KASNEB

CPA PART III SECTION 5

ADVANCED FINANCIAL MANAGEMENT

THURSDAY: 25 May 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.

QUESTION ONE

- Explain two ways in which increased investment in corporate social responsibility (CSR) activities might enhance the (a) value of a firm. (4 marks)
- Kenzel Ltd. has the following capital structure which it considers optimal under both the present and forecasted (b) conditions:

Source of capital	%
Long-term debt	45
Equity capital	55
Total	100

The management of Kenzel Ltd. forecasts the after-tax earnings for the forthcoming year at Sh.2.5 million. The protes.co.xe company has been paying 60 per cent of its earnings as dividend and this payment ratio is expected to continue into the foreseeable future. The company's present loan commitment will allow it to incur additional leverage according to the schedule presented below:

Loan amount (Sh.)	Interest rate on incremental debt
0 - 500,000	9%
500,000 - 900,000	11%
900,000 and above	13%

The company's corporate tax rate is 30%. The current market price of the equity shares of the company is sh.22. The last dividend on equity shares was paid at Sh.2.20 per share and the expected growth rate is 5%. New equity shares can be sold at a floatation cost of 10% of the issue price.

Kenzel Ltd. has the following investment opportunities for the coming year:

Project	Cash outlay	Annual net cash flow	Project life (years)	Internal rate of return
	Sh.	Sh.		%
Α	675,000	155,401	8	?
В	900,000	268,484	5	15
C	375,000	161,524	3	?
D	562,500	185,194	4	12
E	750,000	127,351	10	11

Required:

- The amounts in shillings at which breaks in the marginal cost of capital (MCC) schedule occur. (i) (3 marks)
- (ii) The weighted marginal cost of capital (WMCC) in each of the intervals between the breaks in the MCC (6 marks)
- (iii) The internal rate of return (IRR) for project A and project C. (4 marks)
- Using the investment opportunities schedule (IOS), advise on which project(s) should be accepted. (3 marks) (iv) (Total: 20 marks)

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QUESTION TWO

Analyse three factors that might be responsible for financial distress in a firm. (a)

(6 marks)

(b) The following information relates to the performance of six portfolios over a seven-year period:

Portfolio	Average annual returns (%)	Standard deviation of the average annual returns (%)	Correlation with market returns
Þ	18.6	27.0	0.81
Q	14.8	18.0	0.65
R	15.1	8.0	0.98
S	22.0	21.2	0.75
T	-9.0	4.0	0.45
U	26.5	19.3	0.63
Market return	12.0	12.0	
Risk-free rate	9.0		

Required:

Rank the performance of the above portfolios using:

(i) Sharpe's method. (4 marks)

(ii) Treynor's method. (6 marks)

(c) Compare the rankings using the two methods in (b) above and explain two reasons behind the differences. (4 marks)

(Total: 20 marks)

QUESTION THREE

(a) Examine four strategies that a company could adopt to defend itself against a hostile takeover.

(b) The following data relate to two companies namely; V Ltd. and J Ltd. operating in the same line of business.

Financial data as at 30 April 2017:

V Ltd.	J Ltd.
6.60	11.60
19.80	13.40
680.00	880.00
50.80	-
22.00	- ~
30%	30%
1.85	0.95 3.0%
1.6%	3.0%
900.00	410.00
1.19	0.44
	6.60 19.80 680.00 50.80 22.00 30% 1.85 1.6%

Additional information:

- The global equity risk premium is 4% and the most appropriate risk-free rate derived from government securities is 3%.
- 2. The share options held by the employees were exercisable subject to the employees working for the company for the next three years.
- 3. The company has an annual employee attrition rate of 5% as employees leave and out of those remaining, 20% are expected not to have achieved the standard of performance required to exercise the options.
- 4. The options have a time value of Sh.7.31.
- J Ltd. operates a defined benefit pension scheme which, at its current actuarial valuation, shows a deficit of 5. Sh.860 million.
- 6. V. Ltd. which has managed to sustain a 5% growth rate in earnings per annum, is considering a debt-financed acquisition of J Ltd. In addition, V Ltd. believes that J Ltd. could register a growth rate of 4% per annum under its current management.

Required:

The weighted average cost of capital (WACC) of both J Ltd. and V Ltd. (i)

(4 marks)

(ii) The current value of both J Ltd. and V Ltd.

(8 marks) (Total: 20 marks)

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OUESTION FOUR

Explain three functions of the African Development Bank. (a)

(6 marks)

(b) Biashara Ltd. is an import-export company based in Kenya. On 1 January 2017, the company exported coffee worth US \$140,000 to the United States (US) of America on a five-month credit.

Additional information:

The exchange rates in the forex markets were (are expected to be) as follows:

	KSh/1 US\$
1 January 2017	100
31 May 2017	102

2. The lending and borrowing rates in the two countries are as follows:

	Annual lending rate	Annual borrowing rate
Kenya	18%	19%
USA	14%	15%

3. The importer will settle the outstanding amount on 31 May 2017.

Required:

- Using the interest rate parity relationship, compute the expected 5-month forward exchange rate as at 31 May (i) 2017.
- Advise Biashara Ltd. on which is the better hedging strategy between a forward contract and a money market (ii) . Kashennotes .co. Ke hedge.

QUESTION FIVE

A Ltd. is considering acquiring B Ltd. The selected financial data for the two companies are as follows:

	A Ltd.	B Ltd.
Annual sales (Sh."million")	600	120
Net income (Sh."million")	35	3
Ordinary shares outstanding ("millions")	10	2
Earnings per share (EPS) - Sh.	3.5	1.5
Market price per share (MPS) - Sh.	40	15

Both companies are in the 30% tax bracket.

Required:

The maximum exchange ratio that A Ltd. should agree to if it expects no dilution in earnings per share. (i)

- (ii) Total premium that the shareholders of B Ltd. would receive at the exchange ratio calculated in (a) (i) above.
- (iii) A Ltd.'s post acquisition earnings per share, if the two companies settle on a price of Sh.20 per share.
- (2 marks)
- (iv) A Ltd.'s post-acquisition earnings per share if every 50 ordinary shares of B Ltd. were exchanged for one 8% debenture of a par value of Sh.1,000 each. (2 marks)
- (b) Chuma Ltd. operates a machine which has the following maintenance costs and resale values over its four-year life. The purchase price of the machine is Sh.25,000,000.

	Year 1	Year 2	Year 3	Year 4
	Sh."000"	Sh."000"	Sh."000"	Sh."000"
Maintenance costs	7,500	11,000	12,500	15,000
Resale value (end of year)	15,000	10,000	7,500	2,500

The company's cost of capital is 10%.

Required:

Advise the management of Chuma Ltd. on how frequently the machine should be replaced. (12 marks) (Total: 20 marks)

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

PVIF =	$1/(1+r)^n =$:(1+r):"
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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	.5674	.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:

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

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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		2.0957
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		2.3452
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	5.0183	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		4.0967	3,5386	3.1090
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 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		22.3965									8.0552	7.0027	6.5660	6.1772	5.5168	4.9789	4.1601	3.5693	3 1242
40		27.3555									8.2438	7.1050	6,6418	6.2335	5.5482	4.9966	4.1659	3.5712	3.1250
50		31.4236									8.3045	7.1327	6,6605	6.2463	3.5541	4.9995	4.1666	3.5714	3 1250
60		34.7609									8.3240	7.1401	6.6651		5 5553		4.1667	3.5714	
																		3.5	2 1 6 12 17