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Time allowed : 3 hours

Maximum marks : 100

Total number of questions : 7

Total number of printed pages : 7

NOTE : 1. Answer FIVE questions including Question No.1 which is compulsory.
All working notes should be shown distinctly.

2. Tables showing the present value of Re.1 and the present value of an annuity of Re.1 for 15 years are annexed.

1. Comment on **any four** of the following :

- (i) Economic value added represents real profit.
- (ii) Sensex is a barometer to economic progress of a nation.
- (iii) Current asset policy and current asset financing reflect working capital policy.
- (iv) There is a conflict of goals between management and owners.
- (v) The concept of Economic Order Quantity (EOQ) is losing its importance for the companies managing their business strategically.

(5 marks each)

2. (a) Priyanka Ltd. intends to establish a warehouse so as to exploit the present market situation. The initial cost of project is expected to be Rs.30 lakh and the life of such warehouse will be 5 years. The funds will be provided by the business house, required to be repaid over a period of 5 years at an interest rate of 15% per annum. The operating cost is estimated at Rs.6 lakh in the first year and is expected to increase at the rate of Rs.50,000 every year.

It is proposed to fix storage charges rate in such a way that income over a period of five years covers the initial investment of Rs.30 lakh as well as the operating cost.

The occupancy of the warehouse is expected to be 9,000 MT in the initial year and will increase by 250 MT in each of the following year.

You are required to find out storage rate to be charged per MT/month so as to break-even in this project. Ignore income-tax. Residual value of the project is estimated to be Rs.3,60,000.

(10 marks)

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(b) Ash Ltd. follows collection policy as detailed below :

- (i) 10% of the sales is collected in the same month
- (ii) 20% of the sales is collected in the 2nd month
- (iii) 40% of the sales is collected in the 3rd month
- (iv) 30% of the sales is collected in the 4th month.

Sales of the company for the first three quarters of the year are as follows :

Month of the Quarter	Quarter-I	Quarter-II	Quarter-III
1	15,000	7,500	22,500
2	15,000	15,000	15,000
3	15,000	22,500	7,500
Total	<u>45,000</u>	<u>45,000</u>	<u>45,000</u>
No. of working days	90	90	90

You are required to work out average age of receivables.

(10 marks)

3. (a) Business India Ltd. requires Rs.12 lakh to support its increased volume of activities. Presently, its earnings before interest and tax amount to Rs.2 lakh. The General Manager (Finance) of the organisation has forwarded three proposals for meeting the requirement of these funds :

Source of Funds	Proposal-I	Proposal-II	Proposal-III
Equity capital	10,00,000	6,00,000	2,00,000
Debt	2,00,000	6,00,000	10,00,000

Interest slab applicable to loan is as under :

Loan upto Rs.2,50,000	10% p.a.
Loan from Rs.2,50,001 to Rs.6,25,000	14% p.a.
Loan from Rs.6,25,001 to Rs.10,00,000	16% p.a.
Tax rate	35%

The market price of a share of the company is Rs.40 which is expected to come down to Rs.25 a share, if the market borrowings exceeds Rs.7,50,000.

From among the above proposals, you are required to suggest the most profitable proposal from shareholders' view point.

(10 marks)

(b) Royal Ltd. is an all equity financed company with a market value of Rs.35 lakh and cost of equity (K_e)= 20%. The company wants to buy-back equity shares worth Rs.8 lakh by issuing and raising 10% perpetual debt of the same amount. Rate of tax may be taken as 35%. Applying the MM model (with taxes), how would the capital restructuring affect the following :

(i) Market value of Royal Ltd. (2 marks)

(ii) Cost of equity (K_e). (4 marks)

(iii) Weighted Average Cost of Capital (WACC) of the company. (4 marks)

4. Differentiate between **any four** of the following :

- (i) 'Financial leverage' and 'operating leverage'.
 - (ii) 'Markowitz model' and 'Sharpe index model'.
 - (iii) 'Immobilisation' and 'dematerialisation'.
 - (iv) 'Hedging' and 'speculation'.
 - (v) 'Forward' and 'futures'.
- (5 marks each)

5. (a) A company is considering two mutually exclusive projects. The company uses certainty equivalent approach. Estimated cash flows and certainty equivalents for each project are as follows :

Year	Project-1		Project-2	
	Cash Flow	Certainty Equivalent	Cash Flow	Certainty Equivalent
0	- 30,000	1.00	- 40,000	1.00
1	15,000	0.95	25,000	0.90
2	15,000	0.85	20,000	0.80
3	10,000	0.70	15,000	0.70
4	10,000	0.65	10,000	0.60

Which project should be accepted, if the risk-free discount rate is 15% ?

(10 marks)

(b) A share of Deepika Ltd. is currently selling for Rs.120. There are two possible prices of the share after one year -- Rs.132 or Rs.105. Assume that risk-free rate of return is 9% per annum. What is the value of a one-year call option (European) with an exercise price of Rs.125 ?

(5 marks)

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- (c) Presently, one US \$ is worth 140 Japanese Yen in the spot market. The interest rate in Japan on 90 days government securities is 4% per annum. If the interest rate parity theorem holds true and 3-month forward rate is 138 Yen per US \$, what is the implied interest rate in USA? If the actual interest rate is 7% per annum in USA, what action would follow?

(5 marks)

6. Write notes on **any four** of the following :

- (i) Semi-strong efficient market
- (ii) Capital account convertibility
- (iii) Assumptions of technical analysis
- (iv) Objectives of treasury management
- (v) Project implementation.

(5 marks each)

7. Asin Ltd. manufactures a special chemical. It is thinking of replacing its existing machine by a new machine, which would cost Rs.25 lakh. The company's current production is 80,000 units, and if the new machine is bought, it is expected to increase to 1,00,000 units. The selling price of the product would remain unchanged at Rs.80 per unit. The following is the cost of producing one unit of the product using both the existing and new machines :

	Cost Per Unit (Rs.)		Difference
	Existing Machine (80,000 units)	New Machine (1,00,000 units)	
Material	30.0	25.5	(4.5)
Wages and salaries	20.5	15.0	(5.5)
Supervision	8.0	10.0	2.0
Repairs	4.5	3.0	(1.5)
Power and fuel	6.2	5.7	(0.5)
Depreciation	0.1	2.0	1.9
Allocated corporate overheads	4.0	5.0	1.0
	<u>73.3</u>	<u>66.2</u>	<u>(7.1)</u>

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The existing machine has an accounting book value of Rs.40,000, and it is fully depreciated for tax purposes. It has a remaining economic life of 5 years. The supplier of the new machine has offered to accept the old machine in exchange for Rs.1,00,000. However, the market price of the old machine today is Rs.60,000 and Rs.15,000 after 5 years. New machine has a life of 5 years and a salvage value of Rs.1,00,000 at the end of its economic life. Tax rate is 30% and WDV depreciation rate is 25%. The after-tax required rate of return is 20%. Decide whether new machine should be purchased.

(20 marks)

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TABLE – 1 : PRESENT VALUE OF RUPEE ONE

RATE	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13	YEAR 14	YEAR 15
5%	0.9524	0.9070	0.8638	0.8227	0.7835	0.7462	0.7107	0.6768	0.6446	0.6139	0.5847	0.5568	0.5303	0.5051	0.4810
6%	0.9434	0.8900	0.8396	0.7921	0.7473	0.7050	0.6651	0.6274	0.5919	0.5584	0.5268	0.4970	0.4688	0.4423	0.4173
7%	0.9346	0.8734	0.8163	0.7629	0.7130	0.6663	0.6227	0.5820	0.5439	0.5083	0.4751	0.4440	0.4150	0.3878	0.3624
8%	0.9259	0.8573	0.7938	0.7350	0.6806	0.6302	0.5835	0.5403	0.5002	0.4632	0.4289	0.3971	0.3677	0.3405	0.3152
9%	0.9174	0.8417	0.7722	0.7084	0.6499	0.5963	0.5470	0.5019	0.4604	0.4224	0.3875	0.3555	0.3262	0.2992	0.2745
10%	0.9091	0.8264	0.7513	0.6830	0.6209	0.5645	0.5132	0.4665	0.4241	0.3855	0.3505	0.3186	0.2897	0.2633	0.2394
11%	0.9009	0.8116	0.7312	0.6587	0.5935	0.5346	0.4817	0.4339	0.3909	0.3522	0.3173	0.2858	0.2575	0.2320	0.2090
12%	0.8929	0.7972	0.7118	0.6355	0.5674	0.5066	0.4523	0.4039	0.3606	0.3220	0.2875	0.2567	0.2292	0.2046	0.1827
13%	0.8850	0.7831	0.6931	0.6133	0.5428	0.4803	0.4251	0.3762	0.3329	0.2946	0.2607	0.2307	0.2042	0.1807	0.1599
14%	0.8772	0.7695	0.6750	0.5921	0.5194	0.4556	0.3996	0.3506	0.3075	0.2697	0.2366	0.2076	0.1821	0.1597	0.1401
15%	0.8696	0.7561	0.6575	0.5718	0.4972	0.4323	0.3759	0.3269	0.2843	0.2472	0.2149	0.1869	0.1625	0.1413	0.1229
16%	0.8621	0.7432	0.6407	0.5523	0.4761	0.4104	0.3538	0.3050	0.2630	0.2267	0.1954	0.1685	0.1452	0.1252	0.1079
17%	0.8547	0.7305	0.6244	0.5337	0.4561	0.3898	0.3332	0.2848	0.2434	0.2080	0.1778	0.1520	0.1299	0.1110	0.0949
18%	0.8475	0.7182	0.6086	0.5158	0.4371	0.3704	0.3139	0.2660	0.2255	0.1911	0.1619	0.1372	0.1163	0.0985	0.0835
19%	0.8403	0.7062	0.5934	0.4987	0.4190	0.3521	0.2959	0.2487	0.2090	0.1756	0.1476	0.1240	0.1042	0.0876	0.0736
20%	0.8333	0.6944	0.5787	0.4823	0.4019	0.3349	0.2791	0.2326	0.1938	0.1615	0.1346	0.1122	0.0935	0.0779	0.0649
21%	0.8264	0.6830	0.5645	0.4665	0.3855	0.3186	0.2633	0.2176	0.1799	0.1486	0.1228	0.1015	0.0839	0.0693	0.0573
22%	0.8197	0.6719	0.5507	0.4514	0.3700	0.3033	0.2486	0.2038	0.1670	0.1369	0.1122	0.0920	0.0754	0.0618	0.0507
23%	0.8130	0.6610	0.5374	0.4369	0.3552	0.2888	0.2348	0.1909	0.1552	0.1262	0.1026	0.0834	0.0678	0.0551	0.0448
24%	0.8065	0.6504	0.5245	0.4230	0.3411	0.2751	0.2218	0.1789	0.1443	0.1164	0.0938	0.0757	0.0610	0.0492	0.0397
25%	0.8000	0.6400	0.5120	0.4096	0.3277	0.2621	0.2097	0.1678	0.1342	0.1074	0.0859	0.0687	0.0550	0.0440	0.0352

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TABLE – 2 : PRESENT VALUE OF AN ANNUITY OF RUPEE ONE

RATE	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13	YEAR 14	YEAR 15
5%	0.9524	1.8594	2.7232	3.5460	4.3295	5.0757	5.7864	6.4632	7.1078	7.7217	8.3064	8.8633	9.3936	9.8986	10.3797
6%	0.9434	1.8334	2.6730	3.4651	4.2124	4.9173	5.5824	6.2098	6.8017	7.3601	7.8869	8.3838	8.8527	9.2950	9.7122
7%	0.9346	1.8080	2.6243	3.3872	4.1002	4.7665	5.3893	5.9713	6.5152	7.0236	7.4987	7.9427	8.3577	8.7455	9.1079
8%	0.9259	1.7833	2.5771	3.3121	3.9927	4.6229	5.2064	5.7466	6.2469	6.7101	7.1390	7.5361	7.9038	8.2442	8.5595
9%	0.9174	1.7591	2.5313	3.2397	3.8897	4.4859	5.0330	5.5348	5.9952	6.4177	6.8052	7.1607	7.4869	7.7862	8.0607
10%	0.9091	1.7355	2.4869	3.1699	3.7908	4.3553	4.8684	5.3349	5.7590	6.1446	6.4951	6.8137	7.1034	7.3667	7.6061
11%	0.9009	1.7125	2.4437	3.1024	3.6959	4.2305	4.7122	5.1461	5.5370	5.8892	6.2065	6.4924	6.7499	6.9819	7.1909
12%	0.8929	1.6901	2.4018	3.0373	3.6048	4.1114	4.5638	4.9676	5.3282	5.6502	5.9377	6.1944	6.4235	6.6282	6.8109
13%	0.8850	1.6681	2.3612	2.9745	3.5172	3.9975	4.4226	4.7988	5.1317	5.4262	5.6869	5.9176	6.1218	6.3025	6.4624
14%	0.8772	1.6467	2.3216	2.9137	3.4331	3.8887	4.2883	4.6389	4.9464	5.2161	5.4527	5.6603	5.8424	6.0021	6.1422
15%	0.8696	1.6257	2.2832	2.8550	3.3522	3.7845	4.1604	4.4873	4.7716	5.0188	5.2337	5.4206	5.5831	5.7245	5.8474
16%	0.8621	1.6052	2.2459	2.7982	3.2743	3.6847	4.0386	4.3436	4.6065	4.8332	5.0286	5.1971	5.3423	5.4675	5.5755
17%	0.8547	1.5852	2.2096	2.7432	3.1993	3.5892	3.9224	4.2072	4.4506	4.6586	4.8364	4.9884	5.1183	5.2293	5.3242
18%	0.8475	1.5656	2.1743	2.6901	3.1272	3.4976	3.8115	4.0776	4.3030	4.4941	4.6560	4.7932	4.9095	5.0081	5.0916
19%	0.8403	1.5465	2.1399	2.6386	3.0576	3.4098	3.7057	3.9544	4.1633	4.3389	4.4865	4.6105	4.7147	4.8023	4.8759
20%	0.8333	1.5278	2.1065	2.5887	2.9906	3.3255	3.6046	3.8372	4.0310	4.1925	4.3271	4.4392	4.5327	4.6106	4.6755
21%	0.8264	1.5095	2.0739	2.5404	2.9260	3.2446	3.5079	3.7256	3.9054	4.0541	4.1769	4.2784	4.3624	4.4317	4.4890
22%	0.8197	1.4915	2.0422	2.4936	2.8636	3.1669	3.4155	3.6193	3.7863	3.9232	4.0354	4.1274	4.2028	4.2646	4.3152
23%	0.8130	1.4740	2.0114	2.4483	2.8035	3.0923	3.3270	3.5179	3.6731	3.7993	3.9018	3.9852	4.0530	4.1082	4.1530
24%	0.8065	1.4568	1.9813	2.4043	2.7454	3.0205	3.2423	3.4212	3.5655	3.6819	3.7757	3.8514	3.9124	3.9616	4.0013
25%	0.8000	1.4400	1.9520	2.3616	2.6893	2.9514	3.1611	3.3289	3.4631	3.5705	3.6564	3.7251	3.7801	3.8241	3.8593

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