

## ATD LEVEL II

#### **FUNDAMENTALS OF FINANCE**

TUESDAY: 21 May 2019.

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 the following terms as used in finance:

(i) Financial intermediaries. (2 marks)

(ii) Risk-return trade off. (2 marks)

(iii) Stakeholder management. (2 marks)

(b) Describe three motives of holding inventory. (6 marks)

(c) Zeltex Ltd.'s shares cost Sh.120 each and pay no dividends. The possible prices that the company's shares might sell for at the end of the year with the respective probabilities are provided below:

Price	Probability	No.
Sh.		. 7
115	0.10	neje.
120	0.10	* No
125	0.20	"itent"
130	0.30	onle
135	0.20	200
140	0.10	de la companya de la

## Required:

(i) The expected return of the company's shares.

(4 marks)

(ii) The standard deviation of return.

(4 marks)

(Total: 20 marks)

# **QUESTION TWO**

(a) Firms strive to achieve objectives which at times overlap with each other and in some cases conflict with each other.

With reference to the above statement, discuss four overlaps that could arise in the course of a firm's effort to achieve its objectives.

(8 marks)

(b) Umbo Ltd. is evaluating two mutually exclusive projects, A and B. Both projects are expected to cost Sh.8 million. However, an additional Sh.1 million investment in working capital will be required if the firm were to invest in project A and Sh.1.5 million for Project B.

Project A has an estimated useful life of five years while Project B has an estimated useful life of 4 years. Estimated net operating cash flows (NOCF) from each investment in each year are given as follows:

Year	PRO	JECT
	$\mathbf{A}$	В
	Sh."000"	Sh."000"
1 .	2,500	3,500
2	3,000	3,500
3	3,500	3,500
4	2,800	3,500
5	2,000	-

#### Additional information:

- 1. The resale values for Project A and Project B at the end of their useful life are estimated at Sh.200,000 and Sh.300,000 respectively.
- 2. Cost of capital is projected at 14%.

### Required:

(i) Net present value (NPV) for Project A and Project B.

(10 marks)

(ii) Advise the company on which project to undertake.

(2 marks)

(Total: 20 marks)

## **QUESTION THREE**

(a) Describe four forms of dividend payments that a company could utilise to pay its shareholders.

(8 marks)

(b) Mazeras Ltd. is considering an investment of Sh.20,000 that will generate a perpetual after tax annual cash flow of Sh.2,000. The required rate of return is 8%.

# Required:

(i) The investment's profitability Index (PI).

(3 marks)

- (ii) Advise the company whether to undertake the investment, based on the profitability index obtained in (b) (i) above. (2 marks)
- (c) Explain two advantages of using private placement when issuing long-term debt.

(4 marks)

(d) John Malech deposits the following amounts at the end of each year in a savings account paying an annual interest rate of 4% compounded semi annually:

Year	End of year deposits (Sh.)
1	4,000
2	8,000
3	7,000
4	10,000 ·

## Required:

The value of the account at the end of year A.

(3 marks)

(Total: 20 marks)

# **QUESTION FOUR**

- (a) In relation to financial markets, outline four benefits that could accrue to investors from using the Central Depository System in securities trading (4 marks)
- (b) Kingstone Omondi plans to make a constant deposit into his savings account at the start of each year over a period of four years.

He expects the sum deposited to earn interest at the rate of 8% each year compounded annually. Omondi expects to raise Sh.1,500,000 after four years in order to finance a capital investment.

#### Required:

The annual deposit into his savings account.

(4 marks)

(c) Ushindi Ltd.'s capital structure which is considered optimal, is as follows:

	Sh."000"
Ordinary share capital (Sh.10 Par value)	40,000
Reserves	20,000
12% Debenture (Sh.100 Par value)	_40,000
	100.000

The firm's management are considering raising an additional Sh.20 million to finance an expansion programme. The company expects to generate Sh.2 million from internal sources.

#### Additional information:

- 1. The firm will issue new ordinary shares at Sh.25 each to raise desired external equity. A floatation cost of Sh.2 per share will be incurred.
- 2. The company will issue new 14% redeemable debentures to raise desired debt capital. The issue price will be at Sh.90 subject to a floatation cost of Sh.10 per unit issued. The debentures will mature after 10 years. Par value of each unit is Sh.100.
- 3. Corporation tax rate applicable is 30%.
- The most recent ordinary dividend paid is Sh.3.0 per share, while future dividends shall grow at the rate of 5% each year in perpetuity.

## Required:

The cost of retained profit. (i)

(2 marks)

(ii) The cost of new ordinary share capital. (2 marks)

(iii) The cost of new 14% redeemable debt. (3 marks)

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

(5 marks) (Total: 20 marks)

## **QUESTION FIVE**

Explain the following principles of Islamic Banking and Finance: (a)

(i)

(2 marks)

Loanking and Finance:

Concoraing an interest (Riba).

Investing in businesses involved in prohibited activities (Haram).

Speculation (Maisir).

Uncertainty and risk (C) (ii)

(2 marks)

(iii)

(2 marks)

(iv)

(2 marks)

Summarise four roles of the Capital Markets Authority (CMA) or similar authority in your country. (b)

(4 marks)

Baraka Ltd. has provided the following forecasted financial information for the year ending 30 June 2019: (c)

	Sh."000"
Sales – (all credit)	7,200
Average trade receivables	612
Finished goods	400
Work-in-progress (WIP)	700
Raw materials (balance held)	300
Trade payables	260

The gross profit margin is 25% on sales. Raw materials are 80% of the cost of sales. All purchases are also made on

Assume that the calendar year has 365 days and that inventory levels are constant throughout the year.

#### Required:

Calculate the following:

(i) Raw material holding period. (2 marks)

(ii) Trade payable days. (1 mark)

(iii) Work-in-progress (WIP) period. (1 mark)

(iv) Finished goods holding period. (I mark)

(v) Trade receivables collection period. (1 mark)

(vi) Cash operating cycle (2 marks)

(Total: 20 marks)

AD24 Page 3 Out of 3

# 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%	20
1	.9901	.9804	.9709	.9615	.9524	.9434	.9346	9259	.9174	.9091	.8929	8772	.8696	.8621	.8475					36
2	.9803	.9612	.9426	.9246	.9070	.8900	.8734	.8573	.8417	.8264	.7972	.7695	.7561	.7432		.8333	.8065	.7813	.7576	.73
3	.9706	.9423	.9151	.8890	.8638	.8396	8163	.7938	.7722	.7513	.7118	.6750	.6575	.6407	.7182 .6086	.6944	.6504	.6104	.5739	.54
4	.9610	.9238	.8885	.8548	.8227	.7921	.7629	.7350	.7084	.6830	.6355	.5921	.5718	.5523	.5158	.5787	.5245	.4768	.4348	.39
5	.9515	.9057	.8626	.8219	.7835	.7473	.7130	.6806	.6499	.6209	.5674	5194	.4972	.4761	.4371	.4823 .4019	.4230 .3411	.3725 .2910	.3294	.29
															.4011	.4013	.5411	.2310	.2495	.21
6	.9420	.8880	.8375	.7903	.7462	.7050	.6663	.6302	.5963 `	.5645	.5066	.4556	.4323	.4104	.3704	.3349	.2751	.2274	.1890	
7	.9327	.8706	8131	.7599	.7107	.6651	.6227	.5835	.5470	.5132	.4523	.3996	.3759	.3538	.3139	.2791	.2218	:1776	.1432	.15
8	.9235	.8535	.7894	.7307	.6768	.6274	.5820	.5403	.5019	.4665	.4039	.3506	3269	.3050	.2660	.2326	1789	.1388	.1085	.1:
9	.9143	.8368	.7664	.7026	.6446	.5919	.5439	.5002	.4604	.4241	.3606	3075	.2843	.2630	.2255	.1938	.1443	.1084	.0822	.06
10	.9053	.8203	.7441	.6756	.6139	.5584	.5083	.4632	.4224	.3855	.3220	.2697	.2472	.2267	.1911	.1615	.1164	.0847	.0623	.04
																		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	.0020	.0-
. 11	.8963	.8043	7224	.6496	.5847	.5268	.4751	.4289	.3875	.3505	.2875	.2366	.2149	.1954	.1619	.1346	.0938	.0662	.0472	.0:
12	.8874	.7885	.7014	.6246	.5568	.4970	.4440	.3971	3555	.3186	.2567	.2076	.1869	1685	.1372	.1122	.0757	.0517	.0357	.0:
13	.8787	.7730	.6810	.6006	.5303	.4688	.4150	.3677	.3262	.2897	.2292	.1821	.1625	.1452	.1163	.0935	.0610	.0404	.0271	.0
14	.8700	.7579	.6611	.5775	.5051	.4423	.3878	.3405	.2992	.2633	.2046	.1597	.1413	.1252	.0985	.0779	.0492	.0316	.0205	.0
15	.8613	.7430	.6419	.5553	.4810	.4173	.3624	3152	.2745	.2394	.1827	1401	.1229	.1079	.0835	.0649	.0397	.0247	.0155	0
16	.8528	.7284	.6232	.5339	.4581	.3936	2227													
17	.8444	.7142	.6050	.5134	.4363	.3714	.3387	.2919	.2519	.2176	.1631	.1229	1069	.0930	.0708	.0541	.0320	.0193	.0118	.00
18	.8360	7002	.5674	.4936	.4155	.3503	.3166 .2959	.2703	.2311	.1978	.1456	.1078	.0929	.0802	.0600	<b>Q</b> 451	.0258	.0150	.0089	.00
19	.8277	.6864	.5703	.4746	.3957	.3305	.2765	2502	.2120	.1799	.1300	.0946	.0808	.0691	.0508	,	.0208	.0118	.0068	.00
20	.8195	.6730	.5537	.4564	.3769	.3118	.2584	.2317	.1945	.1635	.1161	.0829	.0703	.0596	.0431	.0313	.0168	.0092	.0051	.00
-			.0001	. 4004	.5705	.5110	.2304	.2145	.1784	.1486	1037	.0728	.0611	.0514	0365	.0261	.0135	.0072	.0039	.00
25	7798	.6095	.4776	.3751	.2953	.2330	.1842	.1460	.1160	.0923	.0588	.0378	.0304	.0245	0160	0105	0046	0004	0040	
30	.7419	.5521	.4120	.3083	.2314	.1741	.1314	.0994	.0754	.0573	.0334	.0196		0116	.0160	.0105 .0042	.0046	.0021	.0010	00
40	.6717	.4529	.3066	.2083	.1420	.0972	.0668	0460	.0318	.0221	.0107	.0053	.00370		.0070		.0016	.0006	.0002	.00
50	.6080	.3715	.2281	.1407	.0872	.0543	.0339	.0213	.0134	.0085	.0035	.0033	.003717	.0006	.0003	.0007	.0002	.0001		
60	.5504	.3048	.1697	.0951	.0535	.0303	.0173	.0099	.0057	.0033	.0033		.0002	.0001	.0003	.0001	•	•	-	
												.5554	٢٥٠٥	.0001	• •	•	• *	•		

The factor is zero to four decimal places

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

PVIF<sub>r1</sub> = 
$$\sum_{t=1}^{n} \frac{1}{(1+t)^t} = \frac{1-\frac{1}{(1+t)^n}}{1-\frac{1}{(1+t)^n}}$$

					`	,		810											
payments	1%	2%	3%	4%	5%	6%	9%	8%	9%	10%	12%	1.49	450						
1	0.9901	0.9804	0.9709	0,9615	0.9524	0.0404	<del></del>				1276	14%	15%	16%	18%	20%	24%	28%	32%
2	1.9704	1.9416	1.9135				0.9346					0.8772	0.8696	0.8621	0.8475	0.8333	0.8065	0.7813	0.7576
3	2,9410		2.8286				1.8080						1.6257	1.6052	1.5656	1.5278		1.3916	1.3315
4	3.9020	3.8077	3.7171			3.4651							2.2832	2.2459	2.1743	2.1065	1.9813	1.8684	1.7663
5	4.8534		4.5797					3.3121						2.7982	2.6901	2.5887	2.4043	2.2410	2.0957
				4.4510	7.32	4.2124	4.1002	3.9927	3.8897	3.7908	3.6048	3.4331	3.3522	3.2743	3.1272	2.9906	2.7454		
6	5.7955	5.6014	5.4172	5.2421	50757	4 9173	A 7006	4 6000	4 40.50										2.0.02
7	6.7282	6.4720	6.2303	6.0021	5.7864	5.5824			4.4859	4.3553	4.1114		3.7845	3.6847	3.4976	3.3255	3.0205	2.7594	2.5342
8	7.6517	7.3255	7.0197		6.4632				5.0330	4.8684	4.5638		4.1604	4.0386	3.8115	3.6046	3.2423	2.9370	2.6775
9	8.5660	8.1622		7.4353		6.8017				5.3349	4.9676		4.4873	4.3436	4.0776	3.8372	3.4212	3.0758	2.7860
10	9.4713	8.9826			7.7217							4.9464	4.7716	4.6065	4.3030	4.0310	3.5655	3.1842	2.8681
						1.5001	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	£ 9052	6.4951									
12	11.2551	10.5753	9.9540	9.3851	8.8633	8.3838	7.9427		7.1607				5.2337	5.0286	4.6560	4.3271	3.7757	3.3351	2.9776
13	12.1337	11.3484	10.6350	9.9856	9.3936	8.8527			7.4869		6.1944	5.6603	5.4206	5.1971	4.7932	4.4392	3.8514	3.3868	3.0133
14	13.0037	12.1062	11.2961	10.5631		9.2950		-	7.7862	7.1034	6.4235	5.8424	5.5831	5.3423	4.9095	4.5327	3.9124	3.4272	3.0404
15	13.8651	12.8493	11.9379	11,1184	10.3797	9 7122	9 1079	8.5595			6.6282	6.0021	5.7245	5.4675	5.0081	4.6106	3.9616	3.4587	3.0609
						0.7122	3.1073	0.5555	0.0607	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	B 3126	7.8237	6.0740	2 2 2 2 4							
17	15.5623	14.2919	13.1661	12.1657	11.2741	10.4773	9.7632	9 1216	8.5436		6.9740 7.1196	6.2651	5.9542	5.6685	5.1624	4.7296	4.0333	3.5026	3.0882
18	16.3983	14.9920	13.7535	12.6593	11.6896	10.8276	10.0591	9 3719	3.7556		7.1196	6.3729	6.0472	5.7487	5.2223	4.7746	4.0591	3.5177	3.0971
19	17.2260	15.6785	14.3238	13.1339	12.0853	11,1581	10 3356	9.6036	R 9504	0.3640	7.2000	6.4674	6.1280	5.8178	5.2732		4.0799	3.5294	3.1039
20	18.0456	16.3514	14.8775	13.5903	12.4622	11.4699	10.5940	9.8181	9 1 285	9.5136	7.3658	6.5504	6.1982	5.8775	5.3162		4.0967	3.5386	3.1090
												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	C 4544						
50	23.0011	44.3363	19,6004	17.2920	15.3725	13.7648	12 4090	11 2579	10 2727	0.4000	8.0552	7.0027	6.4641	6.0971	5.4669	4.9476	4.1474		3.1220
40	32.0347	21.3000	23,1148	19.7928	17,1591	15.0463	13 3317	11 9246	10 7574	0.7704	8.2438	7.1050	6.5660	6.1772	5.5168	4.9789	4.1601		3 1242
30	33.1361	31.4236	25,7298	21.4822	18.2559	15.7619	13 8007	12 2335	10 9517	0.0440	0.2045	7.1030	6.6418	6.2335		4.9966	4.1659	3.5712	3.1250
60	44.9550	34.7609	27.6756	22.6235	18.9293	16.1614	14.0392	12.3766	11.0480	9.9672	P 3240	7.1327	6.6605	6.2463		4.9395	4.1666		3.1250
								1		2.50,2	U.UZ4U	7.1401	6.6651	6.2402	5.5553	4.9999	4.1667	3.5714	3 1250