



ATD LEVEL II

FUNDAMENTALS OF FINANCE

TUESDAY: 24 November 2020.

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) Highlight four applications of the cost of capital to a firm. (4 marks)
- (b) Citing three reasons, justify why the accounting profit might not be the best measure of a company's performance. (6 marks)
- (c) Riziki Ltd. borrowed Sh.15,000,000 from Zaidi Bank at an annual compound interest rate of 18% on the reducing balance. The loan was repayable in annual installments over a period of six years. The installments were payable at the end of each year.

Required:

A loan amortisation schedule for Riziki Ltd. (6 marks)

- (d) At the beginning of year 2015, Chiaro Kwekwe deposited Sh.1,000,000 in an investment account which earned compound interest at the rate of 15% per annum. At the beginning of each subsequent year, Chiaro Kwekwe deposited a further Sh.500,000 in the same account.

Required:

The amount of money in the investment account by the end of the year 2019. (4 marks)

(Total: 20 marks)

QUESTION TWO

- (a) Outline two advantages of bonus issue of shares from the viewpoint of the company. (2 marks)
- (b) Discuss four dividend pay-out policies that could be adopted by different companies in your country. (8 marks)
- (c) Explain the following types of risks:
 - (i) Market risk. (1 mark)
 - (ii) Interest rate risk. (1 mark)
 - (iii) Default risk. (1 mark)
- (d) Barry Otifha plans to buy shares of Lightway Ltd. that are currently selling at Sh.20 each at the Securities Exchange. The forecasted price per share and probability of their occurrence in different states of nature are as follows:

State of nature	Probability	Forecasted share price Sh.
Excellent	0.30	25
Normal	0.20	22
Poor	0.35	21
Very poor	0.15	18

Required:

- (i) Expected rate of return of the company's share. (3 marks)
- (ii) The standard deviation of return. (4 marks)

(Total: 20 marks)

QUESTION THREE

- (a) Explain four features of ordinary shares. (8 marks)
- (b) Orbitech Ltd's capital structure which is considered to be optimal is given as follows:

	%
Equity	60%
Debt	40%
	<u>100</u>

The firm is planning to raise an additional Sh.5,000,000 to finance an expansion programme. This project is expected to generate additional net operating cash inflows of Sh.700,000 in each year in perpetuity.

Additional information:

1. New ordinary shares could be issued at Sh.40 each and incur a floatation cost of Sh.2 per share issued.
2. The firm's current earnings per share is Sh.5 and adopts a 50% payout ratio as its dividend policy. The firm's future dividend is expected to grow at a constant rate of 4% each year indefinitely.
3. New irredeemable 10% debentures can be issued at par at Sh.100 each. Floatation cost of Sh.3 per debenture issued will be incurred.
4. Corporation tax rate is 30%.
5. Retained earnings available to finance this activity are estimated at Sh.1,000,000.

Required:

- (i) Cost of retained earnings. (2 marks)
- (ii) Cost of ordinary share capital. (2 marks)
- (iii) Effective cost of 10% debenture capital. (2 marks)
- (iv) Weighted marginal cost of capital (WMCC) of a firm. (4 marks)
- (v) The number of ordinary shares to be issued to raise external equity. (2 marks)

(Total: 20 marks)

QUESTION FOUR

- (a) Explain three approaches to financing working capital that could be adopted by different firms. (6 marks)
- (b) Outline four features of a sound investment appraisal technique. (4 marks)
- (c) Banita Ltd. is considering the selection of a project from two mutually exclusive projects with an estimated productive life of five years.

The following information relates to the two projects:

Project A: The project costs Sh.9,920,000 and is expected to generate annual cash flows of Sh.2,400,000 with an estimated residual value of Sh.1,180,000.

Project B: The project costs Sh.4,800,000 and is expected to generate annual cash flows of Sh.1,200,000 with an estimated residual value of Sh.405,000.

The company's cost of capital is 14% per annum.

Required:

- (i) Payback period for each project. (4 marks)
- (ii) Net present value (NPV) of each project. (4 marks)
- (iii) Advise the management of Banita Limited on the project to undertake under each of the investment valuation methods in (c) (i) and (c) (ii) above. (2 marks)

(Total: 20 marks)

QUESTION FIVE

(a) In relation to Islamic Finance, distinguish between the following terminologies:

- (i) Istna and salam. (2 marks)
- (ii) Ijara and sukuk. (2 marks)
- (iii) Mudhaaraba and mushaaraka. (2 marks)

(b) Explain three methods of listing a company at the Securities Exchange. (6 marks)

(c) Blaze Ltd. requires 20,000 units of a component "Y" in its manufacturing process in the coming year which costs Sh.50 each. The items are available locally and hence the lead time is one week. Each order costs Sh.20 to prepare and process while the holding cost is Sh.15 per unit per year for storage plus 10% of the purchase price as opportunity cost.

Required:

- (i) Optimal quantity of the component "Y" to be ordered in each order. (4 marks)
- (ii) The re-order level. (Assume 50 weeks in a year). (3 marks)
- (iii) The number of orders to be placed per year. (1 mark)

(Total: 20 marks)

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Present Value Interest factor of 1 Received at the End of n Periods at r Percent:

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

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	24%	25%	30%	
1	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9346	0.9259	0.9174	0.9091	0.9009	0.8929	0.8850	0.8772	0.8696	0.8621	0.8548	0.8476	0.8333	0.8065	0.8000	0.7692
2	0.9803	0.9612	0.9426	0.9246	0.9070	0.8900	0.8734	0.8573	0.8417	0.8264	0.8116	0.7972	0.7831	0.7695	0.7561	0.7432	0.7308	0.7189	0.6944	0.6504	0.6400	0.5917
3	0.9706	0.9423	0.9151	0.8890	0.8638	0.8396	0.8163	0.7938	0.7722	0.7513	0.7312	0.7118	0.6931	0.6750	0.6575	0.6407	0.6246	0.6092	0.5745	0.5120	0.4552	0.3501
4	0.9610	0.9238	0.8885	0.8548	0.8227	0.7921	0.7629	0.7350	0.7084	0.6830	0.6587	0.6355	0.6133	0.5921	0.5718	0.5523	0.5336	0.5156	0.4723	0.4096	0.3501	0.2693
5	0.9515	0.9057	0.8626	0.8219	0.7835	0.7473	0.7130	0.6806	0.6499	0.6209	0.5935	0.5674	0.5428	0.5194	0.4972	0.4761	0.4559	0.4366	0.3841	0.3141	0.2577	0.1893
6	0.9420	0.8880	0.8375	0.7903	0.7462	0.7050	0.6663	0.6302	0.5963	0.5645	0.5346	0.5066	0.4803	0.4556	0.4323	0.4104	0.3899	0.3702	0.3089	0.2321	0.1761	0.1302
7	0.9327	0.8706	0.8131	0.7599	0.7102	0.6651	0.6227	0.5835	0.5470	0.5132	0.4817	0.4523	0.4251	0.3996	0.3759	0.3538	0.3330	0.3136	0.2436	0.1789	0.1326	0.0983
8	0.9235	0.8535	0.7894	0.7307	0.6768	0.6274	0.5820	0.5403	0.5019	0.4665	0.4339	0.4039	0.3762	0.3506	0.3269	0.3050	0.2846	0.2656	0.1973	0.1332	0.0879	0.0643
9	0.9143	0.8368	0.7664	0.7026	0.6446	0.5919	0.5439	0.5002	0.4604	0.4241	0.3909	0.3606	0.3329	0.3075	0.2843	0.2630	0.2430	0.2243	0.1579	0.0943	0.0493	0.0363
10	0.9053	0.8203	0.7441	0.6756	0.6139	0.5584	0.5083	0.4632	0.4224	0.3855	0.3522	0.3220	0.2946	0.2697	0.2472	0.2267	0.2081	0.1906	0.1264	0.0630	0.0180	0.0145
11	0.8963	0.8043	0.7224	0.6496	0.5847	0.5268	0.4751	0.4289	0.3875	0.3505	0.3173	0.2875	0.2607	0.2366	0.2149	0.1954	0.1780	0.1616	0.1000	0.0370	0.0020	0.0015
12	0.8874	0.7885	0.7014	0.6246	0.5568	0.4970	0.4440	0.3971	0.3555	0.3188	0.2858	0.2567	0.2307	0.2076	0.1869	0.1685	0.1522	0.1369	0.0779	0.0150	0.0000	0.0000
13	0.8787	0.7730	0.6810	0.6006	0.5303	0.4688	0.4150	0.3677	0.3262	0.2897	0.2575	0.2292	0.2042	0.1821	0.1625	0.1452	0.1299	0.1156	0.0589	0.0050	0.0000	0.0000
14	0.8700	0.7579	0.6611	0.5775	0.5051	0.4423	0.3878	0.3405	0.2992	0.2633	0.2320	0.2046	0.1807	0.1597	0.1413	0.1252	0.1100	0.0958	0.0414	0.0000	0.0000	0.0000
15	0.8613	0.7430	0.6419	0.5553	0.4810	0.4173	0.3624	0.3152	0.2745	0.2394	0.2090	0.1827	0.1599	0.1401	0.1229	0.1079	0.0937	0.0804	0.0281	0.0000	0.0000	0.0000
16	0.8528	0.7284	0.6232	0.5339	0.4581	0.3936	0.3387	0.2919	0.2519	0.2176	0.1883	0.1631	0.1415	0.1229	0.1069	0.0930	0.0804	0.0688	0.0180	0.0000	0.0000	0.0000
17	0.8444	0.7142	0.6050	0.5134	0.4363	0.3714	0.3166	0.2703	0.2311	0.1978	0.1696	0.1456	0.1252	0.1078	0.0929	0.0802	0.0688	0.0584	0.0080	0.0000	0.0000	0.0000
18	0.8360	0.7002	0.5874	0.4936	0.4155	0.3503	0.2959	0.2502	0.2120	0.1799	0.1528	0.1300	0.1108	0.0946	0.0808	0.0691	0.0596	0.0500	0.0000	0.0000	0.0000	0.0000
19	0.8277	0.6864	0.5703	0.4746	0.3957	0.3305	0.2765	0.2317	0.1945	0.1635	0.1377	0.1161	0.0981	0.0829	0.0703	0.0596	0.0500	0.0414	0.0000	0.0000	0.0000	0.0000
20	0.8195	0.6730	0.5537	0.4564	0.3769	0.3118	0.2584	0.2145	0.1784	0.1486	0.1240	0.1037	0.0868	0.0728	0.0611	0.0514	0.0428	0.0352	0.0000	0.0000	0.0000	0.0000
21	0.8114	0.6598	0.5375	0.4388	0.3589	0.2942	0.2415	0.1987	0.1637	0.1351	0.1117	0.0926	0.0768	0.0638	0.0531	0.0443	0.0367	0.0300	0.0000	0.0000	0.0000	0.0000
22	0.8034	0.6468	0.5219	0.4220	0.3418	0.2775	0.2257	0.1839	0.1502	0.1228	0.1007	0.0826	0.0680	0.0560	0.0462	0.0382	0.0314	0.0256	0.0000	0.0000	0.0000	0.0000
23	0.7954	0.6342	0.5067	0.4057	0.3256	0.2618	0.2109	0.1703	0.1378	0.1117	0.0907	0.0738	0.0601	0.0491	0.0402	0.0329	0.0261	0.0203	0.0000	0.0000	0.0000	0.0000
24	0.7876	0.6217	0.4919	0.3901	0.3101	0.2470	0.1971	0.1577	0.1264	0.1015	0.0817	0.0659	0.0532	0.0431	0.0349	0.0284	0.0226	0.0176	0.0000	0.0000	0.0000	0.0000
25	0.7798	0.6095	0.4776	0.3751	0.2953	0.2330	0.1842	0.1460	0.1160	0.0923	0.0736	0.0588	0.0471	0.0378	0.0304	0.0245	0.0195	0.0145	0.0000	0.0000	0.0000	0.0000
30	0.7419	0.5521	0.4120	0.3083	0.2314	0.1741	0.1314	0.0994	0.0754	0.0573	0.0437	0.0334	0.0256	0.0196	0.0151	0.0116	0.0084	0.0056	0.0000	0.0000	0.0000	0.0000
35	0.7059	0.5000	0.3554	0.2534	0.1813	0.1301	0.0937	0.0676	0.0490	0.0356	0.0259	0.0189	0.0139	0.0102	0.0075	0.0055	0.0037	0.0020	0.0000	0.0000	0.0000	0.0000
36	0.6989	0.4902	0.3450	0.2437	0.1727	0.1227	0.0875	0.0626	0.0449	0.0323	0.0234	0.0169	0.0123	0.0089	0.0065	0.0048	0.0034	0.0020	0.0000	0.0000	0.0000	0.0000
40	0.6717	0.4529	0.3066	0.2083	0.1420	0.0972	0.0668	0.0460	0.0318	0.0221	0.0154	0.0107	0.0075	0.0053	0.0037	0.0026	0.0017	0.0010	0.0000	0.0000	0.0000	0.0000
50	0.6080	0.3715	0.2281	0.1407	0.0872	0.0543	0.0339	0.0213	0.0134	0.0085	0.0054	0.0035	0.0022	0.0014	0.0009	0.0006	0.0004	0.0002	0.0000	0.0000	0.0000	0.0000

Present Value Interest factors for Annuity of 1 Discounted at r Percent for n Periods:

$$PVIFA_{r,n} = [1 - 1/(1+r)^n] / r$$

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	20%	24%	25%	30%
1	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9346	0.9259	0.9174	0.9091	0.9009	0.8929	0.8850	0.8772	0.8696	0.8621	0.8333	0.8065	0.8000	0.7692
2	1.9704	1.9416	1.9135	1.8861	1.8594	1.8334	1.8080	1.7833	1.7591	1.7355	1.7125	1.6901	1.6681	1.6467	1.6257	1.6052	1.5278	1.4568	1.4400	1.3609
3	2.9410	2.8839	2.8286	2.7751	2.7232	2.6730	2.6243	2.5771	2.5313	2.4869	2.4437	2.4018	2.3612	2.3216	2.2832	2.2459	2.1065	1.9813	1.9520	1.8161
4	3.9020	3.8077	3.7171	3.6299	3.5460	3.4651	3.3872	3.3121	3.2397	3.1699	3.1024	3.0373	2.9745	2.9137	2.8550	2.7982	2.5887	2.4043	2.3616	2.1662
5	4.8534	4.7135	4.5797	4.4518	4.3295	4.2124	4.1002	3.9927	3.8897	3.7908	3.6959	3.6048	3.5172	3.4331	3.3522	3.2743	2.9906	2.7454	2.6893	2.4356
6	5.7955	5.6014	5.4172	5.2421	5.0757	4.9173	4.7665	4.6229	4.4859	4.3553	4.2305	4.1114	3.9975	3.8887	3.7845	3.6847	3.3255	3.0205	2.9514	2.6427
7	6.7282	6.4720	6.2303	6.0021	5.7864	5.5824	5.3893	5.2064	5.0330	4.8684	4.7122	4.5638	4.4226	4.2883	4.1604	4.0386	3.6046	3.2423	3.1611	2.8021
8	7.6517	7.3255	7.0197	6.7327	6.4632	6.2098	5.9713	5.7466	5.5349	5.3369	5.1461	4.9676	4.7988	4.6389	4.4873	4.3436	3.8372	3.4212	3.3289	2.9247
9	8.5660	8.1622	7.7861	7.4353	7.1078	6.8017	6.5152	6.2469	5.9952	5.7590	5.5370	5.3282	5.1317	4.9464	4.7716	4.6065	4.0310	3.5655	3.4631	3.0190
10	9.4713	8.9826	8.5302	8.1109	7.7217	7.3601	7.0236	6.7101	6.4177	6.1446	5.8892	5.6502	5.4262	5.2161	5.0188	4.8332	4.1925	3.6819	3.5705	3.0915
11	10.368	9.7868	9.2526	8.7605	8.3064	7.8869	7.4987	7.1390	6.8052	6.4951	6.2065	5.9377	5.6869	5.4527	5.2337	5.0286	4.3271	3.7757	3.6564	3.1473
12	11.255	10.575	9.9540	9.3851	8.8633	8.3838	7.9427	7.5361	7.1607	6.8137	6.4924	6.1944	5.9176	5.6603	5.4206	5.1971	4.4392	3.8514	3.7251	3.1903
13	12.134	11.348	10.635	9.9856	9.3936	8.8527	8.3577	7.9038	7.4869	7.1034	6.7499	6.4235	6.1218	5.8424	5.5831	5.3423	4.5327	3.9124	3.7801	3.2233
14	13.004	12.106	11.296	10.563	9.8986	9.2950	8.7455	8.2442	7.7862	7.3667	6.9819	6.6282	6.3025	6.0021	5.7245	5.4675	4.6106	3.9616	3.8241	3.2487
15	13.865	12.849	11.938	11.118	10.380	9.7122	9.1079	8.5595	8.0607	7.6061	7.1909	6.8109	6.4624	6.1422	5.8454	5.5755	4.6755	4.0013	3.8593	3.2682
16	14.718	13.578	12.561	11.652	10.838	10.106	9.4466	8.8514	8.3126	7.8237	7.3792	6.9740	6.6039	6.2651	5.9542	5.6685	4.7296	4.0333	3.8874	3.2832
17	15.562	14.292	13.166	12.166	11.274	10.477	9.7632	9.1216	8.5436	8.0216	7.5488	7.1196	6.7291	6.3729	6.0472	5.7487	4.7746	4.0591	3.9099	3.2948
18	16.398	14.992	13.754	12.659	11.690	10.828	10.059	9.3719	8.7556	8.2014	7.7016	7.2497								