Q.6 i. Calculate the working capital of Neeraj Ltd Company from the from the given Information: **3**

Particulars	Amount
Accounts payable	25,000
Cash and cash equivalents	50,000
Accounts receivable	30,000
Short-term loans	15,000
Capital	2,00,000
Inventory	20,000
Long term loans	50,000
Furniture	20,000

ii. The cost sheet of the company provides the following details **7**
Elements of Cost
Material -40%
Direct Labour-20%
Overheads-20%
The following particulars are available:
(a) It is proposed to maintain the level of activity of 2,00,000 units
(b) Selling price is Rs 12 per unit
(c) Raw materials are expected to remain in stores for an average period of one month
(d) Materials will be in process, on an average half month
(e) Finished goods are remain in stock for an average period of one month
(f) Credit allowed to the debtors is two months
(g) Credit allowed by suppliers is one month
You may assume that sales and production follow a consistent pattern. You are required to prepare the statement of working capital requirements.

OR iii. Compare and contrast the NI approach and the NOI approach. **7**

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Total No. of Questions: 6 *Total No. of Printed Pages:4*

Enrollment No.....

Faculty of Management Studies
End Sem Examination May-2024
MS5CO33 Financial Management & Corporate Finance

Programme: MBA Branch/Specialisation: Management

Duration: 3 Hrs. **Maximum Marks: 60**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if necessary. Notations and symbols have their usual meaning.

Q.1 i. Compounding refers to: **1**
(a) The process of calculating the present value of future cash flows
(b) The process of calculating the future value of current cash flows
(c) The process of equalizing cash flows over time
(d) The process of comparing cash flows at different points in time

ii. Suppose you invest $10,000 in a savings account that earns an annual interest rate of 5%. According to the rule of 69, approximately how many years will it take for your investment to double in value? **1**
(a) 13.8 years (b) 14.2 years (c) 15.4 years (d) 16.7 years

iii. What is a characteristic of long-term sources of finance? **1**
(a) High flexibility (b) Low stability
(c) Lower interest rates (d) Short commitment periods

iv. Financial leverage magnifies: **1**
(a) Fixed costs (b) Variable costs
(c) Return on equity (d) Operating expenses

v. The cost of preference capital is typically calculated as: **1**
(a) The dividend rate paid to preference shareholders
(b) The market value of preference shares
(c) The coupon rate of preference shares
(d) The book value of preference shares

vi. Market risk premium is a component of the: **1**
(a) Cost of equity (b) Cost of debt
(c) Cost of preference capital (d) Weighted average cost of capital

vii. Which capital budgeting technique discounts all future cash flows to their present value? **1**
(a) Net present value method (b) Payback period method
(c) Accounting rate of return (d) None of these

viii. Why is capital budgeting important for a company? **1**
(a) It helps in maintaining liquidity
(b) It assists in short-term profit maximization
(c) It ensures effective allocation of resources for long-term projects
(d) It focuses on minimizing operational costs

ix. According to the Net Operating Income (NOI) approach, the value of the firm is determined by: **1**
(a) Its dividend policy
(b) The relationship between debt and equity
(c) Its operating income and the cost of capital
(d) The level of retained earnings

x. Bank finance as a source of working capital primarily involves: **1**
(a) Issuing commercial paper
(b) Obtaining short-term loans from banks
(c) Selling equity shares to investors
(d) Long-term borrowing from financial institutions

Q.2 i. Mr Rahul deposits Rs 5,000 today at 8% rate of interest, in how many years will the amount double? Work out the rule of 72. **2**

ii. Explain the profit maximization and wealth maximization approaches as objectives of financial management. **8**

OR iii. (a) Calculate Compound value of Rs 10,000 at the end of 3 years at 12% rate of interest. When interest is calculated on- **8**
I. Yearly basis II. Quarterly basis
(b) Calculate present value of the following cash flows assuming a discount rate of 10%:

Year	Cash Flows
1	5,000
2	10,000
3	10,000
4	3,000
5	2,000

Q.3 i. Differentiate between shares and debentures. **2**

ii. Calculate operating leverage, financial leverage and combined leverage: **8**

Particulars	A Ltd	B Ltd
Sales	25,00,000	30,00,000
Variable cost	40% of sales	40% of sale
Fixed cost	5,50,000	3,50,000
Interest	1,25,000	1,60,000

OR iii. Explain any four long-term sources of finance along with merits & demerits. **8**

Q.4 i. ABC Company has an estimated dividend payout ratio of 60%, a dividend growth rate of 5%, and a current stock price of $50. The company's cost of equity is estimated to be 12%. Calculate the cost of retained earnings for ABC Company. **3**

ii. The sales revenue of Bangalore Ltd @20 per unit is 20,00,000 and the contribution is Rs 10,00,000. At the present level of operations, OL of the company is 2.5. The company does not have any preference shares. The number of equity shares is Rs 1,00, 000.Income tax rate is 50% and the rate of interest on debt capital is 16% p.a. What is EPS (at sales of Rs 20 lakh) and the amount of debt capital if 25% decline in sales will wipe off EPS? **7**

OR iii. Ishani Ltd. wants to issue 8% debentures of Rs 2,00, 000.Face value of debentures is Rs 100.Caluclate cost of capital after tax if: **7**
(a) Issue of debenture at par (b) Issue of debentures at 10% premium.
(c) Issue of debenture at 10% discount. (Assume tax rate 60%)

Q.5 i. Explain any two factors affecting capital budgeting. **2**

ii. Sheela Co. Ltd thinks to set -up a project costing Rs 10,00,000. Cash inflow (before depreciation and after tax) for the next 6 years are as follows: **8**

Year	Cash inflow
1	4,00,000
2	3,00,000
3	2,00,000
4	2,50,000
5	1,75,000
6	1,50,000

On the basis of above information, you are to calculate:
(a) Pay-back period (b) Post payback period

OR iii. A choice is to be made between two competing projects, which require an equal investment of Rs 50,000 & are expected to generate net cash inflows as under: **8**

Year	Project I	Project II
1	25,000	10,000
2	15,000	12,000
3	10,000	18,000
4	NIL	25,000
5	12,000	8,000
6	6,000	4,000

The cost of capital is 10%. Using NPV method recommend which proposal is to be preferred.

Marking Scheme

	Faculty of Management Studies End Sem Examination May-2024 Financial Management and Corporate Finance (T) - MS5CO33
	Programme: MBA | Branch/Specialisation:

Note: The Paper Setter should provide the answer wise splitting of the marks in the scheme below.

Q.1	i)	b. The process of calculating the future value of current cash flows	1
	ii)	a. 13.8 years	1
	iii)	b. Low stability	1
	iv)	c. Return on equity	1
	v)	a. The dividend rate paid to preference shareholders	1
	vi)	a. Cost of equity	1
	vii)	a. Net Present Value Method	1
	viii)	c. It ensures effective allocation of resources for long-term projects	1
	ix)	c. Its operating income and the cost of capital	1
	x)	b. Obtaining short-term loans from banks	1
Q.2	i.	9 years., 8.625 years. (1 mark each)	2
	ii.	According to the explanation the Profit Maximization and Wealth Maximization approaches as objectives of Financial Management	8
OR	iii.	1)Rs 14,049.28 (6) 23606 2)Rs 23,611.65. (4 marks Each)	8
Q.3	i.	According to explanation between Shares and Debentures.	2
	ii.	Any 4 long-term sources finance with proper explanation.	8
OR	iii.	For A Ltd: Operating Leverage: 1.5789 Financial Leverage: 1.1515 Combined Leverage: 1.817 For B Ltd: Operating Leverage: 1.2414 Financial Leverage: 1.1217 1.124 Combined Leverage: 1.3904 (4 marks for each company)	8
Q.4	i.	The cost of retained earnings for ABC Company is 8%.	
	ii.	~~2.6 PBP~~ ~~Post PBP 47.5%~~ EPS-1.25 Subsidiary 937500	
OR	iii.	issue of debt at par 8%. at 10% premium 5.45%. & 10% Dis 6.667%).	
Q.5	i.		
	ii.	PBP-2.6 years Post PBP= 47.5%	
OR	iii.	+3461 NPV (2e) +6819 (4)	
Q.6			
	i.		
	ii.		
	iii.		

Q.4 (ii)

Given:

Sales Revenue @ 20 per unit = 20,00,000

Contribution = 10,00,000

Operating Leverage (OL) = 2.5

Number of equity shares = 1,00,000

Income tax rate = 50%

Rate of interest on debt capital = 16% p.a.

Steps to Solve:

Calculate Fixed Costs:

Operating Leverage (OL) = Contribution / EBIT (Earnings Before Interest and Tax)

Given OL = 2.5 and Contribution = 10,00,000

EBIT = Contribution / OL = 10,00,000 / 2.5 = 4,00,000

Calculate Fixed Costs:

Contribution = Sales - Variable Costs

Fixed Costs (FC) = Contribution - EBIT

FC = 10,00,000 - 4,00,000 = 6,00,000

Calculate Current EPS:

EBIT = 4,00,000

Interest (I) = Rate of interest * Debt Capital

Since debt capital isn't provided yet, let's denote it as DD

Interest (I) = 0.16 * DD

EBT (Earnings Before Tax) = EBIT - Interest = 4,00,000 - 0.16 * DD

Tax = 50% of EBT = 0.50 * (4,00,000 - 0.16 * DD)

Net Income = EBT - Tax = (4,00,000 - 0.16 * DD) - 0.50 * (4,00,000 - 0.16 * DD)

EPS = Net Income / Number of Equity Shares = Net Income / 1,00,000

Find the Debt Capital (DD):

A 25% decline in sales means new sales = 0.75 * 20,00,000 = 15,00,000

New Contribution = Contribution per unit * New sales = 10,00,000 * 0.75 = 7,50,000

New EBIT = New Contribution - Fixed Costs = 7,50,000 - 6,00,000 = 1,50,000

New EBT = New EBIT - Interest = 1,50,000 - 0.16 * DD

If EPS = 0, then Net Income = 0

Thus, EBT - Tax = 0

(₹1,50,000 - 0.16 * DD) - 0.50 * (1,50,000 - 0.16 * DD) = 0

Solving this equation for DD:

(₹1,50,000−0.16∗D)−0.50∗(₹1,50,000−0.16∗D)=0(₹1,50,000−0.16∗D)−0.50∗(₹1,50,000−0.16∗D)=0
(1,50,000−0.16∗D)−0.75∗(₹1,50,000−0.16∗D)=0(₹1,50,000−0.16∗D)−0.75∗(₹1,50,000−0.16∗D)=0 0.50∗(₹1,50,000−0.16∗D)=₹1,50,0000.50∗(₹1,50,000−0.16∗D)= 1,50,000
1,50,000−0.16∗D=₹3,00,000₹1,50,000−0.16∗D= 3,00,000
−0.16∗D=₹1,50,000−0.16∗D= 1,50,000 D= 9,37,500D= 9,37,500

Calculate Current EPS:

Interest on Debt Capital (9,37,500) = 0.16 * 9,37,500 = 1,50,000

EBT = EBIT - Interest = 4,00,000 - 1,50,000 = 2,50,000

Tax = 50% of EBT = 0.50 * 2,50,000 = 1,25,000

Net Income = EBT - Tax = 2,50,000 - 1,25,000 = 1,25,000

EPS = Net Income / Number of Equity Shares = 1,25,000 / 1,00,000 = 1.25

Final Answers:

EPS at current sales of 20 lakh = 1.25

Amount of Debt Capital required for EPS to be wiped out by a 25% decline in sales = 9,37,500

Q-4 (iii)

Soln

(i) Issue of debenture at par

$$K_{da} = \frac{I}{NP} \times 100$$

$$= \frac{16000}{200\,00} \times 100$$

$$= \frac{\$6}{200} \times 100$$

$$= 8\,(1-t)$$

$$= 8\,(1-0.6)$$

$$= 8\,(0.4)$$

$$= 3.2\%$$

(2) Issue of Debentures at 10% premium

$$K_{da} = \frac{I}{NP}(1-t)$$

$$K_{da} = \frac{16000}{220\,00}(1-0.6)$$

$$= \frac{16}{220}(1-0.6)$$

$$= 7.27 \times 0.4$$

$$= 2.91\%$$

(3) Issue of debenture at 10% Discounts

$$K_{da} = \frac{I}{NP}(1-t)$$

$$= \frac{16\,00}{180\,00} \times (1-0.6)$$

$$= \frac{16}{180} \times 0.4$$

$$= 3.55\%$$

On the basis of above information you are required to calculate :
(i) Pay-back period, (ii) Post pay-back period, (iii) Post pay-back profit and (iv) Post pay-back profitability index.

Solution

Year	*ACF*	*Cumulative ACF*
1	4,00,000	4,00,000
2	3,00,000	7,00,000
3	2,00,000	9,00,000
4	2,50,000	11,50,000
5	1,75,000	13,25,000
6	1,50,000	14,75,000

(i) $$\text{Pay-back period} = 3 \text{ years} + \frac{10,00,000 - 9,00,000}{2,50,000}$$

$$= 3 \text{ years} + \frac{1,00,000}{2,50,000}$$

$$= 3.4 \text{ years}$$

(ii) $$\text{Post pay-back} = \text{Life in years} - \text{Pay-back period}$$

$$= 6 - 3.4$$

$$= 2.6 \text{ years}$$

(iii) $$\text{Post pay-back profit} = \text{Total Cash Inflow} + \text{Scrap Value} - \text{Initial Investment}$$

$$= 14,75,000 + \text{Nil} - 10,00,000$$

$$= ₹\ 4,75,000$$

(iv) Post pay-back profitability index

$$= \frac{\text{Post pay-back profit} \times 100}{\text{Initial Investment}}$$

$$= \frac{4,75,000 \times 100}{10,00,000} = 47.5\%$$

***Illustration* 15**

In each following condition calculate (A) Pay-back period, (B) Post pay-back profit, (C) Post pay-back profitability index :
(1) Initial investment ₹ 10,000; Annual cash inflow ₹ 1,750; Estimated life : 10 years; Salvage value Nil.
(2) Initial investment ₹ 10,000, Annual cash inflow (after tax but before depreciation) in first four years ₹ 2,500 and in next 6 years ₹ 1,250, Estimated life 10 years, Salvage value Nil.
(3) Initial investment ₹ 10,000; Annual cash inflow ₹ 1,750; Estimated life 10 years; Salvage value 4,000.

Solution

1. (A) $$\text{Pay-back period} = \frac{\text{Initial investment}}{\text{Annual cash inflow}}$$

$$= \frac{10,000}{1,750}$$

$$= 5.71 \text{ years}$$

(B) $$\text{Post pay-back profit} = \text{Total earnings} + \text{Scrap value} - \text{Initial investment}$$

$$= (1,750 \times 10) + \text{Nil} - 10,000$$

$$= 17,500 - 10,000$$

~~Q5 III~~

Q5 III

		I		II	
1	.909	25 MD	22725	10000	9090
~~2~~	.826	12 350	12 MD	12 MD	9912
2	.751	7510	18 MD	18 MD	13518
3	.683	—	25 MD	25 MD	17075
4	.564	12 MD	7452	8 MD	4968
5		6000	3384	4 MD	2256
			53461		56819
			− 50 MD		50 MD
		NPV	3461		6819.