



**CIFA PART II SECTION 3**  
**CORPORATE FINANCE**

**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.**

**QUESTION ONE**

(a) Explain four limitations of corporate restructuring. (4 marks)

(b) The following financial information has been extracted from the books of Awendo Ltd. and Awasi Ltd. for the year 2016:

	Awendo Ltd. Sh. "000"	Awasi Ltd. Sh. "000"
Turnover	25,000	30,000
Fixed cost	7,500	15,000

Contribution to sales (C/S) ratio of the company is 50% and 30% for Awendo Ltd. and Awasi Ltd. respectively.

**Required:**

- (i) The degree of operating leverage for each company. (4 marks)
- (ii) Comment on the results in (b) (i) above. (1 mark)
- (iii) Highlight four uses of operating leverage. (4 marks)
- (c) The following information has been extracted from Borabu manufacturing company which deals with production of packaging materials at the export processing zone (EPZ):

	Sh. "000"
Average period of credit allowed by suppliers	480
Average trade receivables outstanding	4,400
Raw materials consumption	10,000
Cost of sales	10,500
Revenue for the year	16,000
Value of inventory maintained (average):	
Raw materials	320
Work-in-progress	350
Finished goods	260

The average period of credit allowed by suppliers is 16 days. Assume a year has 365 days.

**Required:**

- (i) The length of operating cycle of Borabu Ltd. (3 marks)
- (ii) Number of operating cycles per annum. (2 marks)
- (iii) Working capital requirement of Borabu Ltd. (2 marks)

**(Total: 20 marks)**

**QUESTION TWO**

- (a) Examine four corporate takeovers defensive tactics. (8 marks)
- (b) Alpha Ltd. contemplates to acquire Beta Ltd. The following information is available:

	Alpha Ltd.	Beta Ltd.
Total current earnings	Sh.50 million	Sh.20 million
Number of outstanding shares	20 million	10 million
Market price per share	Sh.30	Sh.20

**Required:**

- (i) The maximum exchange ratio acceptable to the shareholders of Alpha Ltd. assuming that the price-to-earnings (P/E) ratio of the combined entity is 12 and that there is no synergy gain. (3 marks)
- (ii) The maximum exchange ratio acceptable to the shareholders of Beta Ltd. assuming that the price-to-earnings (P/E) ratio of the combined entity is 11 and that there is a synergy benefit of 5%. (3 marks)
- (c) Hezo Ltd. has issued 8% convertible bonds redeemable in 5 years' time. The convertible bonds are currently quoted at Sh.82 per Sh.100 nominal value. The bonds can be converted into 25 shares in 5 years' time. The share market price is currently Sh.3.50 and is expected to grow at a rate of 3% per annum. The tax rate is 30%.

**Required:**

The cost of convertible bonds for Hezo Ltd.

(6 marks)

**(Total: 20 marks)**

**QUESTION THREE**

- (a) Discuss three reasons why investors might be willing to pay a premium for shares of a company with a stable dividend policy. (6 marks)
- (b) Empire Ltd., an ungeared company, earned a pre-tax accounting profit of Sh.30 million in the financial year just ended. Replacement investment will match last year's depreciation of Sh.2 million. Both are fully tax-allowable.

**Additional information:**

- Corporate tax is payable at a rate of 30%.
- Empire Ltd. operates a 50% dividend payout policy and has previously issued 100 million shares with a par value of Sh.0.25 each.
- Empire Ltd. shareholders require a return of 15% per annum.
- The company holds Sh.15 million cash balance.

**Required:**

The market price per share of Empire Ltd. Assuming the shares are traded:

- (i) Cum-dividend. (3 marks)
- (ii) Ex-dividend. (1 mark)
- (c) Muhoroni Millers is considering the following independent, average risk investment projects:

Project	Size of project (Sh. Million)	Project internal rate of return, IRR (%)
V	1.0	12.0
W	1.2	11.5
X	1.2	11.0
Y	1.2	10.5
Z	1.0	10.0

The company has a target capital structure consisting of 50% debt and 50% equity. Its after-tax cost of debt is 8%, its cost of equity is estimated to be 13.5% and its net income is estimated to be Sh.2.5 million.

**Required:**

The dividend payout ratio given that the company follows a residual dividend policy.

(4 marks)

- (d) Wasini Ltd. encounters significant uncertainty with its sales volume and price in its primary product. The firm relies on scenario analysis in order to determine an expected net present value (NPV) which it then uses in its budget. The base-case, worst-case and best-case scenarios together with their respective probabilities are as follows:

Scenario	Probability of outcome	Unit sales volume	Sales price (Sh.)	Expected net present value (NPV) (Sh.)
Worst-case	0.30	6,000	3,600	-6,000
Base-case	0.50	10,000	4,200	13,000
Best-case	0.20	13,000	4,400	28,000

**Required:**

The coefficient of variation of the net present value.

(6 marks)

**(Total: 20 marks)**

**QUESTION FOUR**

- (a) Describe two types of agency conflicts that could affect the dividend payout policy of a corporate firm. (4 marks)
- (b) (i) Highlight three factors outside the control of the firm that could affect its cost of capital. (3 marks)
- (ii) Muruguru Ltd.'s weighted average cost of capital (WACC) is 11% and its corporate tax rate is 35%. The company's pre-tax cost of debt is 10% and its debt-equity ratio is 3:5. The risk-free rate is 8% and the risk market premium is 7%.

**Required:**

The beta of the company's equity.

(3 marks)

- (c) Masinga enterprises Ltd. (MEL) is considering going private through a leveraged buyout (LBO) by management. The management currently owns 21% of the 5 million outstanding shares. The market price per share is Sh.20 and it is felt that a 40% premium over the present price would be necessary to entice public shareholders to tender their shares in a cash offer. The management intends to keep its shares and obtain a senior debt equal to 80% of the funds necessary to complete the buyout. The remaining 20% will come from junior subordinated debentures. The terms of the senior debt are 2% above the prime rate with principal reductions of 20% on the initial loan at the end of each of the next five years. The junior subordinated debentures bear a 13% interest rate and must be retired at the end of six years with a single balloon payment. The debentures have warrants attached that enable the holders to purchase 30% of the stock at the end of the sixth year. The management estimates that earnings before interest and taxes (EBIT) will be Sh.25 million per year. The company will make capital expenditures in amounts equal to its depreciation. The prime rate is expected to be 10% over the next five years.

**Required:**

The minimum annual earnings before interest and taxes (EBIT) necessary to service the debt.

(5 marks)

- (d) A project to upgrade a computer software is estimated to cost Sh.1,000,000. Its expected cash flow at the end of year 1 is Sh.400,000. Thereafter, it is expected to decrease annually by Sh.20,000. The project has an economic life of 6 years. The certainty factor of the project is given as  $\alpha = 1 - 0.05t$ , where  $t$  is the  $n^{\text{th}}$  year. The risk-free rate of return is 10%.

**Required:**

The net present value (NPV) of the project using certainty equivalent approach.

(5 marks)

**(Total: 20 marks)**

**QUESTION FIVE**

- (a) Discuss five factors that have contributed to the growth of Islamic finance industry in your country. (10 marks)
- (b) Jalopy Motors Ltd. (JML) is intending to undertake a Sh.50 million expansion project. Over the years, the firm's board of directors has adhered to a policy of rejecting any investment proposal that would jeopardise the market value of the firm's ordinary shares.

A preliminary analysis projected a rate of return on the new project of approximately 14% before taxes. JML has made a tentative agreement with AOM Insurance Ltd. to finance the project through a private placement of the Sh.50 million in the form of 10% notes.

The firm's ordinary shares have been historically selling at 10 times after-tax earnings. The current earnings per share (EPS) is Sh.2.70 and the firm faces a 30% corporate income tax rate. The following information is also available:

	Sh. "000"
Long term debt (8%)	10,000
Ordinary shares (10,000,000 shares outstanding, Sh.2 par value)	20,000
Paid in capital, in excess of par	70,000
Retained earnings	<u>100,000</u>
Total capitalisation	<u>200,000</u>

**Required:**

- (i) Anthony Mutembei, one of the members of JML's board of directors argued that the firm should immediately place the notes, since the before-tax marginal cost of capital for the project is only 10% (the interest on the notes), and indications are that the project before tax rate of return would be greater than 10%.

Discuss whether Anthony Mutembei's argument is valid. (3 marks)

- (ii) Determine the level of annual earnings that the new project must generate in order to meet the director's objective assuming JML's earnings multiple declines to 9. (7 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	.0461	.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	.0434	.0313	.0168	.0092	.0051	.0029
20	.8195	.6730	.5537	.4564	.3769	.3118	.2584	.2145	.1784	.1486	.1037	.0728	.0611	.0514	.0366	.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	4.4541	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	8.0627	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	3.1090
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	3.5458	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	5.5441	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