

# KASNEB

## CPA PART II SECTION 3

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### FINANCIAL MANAGEMENT

WEDNESDAY: 23 November 2016.

Time Allowed: 3 hours.

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

#### QUESTION ONE

- (a) Explain four disadvantages of public private partnerships (PPPs). (8 marks)
- (b) Describe six steps involved in personal financial planning. (6 marks)
- (c) The following data was extracted from the financial statements of XYZ Limited for the year ended 30 September 2016.

Total assets	Sh.7,000,000
Total liabilities	Sh.4,000,000
Preference share capital	Sh.500,000
Earnings per share (EPS)	Sh.1.10
Price-earnings (P/E) ratio	15
Outstanding number of ordinary shares	400,000

#### Required:

- (i) Book value per share. (2 marks)
- (ii) Market price per share. (2 marks)
- (iii) Market value to book value ratio. (2 marks)
- (Total: 20 marks)**

#### QUESTION TWO

- (a) Discuss three possible solutions to adverse selection. (6 marks)
- (b) Sandy Ltd. presented the following extracts of the statement of financial position as at 31 October 2016:

	Sh. "000"	Sh. "000"
<b>Equity</b>		
Ordinary shares (Sh.5 nominal value)	800,000	
Reserves	<u>3,600,000</u>	4,400,000
<b>Long term liabilities</b>		
4% preference shares (Sh.1 nominal value)	600,000	
7% bonds (redeemable after 6 years)	600,000	
Long term bank loan	<u>200,000</u>	1,400,000

#### Additional information:

- Ordinary shares of Sandy Ltd. have an ex-div market value of Sh.47.00 per share and an ordinary dividend of Sh.3.63 per share has just been paid.
- The following dividends have been paid over the past four years:

Year	2013	2014	2015	2016
Dividend per share (Sh.)	3.09	3.22	3.36	3.50
- The preference shares are not redeemable and have an ex-div market value of 40 cents per share.
- The 7% bond is redeemable at 5% premium to their nominal value of Sh.100 per bond and have an ex-interest market value of Sh.104.50.

5. The bank loan has a variable interest rate that has averaged 4% per year in recent years.  
6. The corporate tax rate is 30%.

**Required:**

- (i) The weighted average cost of capital (WACC). (10 marks)  
(ii) Explain four reasons why the cost of equity could be greater than the cost of debt. (4 marks)

**(Total: 20 marks)**

**QUESTION THREE**

- (a) The management of Georgina Ltd. wishes to establish the amount of external financial needs for the year ending 31 December 2016. The statement of financial position of the company as at 31 December 2015 was as follows:

	<b>Sh. "000"</b>
Plant and machinery	31,200
Furniture and fittings	18,720
Motor vehicles	12,480
Inventory	19,200
Account receivables	14,400
Cash and bank	<u>3,600</u>
	<u>99,600</u>
<b>Financed by:</b>	
Ordinary share capital	42,000
Retained profit	17,600
14% debenture capital	10,000
Account payables	18,000
Accrued expenses	<u>12,000</u>
	<u>99,600</u>

**Additional information:**

- The sales for the year ended 31 December 2015 amounted to Sh.120,000,000.
- The company forecasts that sales will increase by 10% for the year ending 31 December 2016.
- For the year ended 31 December 2015, the after-tax profit of the company amounted to Sh.18,000,000.
- The company adopts 80% payout ratio as its dividend policy. The payout ratio is expected to remain constant each year in perpetuity.
- The after-tax profit margin is also expected to remain constant each year.
- Assets are expected to vary directly with sales while account payables and accrued expenses form the spontaneous sources of financing.
- Any external financing will be effected through long term debt financing.

**Required:**

- (i) The amount of external 12% long term debt financing that would be required for the year ending 31 December 2016. (4 marks)  
(ii) A forecast statement of financial position as at 31 December 2016. (6 marks)  
(iii) Comment on two weaknesses of the method of forecasting applied in (a)(i) and (a)(ii) above. (2 marks)
- (b) The following information was extracted from the financial statements of a manufacturing company:

	<b>Sh.</b>
Average total debtors outstanding	48,000
Raw materials consumption	440,000
Total production cost	1,000,000
Total cost of sales	1,050,000
Sales for the year	1,600,000
Value of average stock maintained:	
Raw material	32,000
Work in progress	35,000
Finished goods	26,000
Number of days in a year	365
Average period of credit allowed to suppliers	16 days

**Required:**

- (i) The operating cycle in days. (6 marks)
- (ii) The amount of working capital required. (2 marks)
- (Total: 20 marks)**

**QUESTION FOUR**

- (a) Bundacho Ltd. generated Sh.50 million profit after-tax in the previous financial year. The firm adopts 40% payout ratio as its dividend policy. The total number of issued ordinary shares are 10,000,000.

The company has a potential investment opportunity. If undertaken, dividends are expected to grow at the rate of 10% each year for the first 3 years and then stabilise at the rate of 5% each year thereafter in perpetuity.

The investor's minimum required rate of return is 18%.

**Required:**

The current intrinsic value of the share. (6 marks)

- (b) A firm issued 10% preference shares to raise funds. The shares have a par value of Sh.100 each and are currently selling at Sh.110 each.

The minimum required rate of return by the investors is 8%.

**Required:**

Explain whether the share is overvalued or undervalued by the market. (4 marks)

- (c) Mwarakaya Ltd. is considering the acquisition of a new machine to replace the existing machine currently being used in production processes. The existing machine was acquired 2 years ago at a cost of Sh.2,000,000. It was originally estimated to have a useful life of 5 years with no salvage value.

A critical evaluation of the machine now shows that the machine is usable for another 5 years with a salvage value of Sh.250,000 at the end of this period. The disposal value of the existing machine is currently estimated at Sh.1,250,000.

The new machine is estimated to cost Sh.3,140,000 and its estimated salvage value is Sh.1,000,000 at the end of its useful life of 5 years. The new machine will also require an additional investment in working capital of Sh.650,000 at the start of the asset's useful life.

The investment in working capital will however be recovered at the end of the 5 years useful life.

The following information relates to the estimated earnings before depreciation and tax (EBDT) over the coming five-year period for the two machines.

Year	New machine Sh.	Existing machine Sh.
1	1,400,000	800,000
2	1,350,000	700,000
3	1,300,000	750,000
4	1,450,000	650,000
5	1,200,000	600,000

The cost of capital is 10% and the firm applies the straight line method of depreciation.  
The corporate tax rate is 30%.

**Required:**

Using the net present value (NPV) technique, advise the company's management on whether to replace the existing machine. (10 marks)

**(Total: 20 marks)**

**QUESTION FIVE**

(a) Explain the following terms as used in the bond market:

- (i) Yield-to-maturity (YTM). (2 marks)
- (ii) Yield-to-call (YTC). (2 marks)

(b) Kaoyeni Limited has issued a Sh.10,000 par value 10-year bond with a coupon rate of 12% per annum. The bond is currently trading at Sh.8,830 and is callable at Sh.10,500 after 5 years.

The company pays interest on its bonds semi-annually.

**Required:**

- (i) Yield-to-maturity of the bond. (3 marks)
- (ii) Yield-to-call of the bond. (3 marks)

(c) The following data was extracted from Mwakuhenga Limited's financial statements for the year ended 30 June 2016:

	<b>Sh.</b>
Total sales	3,000,000
Variable costs	<u>(900,000)</u>
Contribution	2,100,000
Fixed costs	<u>(1,500,000)</u>
Earning before interest and tax (EBIT)	600,000
Interest	<u>(75,000)</u>
Profit before tax	<u>525,000</u>

**Required:**

Using the concept of leverage, determine:

- (i) The percentage taxable income if EBIT increases by 6%. (3 marks)
- (ii) The percentage EBIT if there is a 10% increase in sales. (3 marks)
- (iii) The percentage taxable income if sales increase by 8%. (4 marks)

**(Total: 20 marks)**

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Present Value of 1 Received at the End of *n* Periods:

$$PVIF_{r,n} = 1/(1+r)^n = (1+r)^{-n}$$

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	15%	16%	18%	20%	24%	28%	32%	36%
1	.9901	.9804	.9709	.9615	.9524	.9434	.9346	.9259	.9174	.9091	.8929	.8772	.8696	.8621	.8475	.8333	.8065	.7813	.7576	.7353
2	.9803	.9612	.9426	.9246	.9070	.8900	.8734	.8573	.8417	.8264	.7972	.7695	.7561	.7432	.7182	.6944	.6504	.6104	.5739	.5407
3	.9706	.9423	.9151	.8890	.8638	.8396	.8163	.7938	.7722	.7513	.7118	.6750	.6575	.6407	.6086	.5787	.5245	.4768	.4348	.3975
4	.9610	.9238	.8885	.8548	.8227	.7921	.7629	.7350	.7084	.6830	.6355	.5921	.5718	.5523	.5158	.4823	.4230	.3725	.3294	.2923
5	.9515	.9057	.8626	.8219	.7835	.7473	.7130	.6806	.6499	.6209	.5674	.5194	.4972	.4761	.4371	.4019	.3411	.2910	.2495	.2149
6	.9420	.8880	.8375	.7903	.7462	.7050	.6663	.6302	.5963	.5645	.5066	.4556	.4323	.4104	.3704	.3349	.2751	.2274	.1890	.1580
7	.9327	.8706	.8131	.7599	.7107	.6651	.6227	.5835	.5470	.5132	.4523	.3996	.3759	.3538	.3139	.2791	.2218	.1776	.1432	.1162
8	.9235	.8535	.7894	.7307	.6768	.6274	.5820	.5403	.5019	.4665	.4039	.3506	.3269	.3050	.2660	.2326	.1789	.1388	.1085	.0854
9	.9143	.8368	.7664	.7026	.6446	.5919	.5439	.5002	.4604	.4241	.3606	.3075	.2843	.2630	.2255	.1938	.1443	.1084	.0822	.0628
10	.9053	.8203	.7441	.6756	.6139	.5584	.5083	.4632	.4224	.3855	.3220	.2697	.2472	.2267	.1911	.1615	.1164	.0847	.0623	.0462
11	.8963	.8043	.7224	.6496	.5847	.5268	.4751	.4289	.3875	.3505	.2875	.2366	.2149	.1954	.1619	.1346	.0938	.0662	.0472	.0340
12	.8874	.7885	.7014	.6246	.5568	.4970	.4440	.3971	.3555	.3186	.2567	.2076	.1869	.1685	.1372	.1122	.0757	.0517	.0357	.0250
13	.8787	.7730	.6810	.6006	.5303	.4688	.4150	.3677	.3262	.2897	.2292	.1821	.1625	.1452	.1163	.0935	.0610	.0404	.0271	.0184
14	.8700	.7579	.6611	.5775	.5051	.4423	.3878	.3405	.2992	.2633	.2046	.1597	.1413	.1252	.0985	.0779	.0492	.0316	.0205	.0135
15	.8613	.7430	.6419	.5553	.4810	.4173	.3624	.3152	.2745	.2394	.1827	.1401	.1229	.1079	.0835	.0649	.0397	.0247	.0155	.0099
16	.8528	.7284	.6232	.5339	.4581	.3936	.3387	.2919	.2519	.2176	.1631	.1229	.1069	.0930	.0708	.0541	.0320	.0193	.0118	.0073
17	.8444	.7142	.6050	.5134	.4363	.3714	.3166	.2703	.2311	.1978	.1456	.1078	.0929	.0802	.0600	.0451	.0258	.0150	.0089	.0054
18	.8360	.7002	.5874	.4936	.4155	.3503	.2959	.2502	.2120	.1799	.1300	.0946	.0808	.0691	.0508	.0376	.0208	.0118	.0068	.0039
19	.8277	.6864	.5703	.4746	.3957	.3305	.2765	.2317	.1945	.1635	.1161	.0829	.0703	.0596	.0431	.0313	.0168	.0092	.0051	.0029
20	.8195	.6730	.5537	.4564	.3769	.3118	.2584	.2145	.1784	.1486	.1037	.0728	.0611	.0514	.0365	.0261	.0135	.0072	.0039	.0021
25	.7798	.6095	.4776	.3751	.2953	.2330	.1842	.1460	.1160	.0923	.0588	.0378	.0304	.0245	.0160	.0105	.0046	.0021	.0010	.0005
30	.7419	.5521	.4120	.3083	.2314	.1741	.1314	.0994	.0754	.0573	.0334	.0196	.0151	.0116	.0070	.0042	.0016	.0006	.0002	.0001
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				
60	.5504	.3048	.1697	.0951	.0535	.0303	.0173	.0099	.0057	.0033	.0011	.0004	.0002	.0001						

\* The factor is zero to four decimal places

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

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

Number of payments	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	0.8929	0.8772	0.8696	0.8621	0.8475	0.8333	0.8065	0.7813	0.7576
2	1.9704	1.9416	1.9135	1.8861	1.8594	1.8334	1.8080	1.7833	1.7591	1.7355	1.6901	1.6467	1.6257	1.6052	1.5656	1.5278	1.4568	1.3916	1.3315
3	2.9410	2.8839	2.8286	2.7751	2.7232	2.6730	2.6243	2.5771	2.5313	2.4869	2.4018	2.3216	2.2832	2.2459	2.1743	2.1065	1.9813	1.8684	1.7663
4	3.9020	3.8077	3.7171	3.6299	3.5460	3.4651	3.3872	3.3121	3.2397	3.1699	3.0373	2.9137	2.8550	2.7982	2.6901	2.5887	2.4043	2.2410	2.0957
5	4.8534	4.7135	4.5797	4.4518	4.3295	4.2124	4.1002	3.9927	3.8897	3.7908	3.6048	3.4331	3.3522	3.2743	3.1272	2.9906	2.7454	2.5320	2.3452
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	2.7594	2.5342
7	6.7282	6.4720	6.2303	6.0021	5.7864	5.5824	5.3893	5.2064	5.0330	4.8684	4.5638	4.2883	4.1604	4.0386	3.8115	3.6046	3.2423	2.9370	2.6775
8	7.6517	7.3255	7.0197	6.7327	6.4632	6.2098	5.9713	5.7466	5.5348	5.3349	4.9676	4.6389	4.4873	4.3436	4.0776	3.8372	3.4212	3.0758	2.7860
9	8.5660	8.1622	7.7861	7.4353	7.1078	6.8017	6.5152	6.2469	5.9952	5.7590	5.3282	4.9464	4.7716	4.6065	4.3030	4.0310	3.5655	3.1842	2.8681
10	9.4713	8.9826	8.5302	8.1109	7.7217	7.3601	7.0236	6.7101	6.4177	6.1446	5.6502	5.2161	5.0188	4.8332	4.4941	4.1925	3.6819	3.2689	2.9304
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	2.9776
12	11.2551	10.5753	9.9540	9.3851	8.8633	8.3838	7.9427	7.5361	7.1607	6.8137	6.1944	5.6603	5.4206	5.1971	4.7932	4.4392	3.8514	3.3868	3.0133
13	12.1337	11.3484	10.6350	9.9856	9.3936	8.8527	8.3577	7.9038	7.4869	7.1034	6.4235	5.8424	5.5831	5.3423	4.9095	4.5327	3.9124	3.4272	3.0404
14	13.0037	12.1062	11.2961	10.5631	9.8986	9.2950	8.7455	8.2442	7.7862	7.3667	6.6282	6.0021	5.7245	5.4675	5.0081	4.6106	3.9616	3.4587	3.0609
15	13.8651	12.8493	11.9379	11.1184	10.3797	9.7122	9.1079	8.5595	8.0607	7.6061	6.8109	6.1422	5.8474	5.5755	5.0916	4.6755	4.0013	3.4834	3.0764
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	3.0882
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	3.0971
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	3.1039
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	3.1099
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	5.9288	5.3527	4.8696	4.1103	3.5458	3.1129
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	3.1220
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	3.5693	3.1242
40	32.8347	27.3555	23.1148	19.7928	17.1591	15.0463	13.3317	11.9246	10.7574	9.7791	8.2438	7.1050	6.6418	6.2335	5.5482	4.9966	4.1659	3.5712	3.1250
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	5.5541	4.9995	4.1666	3.5714	3.1250
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	6.2402	5.5553	4.9999	4.1667	3.5714	3.1250