

### CPA PART II SECTION 3

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#### FINANCIAL MANAGEMENT

WEDNESDAY: 29 November 2017.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings.

#### **OUESTION ONE**

- (a) Explain four factors that might be considered when establishing an effective credit policy in an organisation. (4 marks)
- (b) Summarise four hindrances to international standardisation of Islamic finance.

(4 marks)

- (c) Illustrate how the problem of window dressing manifests itself in measuring business performance using financial ratio analysis. (4 marks)
- (d) The management of Gumbo Ltd. intends to change the company's credit policy from 'net 30' to '3/10 net 60'. If this change is effected, annual sales are expected to increase by 25% from the current level of Sh.12 million. The proportion of bad debts is also expected to increase from 10% to 15% of the credit sales.

A new credit assistant officer will also have to be employed at a salary of \$\frac{5}{1},500,000\$ per annum. If there is a change in the firm's credit policy, it is expected that 60% of the credit customers will benefit from the cash discount offer.

The inventory level and variable costs are however expected to remain constant at 20% and 40% of the annual sales respectively. The firm's rate of return on investment is 14% per annum.

The corporate tax rate is 30%.

All sales are on credit.

Assume a 360-day financial year.

### Required:

Advise the management of Gumbo Ltd. on whether to adopt the new credit policy.

(8 marks)

(Total: 20 marks)

# **QUESTION TWO**

(a) Explain four limitations of dividend growth model.

(4 marks)

(b) Maji Mazuri Ltd. an all equity financed company has an issued share capital of Sh.10 million ordinary shares of Sh.10 par value. The company paid a dividend of Sh.0.4 per share last period and the market price per share is Sh.20 ex-dividend.

The company is contemplating raising additional funds through a rights issue. The management has proposed a 1 for 4 rights issue at an issue price of Sh.15 per share. The funds raised are intended to be used to finance a major new project which is expected to increase the company's annual after tax cash flows by Sh.950,000 in perpetuity.

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(i) The cum-right market price per share (MPS) after the announcement of the rights issue.

(4 marks)

(ii) The theoretical ex-right market price per share.

(2 marks)

(iii) The theoretical value of each right.

(2 marks)

- (c) Evaluate the impact of the rights issue in (b) above on the value of wealth of an existing shareholder who holds 1,600 ordinary shares in Maji Mazuri Ltd. and Sh.10,000 in his savings account assuming that this shareholder decides to:
  - (i) Exercise all his rights.

(3 marks)

(ii) Sell all his rights.

(3 marks)

(iii) Ignore the rights issue.

(2 marks)

(Total: 20 marks)

## **QUESTION THREE**

(a) The ordinary shares of Kwekwe Ltd. are currently selling at Sh.60 each at the securities exchange. The company's price-earnings ratio is 6 times.

Kwekwe Ltd. adopts a 40% pay-out ratio as its dividend policy.

It is predicted that the company's earnings and dividends will grow at an annual rate of 10% for the first three years, 5% for the next two years and 4% thereafter in perpetuity.

The investors' minimum required rate of return is 12%.

# Required:

(i) The current intrinsic value of the shares.

(6 marks)

(ii) Advise the investors based on the result obtained in (a) (i) above.

(2 marks)

(b) Ray Properties Ltd. is planning to build a business mall. The project will cost Sh.180 million.

The firm's current optimal capital structure is as follows:

Ordinary shares (Sh.10 par value) 10% debt (Sh.100 par value) Retained profit Sh."000" 480,000 384,000 96,000 960,000

## Additional information:

- The firm will issue a new 15% debenture at Sh.120 each with a floatation cost of Sh.10 per unit. The par value of each debenture is Sh.100.
- 2. New ordinary shares will be issued at the current market price of Sh.30 each with a floatation cost of Sh.5 per share.
- The most recent dividend paid by the company was Sh.5 per share.
- 4. The dividend is expected to grow at the rate of 5% per annum in perpetuity.
- 5. The firm expects to retain Sh.18 million to finance this investment.
- The corporate tax rate is 30%.

# Required:

The amount to be raised from equity capital, if the capital structure is to remain unchanged.

(3 marks)

(ii) The number of ordinary shares the company should issue to raise the desired external equity capital. (3 marks)

(iii) The firm's weighted marginal cost of capital (WMCC).

(6 marks)

(Total: 20 marks)

### **QUESTION FOUR**

(a) Describe four types of money market instruments.

(4 marks)

(b) Highlight three agency costs that might arise in the principal-agent relationship between shareholders and managers.

(3 marks)

(c) Karem Bottling Company is considering replacing one of the bottling machines with a more efficient one.

The old machine has a current net book value of Sh.2,400,000 with a remaining useful life of five years. The old machine has an estimated re-sale value of Sh.200,000 at the end of its useful life.

The existing machine's current disposal value is estimated to be Sh.1,060,000.

The new machine has a purchase price of Sh.4,700,000 and an estimated useful life of 5 years. The machine is expected to have an estimated market value of Sh.600,000 at the end of the five years.

The machine is expected to economise on electric power usage and repair costs which will save the company Sh.920,000 each year. In addition, the new machine is expected to reduce the number of defective bottles which will save an additional amount of Sh.120,000 annually.

The company's corporate tax rate is 30% with a required rate of return of 12%.

The company provides for depreciation on a straight line basis.

Assume capital gains are taxable.

Required:

(i) The initial net cash outlay.

(3 marks)

(ii) The incremental net operating cash flows for years 1 through year 5.

(4 marks)

(iii) The total terminal cash flows.

(2 marks)

(iv) Using net present value (NPV) criteria, advise the management of Karem Bottling Company whether or not to purchase the new machine. (4 marks)

(Total: 20 marks)

# QUESTION FIVE

(a) Describe three factors that have limited the growth of venture capital investment in most developing countries.

(6 marks)

(b) Deye Ltd. has provided the following financial results:

Year	Profit after tax (Sh."million")
2014	6.0
2015	6.2
2016	6.3
2017	6.3

The firm's earnings yield is 12%.

### Required:

The value of the firm based on the present value of the expected earnings approach.

(4 marks)

(c) A prospective investor is intending to buy ordinary shares of a firm listed at the securities exchange whose market price per share is Sh.30.

The forecasted market price per share for the following five months is estimated as follows:

Month	Forecasted market price per share (Sh.)	Probability		
1	33	0.2		
2	30	0.1		
3	27	0.3		
4	36	0.15		
5	39	0.25		

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# Required:

The expected return from the investment.

(4 marks)

(d) Chitsaka Limited estimates that it requires Sh.12,000,000 for its operations during the following year.

The company will sell marketable securities and deposits into a cost-free no-interest bank account.

The marketable securities currently provide an interest yield of 5% per year.

The cost of selling marketable securities is Sh.60 per transaction regardless of the size of the transaction.

Assume a 365-day financial year.

# Required:

Using the Baumol cash management model, determine:

(i) The optimal size of transaction for selling the marketable securities.

(4 marks)

(ii) The frequency with which the securities should be sold.

(2 marks) (Total: 20 marks)

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Present Value of 1 Received at the End of *n* Periods:  $PV1F_{r,n} = 1/(1+r)^n = (1+r)^{-n}$ 

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	15%	16%	18%	20%	24%	28%	32%	36%
																		You want	3000	10000
1	.9901	.9804	.9709	9615	.9524	.9434	.9346	.9259	.9174	.9091	.8929	8772	8696	.8621	.8475	.8333	.8065	:7813	7576	735
2	.9803	.9612	.9426	.9246	.9070	.8900	8734	.8573	.8417	.8264	.7972	.7695	7561	.7432	.7182	.6944	.6504	.6104	5739	.540
3	.9706	.9423	.9151	.8890	.8638	.8396	.8163	.7938	.7722	.7513	.7118	6750	6575	.6407	.6086	.5787	.5245	.4768	4348	397
4	.9610	.9238	.8885	.8548	.8227	.7921	.7629	.7350	7084	.6830	.6355	.5921	5718	.5523	.5158	.4823	.4230	.3725	3294	292
5	.9515	.9057	.8626	.8219	.7835	.7473	.7130	.6806	.6499	.6209	.5674	5194	4972	4761	.4371	.4019	.3411	2910	2495	.214
6	.9420	.8880	.8375	.7903	.7462	.7050	.6663	6302	.5963	.5645	.5066	4556	.4323	.4104	.3704	.3349	.2751	.2274	1890	.158
7	.9327	8706	.8131	.7599	.7107	.6651	.6227	.5835	.5470	.5132	.4523	3996	3759	.3538	.3139	.2791	.2218	:1776	1432	.116
8	.9235	.8535	.7894	.7307	.6768	.6274	.5820	.5403	.5019	.4665	4039	.3506	.3269	.3050	.2660	.2326	.1789	.1388	1085	.085
9	.9143	.8368	.7664	.7026	.6446	.5919	.5439	.5002	.4604	.4241	.3606	3075	.2843	.2630	.2255	.1938	.1443	.1084	0822	.062
10	,9053	.8203	.7441	.6756	.6139	.5584	.5083	.4632	.4224	.3855	.3220	2697	.2472	.2267	.1911	.1615	.1164	.0847	.0623	.046
. 11	8963	.8043	7224	.6496	.5847	.5268	.4751	.4289	.3875	.3505	.2875	2366	.2149	.1954	.1619	.1346	.0938	.0662	.0472	.034
12	.8874	.7885	.7014	.6246	.5568	.4970	.4440	.3971	.3555	3186	.2567	2076	.1869	1685	.1372	.1122	.0757	.0517	.0357	.025
13	.8787	.7730	.6810	.6006	.5303	.4688	.4150	.3677	.3262	.2897	.2292	.1821	.1625	.1452	.1163	.0935	.0610	.0404	.0271	.018
14	.8700	.7579	.6611	.5775	.5051	.4423	.3878	.3405	.2992	.2633	.2046	.1597	.1413	.1252	.0985	.0779	.0492	.0316	0205	.013
15	.8613	.7430	.6419	.5553	.4810	.4173	.3624	3152	2745	.2394	.1827	1401	.1229	.1079	.0835	.0649	.0397	.0247	.0155	009
16	.8528	7284	.6232	.5339	.4581	.3936	.3387	.2919	.2519	.2176	.1631	.1229	1069	.0930	.0708	.0541	.0320	.0193	.0118	.007
17	8444	.7142	.6050	.5134	.4363	.3714	.3166	.2703	.2311	1978	.1456	1078	.0929	.0802	.0600	.0451	.0258	.0150	.0089	.005
18	.8360	.7002	.3674	.4936	.4155	.3503	.2959	.2502	.2120	.1799	.1300	.0946	.0808	0691	.0508	.0376	.0208	.0118	.0068	.003
19	.8277	.6864	.5703	.4746	.3957	.3305	.2765	.2317	.1945	.1635	.1161	.0829	.0703	.0596	.0431	.0313	.0168	.0092	.0051	.002
20	8195	.6730	,5537	.4564	.3769	.3118	.2584	2145	.1784	1486	1037	.0728	.0611	.0514	.0365	.0261	.0135	.0072	.0039	.002
25	.7798	.6095	.4776	.3751	.2953	.2330	.1842	.1460	.1160	.0923	.0588	0378	.0304	.0245	0160	.0105	.0046	.0021	.0010	000
30	.7419	.5521	.4120	,3083	.2314	.1741	.1314	.0994	0754	.0573	0334	0196	.0151	.0116	.0070	.0042	.0016	.0006	.0002	,000
40	.6717	4529	3066	.2083	.1420	.0972	.0668	0460	0318	.0221	.0107	.0053	.0037	.0026	.0013	.0007	.0002	,0001		
50	.6080	.3715	.2281	.1407	.0872	.0543	.0339	.0213	.0134	.0085	.0035	.0014	.0009	,0006	.0003	.0001			- 2	
60	.5504	.3048	.1697	.0951	.0535	.0303	.0173	.0099	.0057	.0033	.0011	.0004	.0002	.0001						

Present Value of an Annuity of 1 Per Period for Periods:

$$PVIF_{rt} = \sum_{r=1}^{n} \frac{1}{(1+r)^r} = \frac{1-\frac{1}{(1+r)^n}}{r}$$

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number of	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	15%	16%	18%	20%	24%	28%	32%
1	0.9901	0.9804	0.9709	0,9615	0.9524	0.9434	0.9346	0.9259	0.9174	0,9091	0.8329	0.8772	0.8696						
2	1.9704	1,9416	1.9135	1.8861	1.8594	1.8334	1.8080	-,		1,7355	1.6901	1.6467		0.8621	0.8475		0.8065	0.7813	-
3	2.9410	2.8839	2.8286	2.7751	2.7232	2.6730		1000000		2.4869	2.4018	2.3216	1.6257	1.6052	1.5656	1.5278	1.4568		1.33
4	3.9020	3.8077	3.7171	3.6299	3.5460	3.4651			3.2397	3.1699	3.0373	2.9137	2.2832	2.2459	2.1743		1.9813		1.76
5	4.8534	4.7135	4.5797	4.4518	4.3295								3.3522	2.7982 3.2743	2.6901 3.1272	2.5887 2.9906	2.4043 2.7454	2.2410 2.5320	
6	5.7955	5.6014	5.4172	5.2421	5.0757	4.9173	4.7665	4.6229	4.4859	4.3553	4.1114	3 8887	3.7845	3 6847	3 4976	3.3255	3.0205	2 7504	2.52
7	6.7282	6.4720	6.2303	6.0021	5.7864	5.5824	5.3893	5.2064	5.0330	4.8684	4.5638		4.1604	4.0386	3.8115	3.6046	3.2423	2.7594	300
8	7.6517	7.3255	7.0197	6.7327	6.4632	6.2098	5.9713	5.7466	5.5348	5.3349		4.6389	4.4873	4.3436	4.0776	3.8372	3.4212	3.0758	2.67
9	8.5660	8.1622	7.7861	7.4353	7.1078	6.8017	6.5152	6.2469	5.9952	5.7590		4.9464	4,7716	4.6065	4.3030	4.0310	3.5655		2.78
10	9.4713	8.9826	8.5302	8.1109	7.7217	7.3601						5.2161		4.8332				3.1842 3.2689	2.86
11	10.3676	9.7868	9.2526	8.7605	8.3064	7.8869	7.4987	7.1390	6.8052	6.4951	5.9377	5.4527	5.2337	5.0286	4.6560	4.3271	3,7757	3.3351	2.97
12	11.2551	10.5753	9,9540	9.3851	8.8633	8.3838	7.9427	7.5361	7.1607	6,8137	6.1944		5.4206	5.1971	4.7932	4.4392	3.8514	3.3868	3.01
13	12.1337	11.3484	10.6350	9.9856	9.3936	8.8527	8.3577	7.9038	7.4869	7.1034		5.8424	5,5831	5.3423	4.9095	4.5327	3.9124	3.4272	3.04
14		12,1062				9.2950	8.7455	8.2442		7.3667	6.6282		5.7245	5.4675	5.0081	4.6106	3.9616	3.4587	3.06
15	13.8651	12.8493	11.9379	11.1184	10.3797	9.7122	9.1079	8.5595	8.0607	7.6061			5.8474			4.6755		3.4834	2000
16	14,7179	13.5777	12.5611	11.6523	10.8378	10.1059	9.4466	8.8514	8.3126	7.8237	6.9740	6.2651	5.9542	5.6685	5.1624	4 7296	4.0333	3.5026	3 08
17	15.5623	14.2919	13,1661	12.1657	11.2741	10.4773	9.7632	9.1216	8.5436	8.0216	7.1196	6.3729	6.0472	5.7487	5.2223	4.7746	4.0591	3.5177	3.09
18	16,3983	14.9920	13.7535	12.6593	11.6896	10.8276	10.0591	9.3719	8.7556	8.2014	7.2497	6.4674	6.1280	5.8178	5.2732	4.8122	4.0799	3.5294	3 10
19	17.2260	15.6785	14.3238	13.1339	12.0853	11.1581	10.3356	9.6036	8.9501	8.3649	7.3658	6.5504	6.1982	5.8775	5.3162	4.8435	4.0967	3.5386	3.10
20	18,0456	16.3514	14.8775	13.5903	12.4622	11.4699	10.5940	9.8181	9.1285	8.5136	7.4694	6.6231	6.2593	7	5.3527		4.1103		3 11
25	22.0232	19.5235	17.4131	15.6221	14.0939	12.7834	11.6536	10.6748	9.8226	9.0770	7,8431	6.8729	6.4641	6.0971	5,4669	4.9476	4.1474	3.5640	3 12
30	25.8077	22.3965	19.6004	17.2920	15.3725	13.7648	12,4090	11.2578	10.2737	9.4269	8.0552	7.0027	6.5660	6.1772	5.5168	4.9789	4.1601		3 12
		27.3555									8.2438	7.1050	6.6418	6.2335	5.5482	4.9966	4.1659	3.5712	
50	39.1961	31.4236	25,7298	21.4822	18.2559	15.7619	13.8007	12.2335	10.9617	9.9148	8.3045	7.1327	6.6605	6.2463	3.5541	4.9995	4.1666		3 12
60	44.9550	34.7609	27,6756	22.6235	18.9293	16.1614	14.0392	12.3766	11,0480	9.9672	8.3240	7.1401	6.6651		5 5553			3.5714	