

**Semester: Jan 24 to Mar 24**

**Maximum Marks: 50      Examination: ESE Examination      Date: 27/03/2024**  
**Duration: 10:30 AM to 1:30 PM**

<b>Programme code: 01</b> <b>Programme: MBA</b>	<b>Class: FY</b>	<b>Semester/Trimester: III</b>
<b>College: K. J. Somaiya Institute of Management</b>	<b>Name of the department/Section/Center: Finance and Law</b>	
<b>Course Code: 217P01C304</b>	<b>Name of the Course: Financial Management</b>	
<b>Instructions:</b> <ul style="list-style-type: none"><li>• <b>Question Number 1 is compulsory. Attempt any 4 of the remaining questions.</b></li><li>• <b>All subparts of the question must be solved together.</b></li><li>• <b>All working must form part of the solution.</b></li><li>• <b>Make suitable assumptions wherever necessary.</b></li></ul>		

<b>Question No.</b>		<b>Max. Marks</b>																					
<b>1.</b>	<p>The financial statements of Matrix Ltd. for 2 consecutive years are given below:</p> <p>Profit and Loss A/c for the year ending 31<sup>st</sup> March, 2023:      ₹ in million</p> <table border="1"><thead><tr><th></th><th>2023</th><th>2022</th></tr></thead><tbody><tr><td>Revenue from operations</td><td>1065</td><td>950</td></tr><tr><td>Cost of Goods Sold</td><td>805</td><td>720</td></tr><tr><td>Gross Profit</td><td>260</td><td>230</td></tr><tr><td>Operating expenses</td><td>40</td><td>35</td></tr><tr><td>Profit Before Depreciation, Interest and Tax</td><td>220</td><td>195</td></tr><tr><td>Depreciation</td><td>50</td><td>40</td></tr></tbody></table>		2023	2022	Revenue from operations	1065	950	Cost of Goods Sold	805	720	Gross Profit	260	230	Operating expenses	40	35	Profit Before Depreciation, Interest and Tax	220	195	Depreciation	50	40	<b>10</b>
	2023	2022																					
Revenue from operations	1065	950																					
Cost of Goods Sold	805	720																					
Gross Profit	260	230																					
Operating expenses	40	35																					
Profit Before Depreciation, Interest and Tax	220	195																					
Depreciation	50	40																					

Profit Before Interest and Tax	170	155
Interest	35	30
Profit Before Tax	135	125
Tax	50	45
Profit After Tax	85	80
Dividends	35	30
Retained Earnings	50	50

Balance Sheet as at 31<sup>st</sup> March, 2023:

₹ in million

	2023	2022
<b>Equity and Liabilities</b>		
Equity share capital (Par value of ₹ 10)	125	125
Reserves & Surplus	380	330
Long term loans	190	205
Current liabilities	240	193
<b>Total Equity and liabilities</b>	<b>935</b>	<b>853</b>
<b>Assets</b>		
Fixed Assets	550	495
Long term Investments	20	20
Current Assets	365	338
<b>Total Assets</b>	<b>935</b>	<b>853</b>

Calculate the relevant ratios to evaluate the performance of the company on parameters such as profitability, liquidity, solvency, efficiency and shareholders's perspective. Market price per share is Rs. 1550 for 2022 and Rs. 1870 for 2023.

2

ABC Ltd is considering a project for introducing a new product line in the market. For evaluation purpose we will consider the life of the project to be 5 years. The cost of equipment is 20 Lakhs and the working capital of Rs 4 Lakhs. The sales forecast for 5 years is as follows:

10

Years	Units sold every year
1	1,60,000
2	2,40,000
3 to 5 years	6,00,000 units p.a

Selling price per unit is 30. The CMR(Contribution Margin Ratio) is 35%.Fixed cost excluding depreciation is Rs 2,00,000 p.a. Depreciation has to be calculated as per SLM method. The salvage value of the asset is 4 lakh. Tax Rate applicable for this project is 25%. Comment on the feasibility of the project based on NPV METHOD and the PI Method, taking cost of capital at 10%.

3 a

DCM Ltd had annual sales of 50,000 units at Rs 100 per unit. The company works for 50 weeks in a year.

The cost details of the company are as given below:

Cost elements	Unit cost (Rs)
Raw material	30
Labor	10

5

Overheads	20
Cost Per unit	60
Profit Per unit	40
Selling price per unit	100

The company has a practice of storing raw material for 4 weeks' requirement. The wages and other expenses are paid after a lag of 2 weeks. Further the debtors enjoy a credit of 10 weeks, and the company gets a credit of 4 weeks from the suppliers. The processing time is 2 weeks and finished goods inventory is maintained for 4 weeks.

WIP@50% completion stage.

From the above information prepare a working capital estimate allowing for 15% contingency

(b)

5

From the following information extracted from a manufacturing company, compute the operating cycle in days.

Period covered	360 Days
Average Period of credit by suppliers	8 Days
	Amount (Rs.'000)
Average total debtors outstanding	420
Raw material consumption	5800
Total Production cost	10880
Total cost of sales	10900
Sales for the year (credit)	15000
Value of Average stock maintained:	

	<table border="1"> <tr> <td>Raw material</td> <td>580</td> </tr> <tr> <td>Work in progress</td> <td>420</td> </tr> <tr> <td>Finished goods</td> <td>600</td> </tr> </table>	Raw material	580	Work in progress	420	Finished goods	600					
Raw material	580											
Work in progress	420											
Finished goods	600											
<b>4</b>	<p>A company has the following book value capital structure:</p> <table border="1"> <tr> <td>Equity capital (Rs.10 face value fully paid-up)</td> <td>Rs.10 crore</td> </tr> <tr> <td>13% Preference shares (Rs.100 face value, fully paid-up)</td> <td>Rs. 5 crore</td> </tr> <tr> <td>Retained earnings</td> <td>Rs. 30 crore</td> </tr> <tr> <td>12% Debentures (Rs.100 face value, fully paid-up)</td> <td>Rs. 20 crore</td> </tr> <tr> <td>10% Term Loans</td> <td>Rs. 15 crore</td> </tr> </table> <p>The earnings per equity share (EPS) for the next year is expected to be Rs.10 and the company maintains a dividend payout ratio of 40 per cent. Dividend is expected to grow at 6 per cent. The company's equity shares are currently trading at a price/earnings ratio of 6 times the next year's EPS. Preference shares are redeemable at par after 8 years and currently selling at Rs.80 per share. Debentures are redeemable after 5 years at a premium of 5 per cent and are currently selling at Rs.90 per debenture. The tax rate is 25 per cent. Calculate the weighted average cost of capital using (a) book value proportions and (b) market value proportions.</p>	Equity capital (Rs.10 face value fully paid-up)	Rs.10 crore	13% Preference shares (Rs.100 face value, fully paid-up)	Rs. 5 crore	Retained earnings	Rs. 30 crore	12% Debentures (Rs.100 face value, fully paid-up)	Rs. 20 crore	10% Term Loans	Rs. 15 crore	<b>10</b>
Equity capital (Rs.10 face value fully paid-up)	Rs.10 crore											
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12% Debentures (Rs.100 face value, fully paid-up)	Rs. 20 crore											
10% Term Loans	Rs. 15 crore											
<b>5</b>	<p>a. Excel Ltd is examining the question of relaxing its credit policy. It sells at present 25,000 units at a price of Rs. 100 per unit, the variable cost per unit is Rs. 80 and average cost per unit at the current sales volume is Rs. 90. All the sales are on</p>	<b>5</b>										

	<p>credit, the average collection period being 30 days. Collection cost is Rs. 10,000 and bad debts is 1%. A relaxed credit policy is expected to increase sales by 20 per cent and the average age of receivables to 60 days. Collection cost also increased to Rs. 30,000 and bad debt will be 2%. Assuming 15 percent return, should the firm relax its credit policy? Assume 360 days in a year for calculation purposes.</p> <p><b>b.</b> At the time of his retirement, Mr. Ajay is given a choice between two alternatives (a) an Annual pension of Rs. 10,000 as long as he lives (b) Rs. 1,00,000 One time payment at the end of 6 years. If Mr. Ajay expects to live for 15 Years and the interest rate is 15%, which option appears more attractive?</p>	<b>5</b>
<b>6</b>	<p>Attempt <b>ANY TWO</b> from the following:</p> <ul style="list-style-type: none"> <li>a. Describe the three broad areas of financial decision making</li> <li>b. Explain the various determinants of Working capital</li> <li>c. Describe the different techniques of capital budgeting with their advantages and disadvantages.</li> </ul>	<b>10</b>

TABLE A-3 The Present Value of One Rupee

Year	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	.990	.980	.971	.962	.952	.943	.935	.926	.917	.909
2	.980	.961	.943	.925	.907	.890	.873	.857	.842	.826
3	.971	.942	.915	.889	.864	.840	.816	.794	.772	.751
4	.961	.924	.888	.855	.823	.792	.763	.735	.708	.683
5	.951	.906	.863	.822	.784	.747	.713	.681	.650	.621
6	.942	.888	.837	.790	.746	.705	.666	.630	.596	.564
7	.933	.871	.813	.760	.711	.665	.623	.583	.547	.513
8	.923	.853	.789	.731	.677	.627	.582	.540	.502	.467
9	.914	.837	.766	.703	.645	.592	.544	.500	.460	.424
10	.905	.820	.744	.676	.614	.558	.508	.463	.422	.386
11	.896	.804	.722	.650	.585	.527	.475	.429	.388	.350
12	.887	.789	.701	.625	.557	.497	.444	.397	.356	.319
13	.879	.773	.681	.601	.530	.469	.415	.368	.326	.290
14	.870	.758	.661	.577	.505	.442	.388	.340	.299	.263
15	.861	.743	.642	.555	.481	.417	.362	.315	.275	.239
16	.853	.728	.623	.534	.458	.394	.339	.292	.252	.218
17	.844	.714	.605	.513	.436	.371	.317	.270	.231	.198
18	.836	.700	.587	.494	.416	.350	.296	.250	.212	.180
19	.828	.686	.570	.475	.396	.331	.277	.232	.194	.164
20	.820	.673	.554	.456	.377	.312	.258	.215	.178	.149
21	.811	.660	.538	.439	.359	.294	.242	.199	.164	.135
22	.803	.647	.522	.422	.342	.278	.226	.184	.150	.123
23	.795	.634	.507	.406	.326	.262	.211	.170	.138	.112
24	.788	.622	.492	.390	.310	.247	.197	.158	.126	.102
25	.780	.610	.478	.375	.295	.233	.184	.146	.116	.092
30	.742	.552	.412	.308	.231	.174	.131	.099	.075	.057
35	.706	.500	.355	.253	.181	.130	.094	.068	.049	.036
40	.672	.453	.307	.208	.142	.097	.067	.046	.032	.022
45	.639	.410	.264	.171	.111	.073	.048	.031	.021	.014
50	.606	.372	.228	.141	.087	.054	.034	.021	.013	.009

(Contd.)

TABLE A-3 The Present Value of One Rupee (Contd.)

Year	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%*
1	.901	.893	.885	.877	.870	.862	.855	.847	.840	.833
2	.812	.797	.783	.769	.756	.743	.731	.718	.706	.694
3	.731	.712	.693	.675	.658	.641	.624	.609	.593	.579
4	.659	.636	.613	.592	.572	.552	.534	.516	.499	.482
5	.593	.567	.543	.519	.497	.476	.456	.437	.419	.402
6	.535	.507	.480	.456	.432	.410	.390	.370	.352	.335
7	.482	.452	.425	.400	.376	.354	.333	.314	.296	.279
8	.434	.404	.376	.351	.327	.305	.285	.266	.249	.233
9	.391	.361	.333	.308	.284	.263	.243	.225	.209	.194
10	.352	.322	.295	.270	.247	.227	.208	.191	.176	.162
11	.317	.287	.261	.237	.215	.195	.178	.162	.148	.135
12	.286	.257	.231	.208	.187	.168	.152	.137	.124	.112
13	.258	.229	.204	.182	.163	.145	.130	.116	.104	.093
14	.232	.205	.181	.160	.141	.125	.111	.099	.088	.078
15	.209	.183	.160	.140	.123	.108	.095	.084	.074	.065
16	.188	.163	.141	.123	.107	.093	.081	.071	.062	.054
17	.170	.146	.125	.108	.093	.080	.069	.060	.052	.045
18	.153	.130	.111	.095	.081	.069	.059	.051	.044	.038
19	.138	.116	.098	.083	.070	.060	.051	.043	.037	.031
20	.124	.104	.087	.073	.061	.051	.043	.037	.031	.026
21	.112	.093	.077	.064	.053	.044	.037	.031	.026	.022
22	.101	.083	.068	.056	.046	.038	.032	.026	.022	.018
23	.091	.074	.060	.049	.040	.033	.027	.022	.018	.015
24	.082	.066	.053	.043	.035	.028	.023	.019	.015	.013
25	.074	.059	.047	.038	.030	.024	.020	.016	.013	.010
30	.044	.033	.026	.020	.015	.012	.009	.007	.005	.004
35	.026	.019	.014	.010	.008	.006	.004	.003	.002	.002
40	.015	.011	.008	.005	.004	.003	.002	.001	.001	.001
45	.009	.006	.004	.003	.002	.001	.001	.001	.000	.000
50	.005	.003	.002	.001	.001	.001	.000	.000	.000	.000

\*For present value at rates between 21% and 40%, refer to website. The address is: [www.mhhe.com/khan&jain5e](http://www.mhhe.com/khan&jain5e)



TABLE A-4 The Present Value of an Annuity of One Rupee

Year	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	.990	.980	.971	.962	.952	.943	.935	.926	.917	.909
2	1.970	1.942	1.913	1.886	1.859	1.833	1.808	1.783	1.759	1.736
3	2.941	2.884	2.829	2.775	2.723	2.673	2.624	2.577	2.531	2.487
4	3.902	3.808	3.717	3.630	3.546	3.465	3.387	3.312	3.240	3.170
5	4.853	4.713	4.580	4.452	4.329	4.212	4.100	3.993	3.890	3.791
6	5.795	5.601	5.417	5.242	5.076	4.917	4.767	4.623	4.486	4.355
7	6.728	6.472	6.230	6.002	5.786	5.582	5.389	5.206	5.033	4.868
8	7.652	7.326	7.020	6.733	6.463	6.210	5.971	5.747	5.535	5.335
9	8.566	8.162	7.786	7.435	7.108	6.802	6.515	6.247	5.995	5.759
10	9.471	8.983	8.530	8.111	7.722	7.360	7.024	6.710	6.418	6.145
11	10.368	9.787	9.253	8.760	8.306	7.887	7.499	7.139	6.805	6.495
12	11.255	10.575	9.954	9.385	8.863	8.384	7.943	7.536	7.161	6.814
13	12.134	11.348	10.635	9.986	9.394	8.853	8.358	7.904	7.487	7.103
14	13.004	12.106	11.296	10.563	9.899	9.295	8.746	8.244	7.786	7.367
15	13.865	12.849	11.938	11.118	10.380	9.712	9.108	8.560	8.061	7.606
16	14.718	13.578	12.561	11.652	10.838	10.106	9.447	8.851	8.313	7.824
17	15.562	14.292	13.166	12.166	11.274	10.477	9.763	9.122	8.544	8.022
18	16.398	14.992	13.754	12.659	11.690	10.828	10.059	9.372	8.756	8.201
19	17.226	15.679	14.324	13.134	12.085	11.158	10.336	9.604	8.950	8.365
20	18.046	16.352	14.878	13.590	12.462	11.470	10.594	9.818	9.129	8.514
21	18.857	17.011	15.415	14.029	12.821	11.764	10.836	10.017	9.292	8.649
22	19.661	17.658	15.937	14.451	13.163	12.042	11.061	10.201	9.442	8.772
23	20.456	18.292	16.444	14.857	13.489	12.303	11.272	10.371	9.580	8.883
24	21.244	18.914	16.936	15.247	13.799	12.550	11.469	10.529	9.707	8.985
25	22.023	19.524	17.413	15.622	14.094	12.783	11.654	10.675	9.823	9.077
30	25.808	22.397	19.601	17.292	15.373	13.765	12.409	11.258	10.274	9.427
35	29.409	24.999	21.487	18.665	16.374	14.498	12.948	11.655	10.567	9.644
40	32.835	27.356	23.115	19.793	17.159	15.046	12.332	11.925	10.757	9.779
45	36.095	29.490	24.519	20.720	17.774	15.456	13.606	12.108	10.881	9.863
50	39.197	31.424	25.730	21.482	18.256	15.762	13.801	12.234	10.962	9.915

(Contd.)

TABLE A-4 The Present Value of an Annuity of One Rupee (Contd.)

Year	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%*
1	901	893	885	877	870	862	855	847	850	833
2	1713	1690	1668	1647	1626	1605	1585	1566	1547	1528
3	2444	2402	2361	2322	2283	2246	2210	2174	2140	2106
4	3102	3037	2974	2914	2855	2798	2743	2690	2639	2589
5	3696	3605	3517	3433	3352	3274	3199	3127	3058	2991
6	4231	4111	3998	3889	3784	3685	3589	3498	3410	3326
7	4712	4564	4423	4288	4160	4039	3922	3812	3706	3605
8	5146	4968	4799	4639	4487	4344	4207	4078	3954	3837
9	5537	5328	5132	4946	4772	4607	4451	4303	4163	4031
10	5889	5650	5426	5216	5019	4833	4659	4494	4339	4192
11	6207	5938	5687	5453	5234	5029	4836	4656	4487	4327
12	6492	6194	5918	5660	5421	5197	4988	4793	4611	4439
13	6750	6424	6122	5842	5583	5342	5118	4910	4715	4533
14	6982	6628	6303	6002	5724	5468	5229	5008	4802	4611
15	7191	6811	6462	6142	5847	5575	5324	5092	4876	4675
16	7379	6974	6604	6265	5954	5669	5405	5162	4938	4730
17	7549	7120	6729	6373	6047	5749	5475	5222	4990	4775
18	7702	7250	6840	6467	6128	5818	5534	5273	5033	4812
19	7839	7366	6938	6550	6198	5877	5585	5316	5070	4843
20	7963	7469	7024	6623	6259	5929	5628	5353	5101	4870
21	8075	7562	7102	6687	6312	5973	5665	5384	5127	4891
22	8176	7645	7170	6743	6359	6011	5696	5410	5149	4909
23	8266	7718	7230	6792	6399	6044	5723	5432	5167	4925
24	8348	7784	7283	6835	6434	6073	5747	5451	5182	4937
25	8422	7843	7330	6873	6464	6097	5766	5467	5195	4948
30	8694	8055	7496	7003	6566	6177	5829	5517	5235	4979
35	8855	8176	7586	7070	6617	6215	5858	5539	5251	4992
40	8951	8244	7634	7105	6642	6233	5871	5548	5258	4997
45	9008	8283	7661	7123	6654	6242	5877	5552	5261	4999
50	9042	8305	7675	7133	6661	6246	5880	5554	5262	4999

\*For present value of annuity at rates between 21% and 40%, refer to website. The address is: [www.mhhe.com/khan&jain5e](http://www.mhhe.com/khan&jain5e)