	650	0
Additions during the year	1 210	1 300
Disposals during the year	(610)	(250)
Closing balance at cost	7 210	5 960

Note 1. The revaluation amount is the net amount arising from revaluation surpluses and losses.

Required:

(i) Explain the principle business risks of Deep Drilling Company. (12 marks)

(ii) Identify the potential risk of material misstatement caused by the court case which has not been concluded at the period end. (2 marks)

(iii) State four (4) audit procedures that should be undertaken regarding the litigation against Deep Drilling Company. (4 marks)

(iv) Describe, stating the financial statement assertions being tested, three (3) audit procedures each that should be carried out to test the following:

- Revaluation (4 marks)
- Additions (4 marks)
- Disposals (4 marks)

[Total: 40 Marks]

SECTION B

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

QUESTION TWO

(a) The IAASB has conducted a review of the structure and content of audit reports, including the issuance of an Invitation to Comment on *Improving the Auditor's Report*, in which several suggestions were made with the aim of improving the disclosure of matters included in the auditor's report, including those relating to going concern status.

Required:

Explain the suggestions made by the IAASB in respect of additional disclosures in the auditor's report regarding going concern status, and discuss the benefits of such disclosures**.** (8 marks)

(b) You are an audit manager in Chongololo & Co, responsible for the audit of Bob Co, a large company which provides information technology services to business customers.

The Finance Director of Bob Co contacted you this morning, saying: 'I was alerted yesterday about a fraud being conducted by members of our sales team. It appears that several sales representatives have been claiming reimbursement for fictitious travel and client entertaining expenses and inflating actual expenses incurred. Specifically, it has been alleged that, the sales representatives have claimed on expenses for items such as gifts for clients and office supplies which were never actually purchased, claimed for business class airline tickets but in reality had purchased economy tickets, claimed for non-existent business mileage and used the company credit card to purchase items for personal use.

I am very worried about the scale of this fraud, as travel and client entertainment is one of our biggest expenses. All of the alleged fraudsters have been suspended pending an investigation, which I would like your firm to conduct. We will prosecute these employees to attempt to recover our losses if evidence shows that a fraud has indeed occurred. Your firm would need to provide an expert witness in the event of a court case. Can we meet tomorrow to discuss this potential assignment?'

Bob Co has a small internal audit department and in previous years the evidence obtained by Chongololo & Co as part of the external audit has indicated that the control environment of the company is generally good. The audit opinion on the financial statements for the year ended 31 March 2015 was unmodified.

Required:

(i) Explain the matters that should be discussed in the meeting with the Finance Director in respect of planning the investigation into the alleged fraudulent activity. (6 marks)

(ii) Evaluate three (3) arguments for and three (3) against the prohibition of auditors providing non-audit services to audit clients. (6 marks)

[Total: 20 Marks]

QUESTION THREE

(a) There is increasing debate in the public domain on the importance and relevance of statutory audits for listed companies. There are some who argue that statutory audits are a drain on company resources and given a chance most companies would opt not to be audited by external auditors.

The following statements were extracted from an article that appeared in a business magazine.

1. 'Statutory audits are a waste of resources which are supposed to improve the profitability of listed companies for the benefit of the shareholders. Huge sums of money are paid in audit fees for a service that cannot be quantified and seen'.
2. 'There is little difference between funds spent on audits and those spent on social responsibility activities. There is increased expenditure on matters not relevant to the objectives of most listed companies and described as social responsibility. Such funds should not be spent and should also be for the benefit of the shareholders'.

Required:

(i) Discuss statement 1 above. (4 marks)

(ii) Explain what is meant by Social Responsibility and comment on statement 2 above. (4 marks)

(b) Manda Investment Limited is a property development company. The main business of Manda Investment Limited has been the construction of residential and commercial buildings for sale. The company buys land from private individuals and develops the properties by constructing residential houses and commercial buildings for sale to the public.

The company has experienced a decline in sales due to the economic situation prevailing in the country. At a recent board meeting, it was resolved that the company goes into

the renting of housing and office space to private individuals and commercial entities. The company decided that ten housing units and one office block be reclassified as tangible non- current assets and no longer be available for sale but be let out to tenants.

Manda Investment Limited has appointed Shelter Estate Agents to manage the properties on their behalf. The agreement between Manda Investment Limited and Shelter Estate Agents provides that Shelter Estate Agents finds the tenant and payment will be made to Shelter Estate Agent who will deduct the equivalent of one month's rent before remitting the balance of funds to Manda Limited.

Tenants are required to pay three months' rent in advance and Shelter Estate Agent is required to remit funds received within two weeks of receipt of the funds from the tenants.

The following figures were extracted from the draft financial statements of Manda Limited:

	K000
Current assets:	
Inventory of housing units for resale.	980 000.00
Tangible non- current assets:	
Reclassified buildings	230 000.00

Required:

(i) Explain the risk of misstatement regarding rental income of Manda Limited. (2 marks)

(ii) Explain the audit procedures that should be undertaken in the audit of investment property income of Manda Investment Limited. (4 marks)

(iii) Describe the audit procedures that should be undertaken regarding the reclassified properties. (6 marks)

[Total: 20 Marks]

QUESTION FOUR

Bosi Ltd is the parent company of an expanding Group of companies. It is a Zambian resident company which has been built over ten years. Bosi Ltd is a leading supplier of various baby wear. Bosi Ltd has built a strong reputation for quality service. Bosi Ltd is a family business run

by a board dominated by family members. The chief executive officer is the eldest son of the founder. It is company policy that 80% of the business should be carried out with family members. This applies to purchases and sales.

So far, the arrangement with family members has benefitted the business. In the third year of operation, Bosi Ltd acquired Veronica Ltd, situated in South Africa. Two years later, Bosi Ltd acquired two additional companies in Europe and USA respectively. The Zambian based structure is still in place but most key decisions are now taken at the American Head Office, since the founder is now domiciled in the USA.

You were informed at the beginning of the year, by the senior partner of your firm, Provident Associates that you will be in charge of the audit of Bosi Group of companies, a new client. The previous auditors were removed for failure to provide useful recommendations on group-wide controls in their report to management. You are aware that the financial statements will be relied upon outside Zambia's jurisdiction for purposes of significant lending decisions. Bosi Ltd is interested in issuing a $3 million Eurobond. The funds will be used for working capital support for the group and acquisition of a company based in Asia.

During the audit, one of the engagement team members discovered undisclosed related parties.

The senior partner is considering joining one of the reputable international audit firm networks following a number of meetings held with the audit committee of Bosi Group of companies.

Required:

(a) Discuss why identification of related parties and material related party transactions can be difficult for Provident Associates. (2 marks)

(b) Identify two (2) business risks in Bosi Group of companies and suggest one appropriate group-wide control for each risk. (4 marks)

(c) (i) Discuss three (3) features of a transnational audit that may contribute to a High level of audit risk in the audit of Bosi Group of companies. (6 marks)

(ii) Explain two (2) roles of a reputable international audit firm network, like the Forum of Firms. (2 marks)

(d) Recommend four (4) actions which Provident Associates could take, in respect of the identified related parties not disclosed by management. (6 marks)

[Total: 20 Marks]

QUESTION FIVE

You are an audit partner. Your firm carries out the audit of Aye Ltd, which is a subsidiary of Kye Plc, a company listed on the Lusaka Stock Exchange (LUSE). You are reviewing the suitability of the audit report suggested by the audit manager.

An extract from the draft audit report is shown below:

"Basis of opinion

As explained in note 16, the company's going concern is worrying. The company's liabilities are significantly higher than the assets. However, Kye Plc has provided a comfort letter as evidence of continued support to Aye Ltd. This is contrary to international best practice. The effect on the financial statements of the worrying going concern is that the accounts cannot be relied upon.

Opinion

In our opinion, except for the effects of the matter described above, the financial statements do not give a true and fair view of the financial position of Aye Ltd as at 28 February 2015, and of their financial performance and their cash flows for the year then ended in accordance with the Zambian Accounting Standards".

Required:

(a) Discuss the various types of modified opinions, giving examples, as appropriate. (6 marks)

(b) (i) Comment on the suitability of the extract from the draft audit report and other matters arising in the light of your review. (8 marks)

(ii) State the form of report expected when the subsidiary has submitted a letter of comfort from the parent company. (2 marks)

(c) Discuss the key message of the IAASB Practice Alert Audit Considerations in Respect of Going concern in the Current Economic Environment (Jan 2009). (4 marks)

[Total: 20 Marks]

END OF PAPER

December 2016 Examinations

P4 SOLUTIONS

SOLUTION ONE:

a) i. Main objective of audits by the Auditor General:

The Auditor General's office is the office that has the responsibility of conducting audits on government ministries and other semi government entities.
The main objective of this department is to check on the use of funds by these agencies and confirm whether expenditure is in line with laws and regulations.
The auditor's main focus is on compliance and they also carry out investigations on behalf of government particularly where fraud is suspected.

ii. Objectivity of Auditor General Staff:

Objectivity is one of the fundamental principles that accountants are required to observe in the conduct of their work. This requires that the accountant should not be biased and influenced by others in the performance of his/her work.

In the case of the staff of the auditor general, they can be regarded as external auditors for government ministries and agencies. They are therefore expected to be objective in the performance of their work.

They maintain their objectivity in the first place by making the office of the Auditor General constitutional requiring parliamentary approval for the holder of that office and they cannot be removed without following legal provisions.

The office of the Auditor General is separate from the government ministries and is funded separately.

b) Litigation against Chirwa & Associates:

Auditors can only be sued successfully if it can be proved that they were negligent in the performance of their duties. The fact that previous audit reports have been unmodified is not sufficient ground to succeed in an action against the auditors. The auditor has an agreement with the client and not any third party, and so only the company through shareholders as a body can sue the auditor. In order to succeed in an action, the following situation applies:

- There should be a duty of care by the auditors to the plaintiff. In the case of shareholders as a body this duty of care is implied because of the relationship

that exists between the auditor and the client. In the case of third parties such as, Organic Fertilizers & Chemicals Supplies Limited, the duty of care must be proved.

- The plaintiff must prove that there was a breach of the duty of care by the auditor in all cases whether litigation is by shareholders as a body or a third party.
- The plaintiff must also prove that they suffered loss as a result of the breach committed by the auditor.

In the case at hand, the auditor has no contract with Organic Fertilizers & Chemicals Supplies Limited. Traditionally the courts have been averse to attributing a duty of care to third parties such as this one. The leading case in this decision is that of Caparo V Dickman, where it was held that the auditors owe no duty to members of the public at large who relied upon the company financial statements to deal with the client of the auditor.

Organic Fertilizers & Chemicals Supplies Limited is advised that they should be prepared to prove a duty of care by the auditor exists if they are to succeed. If this cannot be proved then the company should not consider taking the auditors to court because they are unlikely to succeed.

The company also need to prove that there was a breach of duty. This can only be proved if auditors were negligent and did not perform the audit in accordance with existing standards. It will not be easy for Organic Fertilizers & Chemicals Limited to prove this to the court.

Lastly it must be proved that the loss suffered is a direct result of the breach of duty by the auditors.

c) i. Business risks in Deep Drilling Company:

- Risk of non-compliance with laws and regulations – there is a risk that the company may not comply with the laws and regulations that are in place. This could result in litigation against the company by the regulators and the company may need to pay heavy penalties.
- The Mining Company is the major client of Deep Drilling Company and there is a risk that if the company fails to meet the safety requirements the contract may be terminated. This has implications for the going concern assumption of the company.
- The nature of the business that Deep Drilling Company is involved in is hazardous and fatalities will result in litigation against the company whose consequences could have far reaching results to the company.
- There is a risk that Deep Drilling Company has not met the safety requirements although it has received favorable safety audit reports in

the past. The fact that Jim Jones the major shareholder has a 30% stake in the company that carries out the safety audits suggests that the company is not objective in their work. Once this is confirmed Deep Drilling Company may lose its business with the Mining Company.

- There is a risk of poor and deteriorating cash position arising from delays in the Mining Company paying its contractors and suppliers. This could adversely affect the operations of Deep Drilling Company. Despite the poor cash flow, the Mining Company expects Deep Drilling Company to continue its project and this will put stress on the cash position of Deep Drilling Comapny.
- Withdrawal of overdraft facility by the bank will put more pressure on the cash position of Deep Drilling Company. This could have an effect on the ability of Deep Drilling Company to continue operating.
- The bank requiring unmodified audit reports as a condition for the loan could cause management to use creative accounting in order to show a better than real position and also Deep Drilling Company may exert pressure on the auditors to issue an unmodified audit report at all costs.
- The poor internal controls which have been observed as a result of a loss of staff could result in the company losing inventory, property and even cash.
- With the resignation of a key member of staff, the company risks losing much needed skills. This may have far reaching consequences on the ability of the company to continue operating effectively.

ii. Risk of material misstatement of court case:

At the period end, there is a court case against the company. This court case may result in the company being required to pay compensation to the family of the deceased. Since this relates to a past period then there may be need to provide for the likely liability in the financial statements. The risk here is that provisions may be materially misstated.

IAS 37 *Provisions, contingent liabilities and contingent assets* gives guidance on the treatment of provisions. In the event that the conditions for setting out a provision as set out in IAS 37 are met, then the company is expected to make the provision.

The auditor's concern will be to establishing whether the IAS 37 conditions have been met and if so, how the estimated amount has been arrived at and a provision made.

iii. Audit procedures relating to court action:

- Inquire of management, information regarding this incident and possibly obtain written representations.
- Obtain an estimate of the likely payment by the company from management.
- Review any available correspondence between the lawyers of the plaintiffs and the client.
- With the permission of the client, discuss this matter with the legal counsel of the client and obtain his views concerning the likely outcome of this case.
- Obtain independent legal opinion on the likely outcome of the case.
- Review the events after the period end to see whether there is an event that gives evidence of conditions that existed at the period end. For example, if the case is concluded soon after the period ends any potential liability determined by the court should be provided for.

iv. Audit procedures:

Revaluations:

- Check the calculations of the revaluations carried out to ensure they have been carried out correctly – This will test the assertion of **accuracy.**
- Confirm that all properties in this class have been revalued in line with the provisions of the accounting standard – This will test for **completeness.**
- Inspect the properties revalued – This will test for **existence** of the said properties.

Additions to land & Buildings:

- Examine the title deeds to property that has been acquired during the year under review – This will test for rights and obligations **(ownership)** that the properties belong to Deep Drilling Company.
- Verify that the additions have been recorded by reviewing the non-current asset register and the general ledger – This will test for **completeness.**
- Inspect transactions in the non-current asset accounts and verify documentation to ensure that transactions have been properly allocated to capital. Further, examine expense accounts such as the maintenance account to ensure capital & revenue expenditure are correctly classified – This will test for **accuracy** and **allocation** as well as **completeness.**

Disposals:

- Verify disposals with supporting documentation, checking transfers of title, sales price and dates of completion & payment – This will test for **rights & obligations**, **accuracy, occurrence** and **completeness.**
- Recalculate the profit or loss on disposal – This will test for **accuracy** and **completeness.**
- Confirm authorization as per company policy for the disposal – This will test for **occurrence**.

Note: Any three audit procedures other than the ones in this solution with the correct assertions given will be awarded full marks.

SOLUTION TWO

a) Additional disclosures – Going concern:

- The IAASB issued its Invitation to Comment (ITC) on *Improving the Auditor's Report* as part of a process of improving the quality of audits. The ITC states that a quality audit should be accompanied by an informative audit report which delivers value to the entity's stakeholders and that the auditor's report should better explain key matters.
- In respect of going concern, the ITC suggests that the auditor's report should include an auditor's conclusion on the appropriateness of management's use of the going concern assumption, and an explicit statement as to whether material uncertainties in relation to going concern have been identified. A description of management's responsibilities with respect to going concern will also be required.
- The illustration of an improved auditor's report in the ITC shows a separate paragraph headed Going Concern positioned below the Opinion and Basis of Opinion paragraphs, in which these matters are included. It is clear that the financial crisis of recent years sparked a new debate into the appropriateness of the use of the going concern assumption by management, and into whether the auditor's report contains sufficient information about going concern matters. Many users of financial statements have argued that going concern is such a critical issue that it should be discussed in more detail, and in an understandable way in the auditor's report. The current audit report has been criticised as containing insufficient information regarding going concern and added to the perceived expectation gap. The ITC suggestion to include specific statements regarding going concern will add clarity on this matter.
- The issue of auditors making an affirmative statement regarding going concern is likely to add more credibility to the financial statements, which will provide a level of comfort for all users of financial statements. Specifically for users such as providers of finance, they may be more willing to make lending decisions based on financial statements on which an affirmative statement in respect of going concern has been given by the auditor. The proposed disclosures include a statement regarding material uncertainties

which relate to going concern. This can be seen to be informative and should help users to understand the subjective nature of the going concern assumption.

- Overall, the suggestions made by the ITC should go some way to bridge the expectation gap but users of financial statements will need to treat statements made in relation to going concern with some caution, due to its highly subjective nature. The danger is that the auditor's affirmations may be seen as a guarantee of a company's future sustainability, which is clearly not their purpose. It can be argued that the requirements of ISA 570 *Going Concern* are sufficiently robust, and that including going concern as a specific matter in the auditor's report only when it is an issue provides the best clarity for users of the financial statements.

(b) (i) Matters to discuss with Finance Director :

- Discuss the purpose, nature and scope of the investigation. In particular, confirm whether evidence gathered will be used in criminal proceedings and in support of an insurance claim. Confirm that Bob Co.'s objectives are to identify those involved with the fraud, and to quantify the amount of the fraud. This will help to clarify the terms of the engagement, which will be detailed in an engagement letter.
- Determine the time-scale involved, whether the company needs the investigation to commence as soon as possible and the deadline for completing the investigation. This is necessary to determine the resources needed to perform the investigation, and whether resources need to be diverted from other assignments.
- Enquire as to how many sales representatives have been suspended (i.e. are suspected of involvement in the fraud). This will help the firm to determine the potential scale of the investigation.
- Gain an understanding as to how the fraud came to light (e.g. was it uncovered by internal audit or a member of the sales department) and who reported their suspicions to the company. This information will indicate how the investigation should commence (e.g. by interviewing the whistle-blower).
- Determine whether Bob Co. will provide resources to help with the investigation, e.g. members of the internal audit team could provide assistance in obtaining evidence.
- Ask for the company's opinion as to why the fraud had not been prevented or detected by the company's internal controls. In particular, enquire if there has been a breakdown in controls over authorization of expenses.
- Determine whether recommendations to improve controls are required as an output of the investigative work. Discuss the investigative techniques which may be used (e.g. interviewing the alleged fraudsters, detailed review of all expense claims made by sales representatives, analytical review of expenses) and ensure that investigators will have unrestricted access to individuals and documentation.
- Enquire as to whether the police have been informed, and if so, the name and contact details of the person informed. It is likely that a criminal investigation by the police will take place as well as Bob Co.'s own investigation. Confirm that Bob Co. grants

permission to Chongololo & Co.'s investigation team to communicate with third parties such as the police and the company's lawyers regarding the investigation.

(ii) Arguments for outright prohibition of provision of non-audit services:

- The issue of auditors providing non-audit services to audit clients has been topical for many years, and there are many arguments for and against their outright prohibition.
- Those arguing in favour of outright prohibition suggest that this would be a simple way to eliminate the threats to objectivity, which the provision of non-audit services to audit clients creates. Typically, management, self-interest and self-review threats arise, which result in the perception that the auditor cannot be objective when performing the audit service.
- In particular, non-audit services can be very lucrative, leading potentially to a self-interest threat. The greater the volume and financial significance of the non-audit services provided, the greater the risk that the auditor will have relationship and economic reasons not to challenge management's views and positions with the necessary degree of professional skepticism.
- It has also been argued that outright prohibition would benefit the market, allowing smaller audit firms to provide the services which larger firms would no longer be able to offer to their audit clients.

Arguments against prohibition outright prohibition:

- However, there are also many arguments against outright prohibition. By having the same firm provide the audit and the non-audit service, the client benefits in two ways. The audit firm will already possess a good knowledge and understanding of the client and its operating environment, resulting in deeper insight and a better quality service being provided. This will then lead to cost savings, as the non-audit service will be provided in a more efficient way.
- Audit firms would also argue that participation in services such as due diligence reviews and forensic investigations, allows the audit firm to understand their clients' business and risks better and to obtain insights into management's objectives and capabilities which are useful in an audit context.
- Finally, non-audit services can be safely provided as long as steps are taken to assess potential threats to objectivity, and to adequately address those risks, for example, by the use of separate teams to provide audit and non-audit services.
- The UK Corporate Governance Code requires the audit committee to review and monitor the external auditor's independence and objectivity. This includes the audit committee evaluating and approving the provision of non-audit services by the audit firm.
- A principles-based approach to the provision of non-audit services, in which such services can be provided as long as risks are assessed and managed, appears to benefit both audit firms and their clients.

SOLUTION THREE

a) Relevance of the statutory audit and social responsibility:

i. Statutory audits:

Listed companies are those whose shares are traded on a stock exchange such as the Lusaka Stock Exchange (LUSE). Shares are owned by individuals and institutional shareholders.

In such a case there is a separation between ownership and management of these companies. Management is put in place to run and manage these companies on behalf of the shareholders, the owners of the company. Because of this,there is likely to be a conflict of interest with the management pursuing their own interests.

Good corporate governance guidelines, therefore, require that such company's should be audited by external auditors. These are independent auditors who are appointed by the shareholders and report to the shareholders.

It is true that sometimes it may not be obvious to see the value of statutory audits especially that the only document the stakeholders see is the brief audit report which contains the audit opinion.

The statement in the extract is not correct as there are benefits to the shareholders of having the financial statements audited by independent auditors. By having the financial statement of listed companies audited by the external auditors this gives assurance to the shareholders that the management is performing its stewardship role as expected.

ii. Social responsibility:

Organizations do not operate in a vacuum. They operate in an environment where there are other stakeholders. It is therefore important to note that these organizations have a responsibility towards these stakeholders. This way the organizations will be demonstrating that they are 'good citizens'.

It is important to note that organizations get their raw material from the environment which sustains life and other stake holders. Further, the employees who work for these organizations come from the communities surrounding them and finally the products are sold to the same communities.

From the above, it is clear that organizations are dependent upon the communities in which they operate. In recognition of this fact, organizations give back to these communities by carrying out certain social duties. These range from sporting activities, running hospitals or doing many other things not directly linked to their core business but beneficial to the communities in which they do business.

Comment on statement 2:

It is not correct to suggest that funds spent on social activities are wasted. To the contrary they benefit the organization as loyalty will increase towards organizational products.

b) Manda Investment Limited – Investment Properties

i. Risk of misstatement – rental income

Rental income is received through the agents ,Shelter Estate Agents and considering the conditions of the agreement between Manda Investments and Shelter Estate Agents, the following risk of material misstatement of rental income figures could arise:

- There is a risk that Shelter Estate Agents will not remit the rental income less the one month rent per agreement within the time agreed upon.
- Manda Investment Limited may recognize all rentals received during the year as income and yet some of the income may relate to the following accounting period. This is because rent is received three months in advance. Rentals received in the last two months will relate to the following accounting period and should be accounted as rentals received in advance as liabilities.

ii. Audit procedures – Investment property income:

- Confirm that the figure in the financial statements as investment property income agrees with the relevant revenue general ledger account.
- For a sample of properties on lease examine and review the tenancy agreement and ensure income received is per valid lease agreement.
- Ensure that the cut off for any income received in the last two months before the period end correctly accounted for in terms of rentals received in advance.
- Test property rental income using proof in total by taking rental receivable for all properties let at the agreed rate less the amounts due to the property agents.

iii. Reclassified properties:

The reclassified property will no longer be regarded as inventory. They are now tangible noncurrent assets accounted for as per the provisions of IAS16 *Property plant and Equipment.*

Audit procedures – Property

- Examine the board resolution that authorizes the reclassification of the ten properties.
- Examine the architect's certificate to ensure construction work if any in current period is complete.
- Verify the costs of construction by examining invoices and architect's certificates.
- Ensure that the reclassified units are recorded in the fixed asset register.
- Confirm presentation on the properties in the financial statements is in line with the provisions of IAS 16 *Property, plant and equipment.*
- Examine the title deeds to the property is in the name of Manda Investment Limited.
- Physically inspect the properties to confirm existence

SOLUTION FOUR

(a) Difficulties in identifying related parties & related party transactions:

Provident Associates may find it difficult to obtain sufficient assurance that they have identified all disclosable transactions because of:

- The low value of certain transactions, making them difficult to detect when using normal audit procedures. Auditors usually focus on high value items. Most auditing firms use the recommended quantitative benchmarks, with minor qualitative adjustments when determining materiality level. In fact application of materiality in related parties is a problem.
- Any requirements for disclosure of transactions between the company and connected persons of a director, given that it may not always be easy for the auditors to identify such connected persons. Auditors should enquire as to the company's procedures for ensuring that all disclosable transactions are properly identified and recorded. The reliability of the evidence will depend on the integrity of management and those charged with governance.
- The fact that there may be little or no documentary evidence of transactions requiring disclosure. The efficiency of the audit is greatly improved where documents are available. This means verifying completeness of disclosable transactions could be difficult. In audit assignments time is an important factor.

- Related party relationships are not always easy to identify.
- There are some complex businesses whereby identifying such relationships is difficulty.
- Management may deliberately try to conceal related party relationships and related party transactions.

(b)

Business risks	Group-wide controls
No effective oversight over operations	Monitoring of components' operations and financial results.
Lack of performance review	Regular meetings between group and component management to discuss business developments to review performance.
Non-existence of an effective risk assessment process.	Implement Group management's risk assessment process.
No group internal auditors	Establish group internal auditors
No group accountant	Create a position of group accountant or it's equivalent to monitor, control, reconcile and eliminate intra-group transactions, unrealized profits and intra-group balances.
No deadlines for financial reporting for components	Implement deadlines as a process for monitoring the timeliness and assessing the accuracy and completeness of financial information received from components.

(c) (i) Features of transnational audits are:

- Regulation and oversight of auditors differs from country to country – a number of countries have tightened their laws and regulations, and auditors are expected to adhere to them. Lack of awareness on the part of the auditors could significantly affect the quality of the audit and the resulting audit opinion.
- Differences in auditing standards from country to country – some countries use their national auditing standards, and this could give group auditors some challenges when using international auditing standards in the audit of consolidated financial statements.
- Variability in audit quality in different countries – international auditing standards are very clear on the importance of quality. ISQC 1 Quality control for firms that perform audits and reviews of financial statements, and other assurance and related services engagements, and ISA 220 Quality control for an audit of financial statements, give detailed guidance on quality issues. Some countries could have poor or no guidance at all. This could bring into question the audit work performed by component auditors.

(ii)Role of the international audit firm networks is to establish consistent practices worldwide in areas such as:

- Training and education – The International Federation of Accountants (IFAC) is very clear on the type of training and education required for accountants. However, the international firm networks may be seen as going an extra mile in this area. IFAC guidelines could be seen as the minimum requirements, while the international audit firm network could strive for the highest standards possible.
- Audit procedures – the effectiveness of the audit process greatly depends on the audit procedures being carried out. If irrelevant audit procedures are carried out they could fail to assist the auditor obtain sufficient appropriate to support financial statement assertions. The international audit firm network could emphasise the need for auditors to carry out relevant audit procedures.
- Quality control procedures – The international audit firm network could demand commitments and responsibilities in quality assurance. Firms may be subject to periodic audits in this area by reputable external organizations.

(d)Action by Provident Associates:

- Tell the rest of the engagement audit team
- Request management of Bosi Group of companies to identify all transactions with identified related parties.
- Inquire as to why company controls failed to identify related party
- Perform substantive procedures relating to related party and its transactions with the entity.
- Reconsider the risk of further related parties existing and not being disclosed to Provident Associates
- If non-disclosure appears intentional, and therefore indicative of fraud, evaluate implications for audit.
- Consider the likely impact on the financial statements and consider its effect on the audit report.

SOLUTION FIVE

(a) ISA 705 *Modifications to the opinion in the independent auditor's report* sets out the different types of modified opinions that can result. It identifies three possible types of modifications:

- A qualified opinion – this must be expressed in the auditor's report in the following two situations:
  1. The auditor concludes that misstatements are material, but not pervasive, to the financial statements e.g. appropriateness or adequacy of disclosures in the financial statements.

2. The auditor cannot obtain sufficient appropriate audit evidence on which to base the opinion but concludes that the possible effects of undetected misstatements, if any, could be material but not pervasive e.g. some accounting records destroyed.

- An adverse opinion – this is expressed when the auditor, having obtained sufficient appropriate audit evidence, concludes that misstatements are both material and pervasive to the financial statements. This will normally apply when misstatements are not confined to specific elements, accounts or items in the financial statements e.g. no depreciation has been provided on plant and equipment, a receivable balance consisting half of total receivables is irrecoverable and has not been provided.
- A disclaimer of opinion – an opinion must be disclaimed when the auditor cannot obtain sufficient appropriate audit evidence on which to base the opinion and concludes that the possible effects on the financial statements of undetected misstatements, if any, could be both material and pervasive e.g. auditor is unable to attend the inventory count and unable to request receivable confirmations, and there is no other realistic means of gathering evidence on these two areas. If these two areas form a significant element of the total assets value, a disclaimer may be appropriate.

(b) (i)The following are the key areas of concern:

- Basis of opinion paragraph heading – this is not correctly worded as guided by ISA 705. The standard requires the basis of opinion paragraph to be headed, "Basis of Qualified Opinion", "Basis for Disclaimer of Opinion", "Basis of Adverse Opinion" as appropriate.
- Use of worrying – this is unprofessional language and could be misunderstood.
- Contrary to best practice – comfort letters reflect acceptable best practice. Hence, the sentence in the draft audit report is wrong and must correct.
- Reliance on the accounts – the comfort letter can make the accounts reliable.
- Opinion paragraph heading – this is also not correctly worded as per ISA 705 guidance. It must be headed, "Qualified Opinion", "Disclaimer of Opinion", or "Adverse Opinion".
- Details in the opinion paragraph – the details are totally misleading. They contain both qualified opinion and adverse opinion.
- Link of basis of opinion paragraph and opinion paragraph – the basis of opinion may point towards a disclaimer of opinion, while the opinion paragraph is about qualified and adverse opinions.
- Zambian Accounting Standards – there are no Zambian Accounting Standards. Financial statements in Zambia are prepared according to International Financial Reporting Standards.(IFRSs)
- The professional competence of the audit manager is questionable.

(iii) The type of opinion in this case should be unmodified with an emphasis of matter paragraph. The details on the comfort letter should be adequately disclosed in the financial statements.

(c) In January, 2009, the IAASB issued a Practice Alert on going concern in the context of the global economic downturn. The key message was follows:

- The going concern assumption is a fundamental principle in the preparation of financial statements.
- The assessment of an entity's ability to continue as a going concern is the responsibility of the entity's management.
- The appropriateness of the use of the going concern assumption is a matter for the auditor to consider on every audit engagement.
- ISA 570 Going Concern establishes the relevant requirements and guidance with regard to the auditor's consideration of the appropriateness of management's use of the going concern assumption and auditor reporting.
- The credit crisis and economic downturn have led to a lack of available credit to entities of all sizes, which may affect an entity's ability to continue as a going concern; this and other factors may be relevant in the auditor's evaluation of forecasts prepared by management to support its going concern assessment.
- The extent of disclosures in the financial statements is driven by management's assessment of an entity's ability to continue as a going concern, coupled with the disclosure requirements of the applicable financial reporting framework.

Consideration of the need for an emphasis of matter paragraph in the auditor's report will be a difficult matter of judgment to be made in the context of the entity's circumstances; the mere existence of the credit crisis, though referred to in the financial statements, does not of itself create the need for an emphasis.

END OF SOLUTIONS

CHARTERED ACCOUNTANTS EXAMINATIONS

PROFESSIONAL LEVEL

P5: STRATEGIC MANAGEMENT

WEDNESDAY 14 DECEMBER 2016

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 (CASE STUDY)

Xiaomi was founded in April 2010 by ex-Kingsoft CEO LEI Jun, as a software company creating a new custom ROM based on googles android. Their aim was to provide additional functionality that android had yet to offer and an easy to user interface. MIUI, the ROM which the team created, became a huge success and has been ported to many devices. As of 2014 MIUI can be downloaded and installed to over 200 devices in both English and Chinese, even non developers can easily install MIUI to their phones using the MIUI Express APK. As of the end of 2013 Xiaomi had over 30 million MIUI users worldwide! Very impressive for such a young company!

The MIUI ROM was likened to apples iOS for being very easy to use whilst providing sophiscated services such as cloud backup, an easy to use music player and their own app store. The team at Xiaomi has always wanted users to feel part of the company and happily take on fan feedback via multiple channels and update the ROM every Friday with bug fixes, optimization and additional features. Too good to be true? Well try it out for yourself as it's probably available for your device already.

In 2011 Xiaomi announced the Mi one phone. Xiaomi was now not only making its own software, but its own hardware too. The Mi One was a top spec phone with a great price way ahead of its time, this has remained Xiaomi`s philosophy from day one.

While commenters are quick to call the Beijing based company "the apple of china", Xiaomi prefer to compare themselves to amazon, they create powerful hardware which they sell at a cost price and rely on their services and content to make up most of the revenue. Speaking of which their revenue for 2013 alone over a $5billion extremely impressive for a new company. There are similarities between Xiaomi and apple however, they are both hardware and software companies, both have strong control over supply chains and both have feverish fan base. Apart from this the two companies don't have much else in common. Apple prices their smartphones at ludicrous prices and don't take on much customer feedback whereas Xiaomi do the opposite.

In 2012 Xiaomi shipped a total of 7.2m smartphones and in 2013 Xiaomi shipped a total of 18.7m smartphones and even shipped more than apple in one quarter. In the first quarter of 2014 Xiaomi had already shipped over 11m smartphones, more than they sold in the entirety of 2012 and just over half the 2013 sales numbers. Demand continues to increase due to the high specification hardware of their devices and the price they sell their products at.

International markets such as Hong Kong, Taiwan and Singapore where Xiaomi are also officially available have seen similar demand to china. This continued expansion out of china also prompted the high profile hire of Hugo Barra (ex-Google android executive) whose job it is to discover new markets. Malaysia, Philippines, Thailand, Indonesia and India will see Xiaomi`s phones next. This may eventually lead to an official European and US launch but nothing is

confirmed yet. And besides, those that want Xiaomi phones (and many do) are willing to pay the money to import the world's best smartphone.

Xiaomi have launched other devices such as smart TV, WI-FI router and even looking to launch their own tablet (if rumours are to be believed). Xiaomi are without a doubt the company to watch in 2014 as they are estimating that they can ship over 60 million units worldwide by the end of the year. That's more than triple the amount they shipped in 2013.

Even with their huge popularity and large international fan base it remains to be seen if Xiaomi can stay ahead of the competition and if their marketing style will cut the mustard in more mature markets! So far everything seems to be going their way though, and the company thrives and certainly one to watch!

Source: www.success stories.com/companies

Note: *The exchange rate to the US Dollar is approximately K11.00 to $1.00*

Required:

(a) Critically evaluate the main strategy being pursued by Xiaomi in this case study?

(8 marks)

(b) Based on the main strategy discussed in (a) above, identify any four (4) specific strategies used by Xiaomi to increase the demand for its products. (16 marks)

(c) (i) Identify the nature of the supply chain in this case study. (2 marks)

(ii) Assess the benefits that Xiaomi has gained from being in control of the supply chain. (6 marks)

(d) Identify the market orientation strategies used by Xiaomi. (4 marks)

(e) Evaluate how outsourcing in Xiaomi might contribute to the success of the company. (4 marks)

[Total: 40 Marks]

SECTION B

Answer any THREE (3) questions in this section.

QUESTION TWO

(a) Evaluate the four (4) factors of globalization which are key drivers of change in the macro environment. (4 marks)

(b) Analyse the importance of resource audit to the Organisation. (8 marks)

(c) Assess the non- financial performance measures commonly used by organisations.

Give two (2) examples for each. (8 marks)

[Total: 20 Marks]

QUESTION THREE

(a) Discuss two (2) ways in which planners assess products to determine appropriate strategy as they review outputs. (2 marks)

(b) Discuss any two (2) advantages of joint ventures and three (3) disadvantages.

(10 marks)

(c) The concept of social responsibility proposes that a private corporation has responsibilities to society that extend beyond making a profit.

Discuss the arguments for and against the concept of Corporate Social Responsibility.

(8 marks)

[Total: 20 Marks]

QUESTION FOUR

(a) Cost -benefit analysis is a strategy used to evaluate a project.

Evaluate the three (3) common basis of this analysis in many public sector decisions?
(6 marks)

(b) Traditional financial analyses have been used extensively in the evaluation of the acceptability of strategies.

Discuss two (2) of the more commonly used approaches in conducting financial analyses. (5 marks)

(c) Discuss three (3) important roles of a mission statement in the strategic planning process. (9 marks)

[Total: 20 Marks]

QUESTION FIVE

(a) Discuss the following four (4) approaches to strategic leadership.

(i) The human asset approach (2 marks)

(ii) The expertise approach (2 marks)

(iii) Control approach (2 marks)

(iv) The change approach (2 marks)

(b) Identify any three (3) frequent areas and sources of potential synergy in organizations. (9 marks)

(c) Examine any three (3) qualities of a core competence? (3 marks)

[Total: 20 Marks]

END OF PAPER

December 2016 Examinations

P5 SOLUTIONS

SECTION A

SOLUTION ONE (COMPULSORY)

(a) Xiaomi is providing additional functionality that android had yet to offer and an easy to use user interface.

The strategy the company is using is Differentiation: This is done through innovation by providing a unique product or service which cannot be easily imitated. This strategy paves a way for a strong competitive advantage over the competitors and the market leader.

Differentiation strategy assumes competitive advantage can be gained through particular characteristics of firms products.

Products can be categorized as:

- Breakthrough products competition
- Improved products
- Competitive products

In this case the company differentiated its android by giving it special features to make it stand out. It also uses IT to create new features in order to build its brand image.

Xiaomi will allow customers to get the additional satisfaction which they will not find in similar products.

(b) Strategies used:

- Developing and introducing premium products through innovation through the addition of new features to the product.
- Pricing: at cost price lower than its competitors (Low cost leadership)
- Xiaomi has managed to keep the prices lower than its competitors by paying attention to customer feedbacks and cutting of production costs in order to transfer the benefits to the customers through lower prices
- Identification of customer needs and development of ways to meet these needs. This has been done through constant involvement of the customers who have become part of the Xiaomi family
- Customers loyalty maintenance making them feel part and parcel of the company.
- Market development this is the movement to new markets while maintaining the same product. the company has decided to open new markets in other countries and have hired a consultant to

- Forward Integration

(c) **A supply chain:**

I. A Supply chain is a network of organisations involved in the different activities necessary to transform raw materials into finished goods and services in order to produce value for the ultimate customer. In this case, Xiaomi uses Vertical Integration

II. **The benefits of Xiaomi's strong control over the supply chain**.

- Reduction of costs leading to sell of powerful hardware at cost price. This is done by getting rid of processes that may increase costs and concentrate on value adding activities and reduction of costs with the intention of transferring the benefits to customers through lower pricing.

- Efficiency through encouragement of only value adding activities. It produces both software and hardware through forward integration and encourages production of product as intended by the company for proper customer satisfaction.

- Improvement of relationships with stakeholders egg timely deliveries, demand for the products has continued to grow due to the high specification of their hardware devices and the price they sale their products at which is lower than any competitor.

- Increased profits/ revenue 2013 alone it was over $5billion which was extremely impressive for a new company.

(d) Development of a marketing orientation in strategic planning is very dominant for Xiaomi's competitive strength. This is the use of marketing concept in product design by making the products more attractive, user friendly leading to sales growth, and higher profits. This has worked for this company because their resolve is to improve their products in order to satisfy the customer and the company has decided to get feedbacks.

(Note however, that other concepts are also applying in this case)

(e) Due to the high demand for its products and expansion of Xiaomi Company to other countries. It has been prompted to hire Hugo Barra (Ex-google android executive) whose job is to discover new market with the following additional benefits:

- Market Development same product in a new market

- Competitive advantage leading to high market share

- Concentration on core business doing what the company knows best e.g. Coca-Cola has managed to produce its drink for a long time and has managed to completely shake off the competitors like Pepsi who have tried to imitate the product. This has given the company a very high competitive edge due to benefits like economies of scale, learning curve effect and many more.

- Access of the expert service by Hugo will help Xiaomi take advantage of the opportunity to improvement its operation and services because the decision to open markets in other countries is based on factual market conditions through a market survey.

- Cut on operational costs. Xiaomi will make informed decisions which will cut on unnecessary costs through excess expenditure. Only trained people will be employed leading to the improvement of operations, processes and product.

SECTION B

SOLUTION TWO

(a) The four (4) factors of globalization which are key drivers of change in the macro environment:

- **Market globalization:** consumer tastes are becoming homogeneous and firms that produce goods and services have gone global and in their quest to look for suppliers and customers. Due to the improvement of global communication and logistics it has become easier to create global brands.

- **Cost globalization:** this has improved the cost advantage through electronic manufacturers-economies of scale, experience effects, sourcing efficiencies which are achieved through central procurement from global lowest suppliers.

- **Government activity and policy**: governments have become more relaxed toward certain barriers to trade and this has created more opportunities for companies to get ideas globally and production of standard goods.

- **Global competition.** The competition has been intensified globally because it has become Easy and straight forward to find customers anywhere around the globe.

(b) The importance of resource audit to the Organisation:

An organisations survival and prosperity depends to a large extent on its strategic capability defined by adequacy and suitability of its resources and competencies to implement the strategy. The productivity of an organisation will depend on the available resources such as human, financial, informational and physical assets. The coordination and efficiency use of these resources will result in achievement of organizational objectives. It considers how well resources have been utilized and the effectiveness of the organisations systems. It also includes the quality and timeliness of information available to the managers. The failure to pay attention to the availability of these resources will results in shortages.

(c) Four (4) ways of measuring non-financial performance.

Non-financial measures are measures of performance based on non-financial information which may originate in and be used by operating departments to monitor and control their activities without any accounting input.

Examples:

Service quality

This is done by paying attention to indicating details that are normally used for assessment of service quality such as the following:

- Number of complaints,
- proportion of repeat bookings,
- on-time deliveries
- Customer waiting time

Production performance

- Number of suppliers,
- output per employee,
- proportion of output requiring rework
- schedule adherence

Marketing effectiveness

- Trend in market share,
- sales volume growth,
- Number of customers
- Customer visits per sales person

Personnel

- Number of complaints received
- Staff turnover
- days lost through accidents or sickness
- Days lost through absenteeism

SOLUTION THREE

(a) Three ways planners assess products to determine appropriate strategy:

- The stage of its life cycle that any product has reached. For example, in the growth stage, a firm's strategy might focus on trying to differentiate its product from that of the competitors, and it might have to incur high marketing costs to achieve this. However, for a mature product, the focus might be on controlling costs.
- The products' remaining life. i.e. how much longer will it contribute to profits.
- How urgent is the need to innovate, to develop new and improved products?

(b) Discussion on the advantages and disadvantages

Advantages

- Joint ventures permit coverage of a large number of countries since each one requires less investment.
- It reduces the risk of government intervention.
- Provide close control over operations.
- When with an indigenous firm it provides local knowledge, and can also allow firms a route into markets they might otherwise struggle to enter.
- It is a learning exercise, as each party gains access to other's competences
- It is often an alternative to seek to buy or build a wholly owned manufacturing operation abroad.

Disadvantages

- Profits from the venture are shared, reducing the amount earned by each partner.
- It may not be fully supported by its parent companies due to the feeling of none ownership.
- Gained confidential information by partners could subsequently be used competitively by one partner against another.

(c) Arguments for and against Corporate Social Responsibility:

The concept of social responsibility proposes that a private corporation has responsibilities to society that extend beyond making a profit. Strategic decision making often affect more than just the corporation. A decision to retrench by closing some plants and discontinuing product lines, for example, affect not only the organisation's workforce, but also the communities where the plants are located and the customers with no other sources of the discontinued product. Such situations raise questions of the appropriateness of certain

missions, objectives and strategies of the business corporations. Managers must be able to deal with these conflicting issues or interests in an ethical manner to formulate a viable strategic plan.

Milton Friedman and Archie Carrol offer two contrasting views of the responsibilities of business organisations to society.

- **Friedman's traditional view of business responsibilities**

Milton Friedman argues against the concept of social responsibility. A business person who acts "responsibly" by cutting the price of the firm's product to prevent inflation, or by making expenditures to reduce pollution, or by hiring the hard-core unemployed, according to Friedman, is spending the shareholders' money for a general social interest. Even if a businessman has a shareholders' permission or encouragement to do so, he or she is still acting from motives other than economic and may, in the long-run, harm the very society the firm is trying to help. By taking on the burden of these social costs, the business becomes less efficient – either prices go up to pay for the increased costs or investments in new activities and research is postponed. These results negatively affect – perhaps fatally – the long term efficiency of a business.

Friedman thus referred to social responsibility of business as a "fundamentally subversive doctrine" and stated that:

'There is one and only social responsibility of business to use its resources and engage in activities that are designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud'.

(ii) Carrol's four responsibilities of business

Archie Carrol proposes that the managers of business organisations have Four Responsibilities: economic, legal, ethical and discretionary.

- **Economic** responsibilities of a business organisation's management are to produce goods and services of value to society so that the organisation may repay its creditors and shareholders.
- **Legal** responsibilities are defined by government in laws that management is expected to obey. For example, organisations are required to hire and promote people based on their credential rather than to discriminate on non-job-related characteristics such as race, gender, or religion.

- **Ethical** responsibilities of an organisation's management are to follow the generally held beliefs about behaviour in society. For example, society generally expects organisations to work with the employees and the community in planning for layoffs, even though no law may require this. The affected people may get very upset if an organisation's management fails to act to generally prevailing ethical values.

- **Discretionary** responsibilities are purely voluntary obligations a corporation assumes. Examples are philanthropic contributions, training the hard-core unemployed, and providing day care centres. The difference between ethical and discretionary responsibilities is that few people expect an organisation to fulfil discretionary responsibilities, where as many expect an organisation to fulfil ethical ones.

Carrol lists these four responsibilities in order of priority. A business firm must first make a profit to satisfy its economic responsibilities. To continue in existence, the firm must follow the laws – thus fulfil its legal responsibilities. To this point Carrol and Friedman are in agreement. Carrol however, goes further by urging that business managers have responsibilities beyond legal and economic ones.

Having satisfied the two basic responsibilities, according to Carrol, the firm should look to fulfil social responsibilities. Social responsibility, therefore, includes both ethical and discretionary, but not economical and legal responsibilities.

SOLUTION FOUR

(a) 3 common basis of the analysis:

- The project and its overall objectives are defined.
- The benefit, including social benefits, is analyzed in detail.
- The net benefits for the project are estimated, if possible.

(b) Commonly used approaches for Financial Analayis

Assessment of the returns likely to accrue from specific options is a key measure of the acceptability of an option. However, there are a number of different approaches to the analysis of return. Traditional financial analyses have been used extensively in the evaluation of the acceptability of strategies. Three of the more commonly used approaches are as follows:

- Forecasting the return on capital employed (ROCE) a specific time after a new strategy in implemented (e.g. the new strategy will result is a return on capital of 20% by 2017)
- Payback period has been used where a significant capital injection is needed to support a new venture. The payback period refers to period of how long the project will take to pay back the original amount of investment. Thus the shorter the period the more attractive the investment is.
- Discounted cash flow (DCF) analysis is perhaps the most widely prescribed investment appraisal technique and is essentially an extension of the payback period analysis. Once the net cash flows have been assessed for each of the preceding years they are discounted progressively to reflect the fact that funds generated early are of more real value than those in

later periods (years). The Net Present Value (NPV) of the internal rate of Return (IRR) of investment are used to calculate the DCFs.

(c) Important roles of a Mission Statement

- It inspires and informs planning. Plans should therefore be consistent with the organisations values and goals.it provides a focus for consistent strategic planning decisions.
- Screening. It acts as a yardstick by which plans are judged.
- It affects the implementation of a planned strategy in terms of the ways in which the firm carries out its business and the culture of the Organisation as it often establishes an ethics framework.

SOLUTION FIVE

(a) The four (4) approaches to strategic leadership.

- **Human asset approach**

  Development of organizational people

  Manager's responsibility to recruit the right people and develop the appropriate culture

- **Expertise approach**

  Focuses on some form of technical expertise as a source of competitive advantage and concentrates on building expertise through systems and procedures forming the basis of change management.

- **Control approach**

  The control approach concentrates on setting procedures and control measures and monitoring performance so as to achieve uniform, predictable performance.

- **Change approach**

  Focuses on continual change and acting as a change agent and spends much effort on communication and motivation.

(b) Areas and sources of Potential Synergy

The notion of 'synergy' has long been a key concept in the area of corporate strategic planning. Synergy is said to occur where the sum of combining resources is greater than the sum of the parts which are combined. It is frequently referred to as '2+2=5'.

Some of the more frequent areas and sources of potential synergy include the following:

- **Sales and Marketing Synergy**
  This can occur when products and distribution channels are combined. Similarly opportunities for 'tie-in' sales when a company acquires a company with a

complementary range of products can give rise to synergy. One of the most frequent sources of synergy in this area is where a company can use its strong brand name or corporate identity to gain extra benefits in new markets.

- **Operating Synergy**
  Operating synergy is most often the result of increased utilisation of facilities and personnel, spreading overheads, and large-scale purchasing.

- **Investment Synergy**
  This type of synergy arises from for example: combining plant and machinery, raw material inventories, transfer of research and development knowledge.

- **Personnel Synergy**
  Synergy can also arise through the combination of people and their skills. So, for example, if a company has extremely competent senior management skilled, say, in strategic planning, increased performance can result in acquired companies, giving rise to positive synergy.

- **Financial Synergy**
  One of the possible effects of all the areas of synergy discussed above is on overall financial performance, there can also be opportunities for synergy in the financial area itself. For example the cash-rich company which acquires another company say to penetrate new markets may additionally benefit by producing extra profits from otherwise 'idle' cash.

(c) Core competence

- It must make disproportionate contribution to the value customer —perceives
- It must be competitively unique which means one of the three things: actually unique, superior to competitors: or capable of dramatic improvement.
- It must be extendable, in that it must allow for the development of an array of new products.

End of Solutions