

PAPER – 4 : COST ACCOUNTING AND FINANCIAL MANAGEMENT

PART II : FINANCIAL MANAGEMENT

QUESTIONS

1. Answer the following, supporting the same with reasoning/working notes:
 - (a) Xansa Limited's operating income is Rs. 1,80,000. The company's cost of debt is 12% and currently it employs Rs. 5,25,000 of debt. The overall cost of capital of the company is 16%. You are required to determine the cost of equity of Xansa Limited.
 - (b) Discuss in brief the concept of "Venture Capital Financing".
 - (c) Explain the limitations of Capital Rationing.
 - (d) Explain some of the characteristics of Debentures.
 - (e) Name the various fundamental principles to be kept in mind while choosing a suitable capital structure.

Working Capital Management

2. The following information is given for Goodluck Limited:

The company manufactures a product which sells for Rs. 50 and the variable cost of each unit is as follows.

Material	Rs. 26
Labour (wages)	Rs. 8
Variable overhead	Rs. 2

Fixed overheads (excluding depreciation) are budgeted at Rs. 5,500 per month payable on the 23rd of each month.

Additional information:

- (i) Sales for the last two months of this year.

November	December
1,000	1,200

- (ii) Budgeted sales for next year.

January	February	March	April	May	June
1,400	1,600	1,800	2,000	2,200	2,600

- (iii) Production quantities for the last two months of this year.

November	December
1,200	1,400

- (iv) Budgeted production units for next year.

January	February	March	April	May	June
1,600	2,000	2,400	2,600	2,400	2,200

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- (v) Wages are paid in the month when output is produced.
- (vi) Variable overhead is paid 50 percent in the month when the cost is incurred and 50 percent the following month.
- (vii) Suppliers of material are paid two months after the material is used in production.
- (viii) Customers are expected to pay at the end of the second month following sale.
- (ix) A new machine is scheduled for January costing Rs. 34,000; this is to be paid for in February.
- (x) An old machine is to be sold for cash in January for Rs. 1,200.
- (xi) The company expects to have a cash balance of Rs. 35,500 on 1st January.

You are required to:

- (a) Prepare a month by month cash budget for the first six months of next year.
- (b) Discuss the actions management might take in the light of the cash budget you have prepared.

Investment Decisions

3. Beetal Limited is trying to decide whether to buy a machine for Rs. 80,000 which will save costs of Rs. 20,000 per annum for 5 years and which will have a resale value of Rs. 10,000 at the end of 5 years. If it is the company's policy to undertake projects only if they are expected to yield a return of 10 percent or more, you are required to advise Beetal Limited whether to undertake this project or not.

Financing Decisions

4. Ganpati Limited has issued 10% debentures of nominal value of Rs. 100. The market price is Rs. 90 ex-interest. You are required to calculate the cost of debentures if the debentures are:
- (a) Irredeemable; and
 - (b) Redeemable at par after 10 years.

Financial Analysis and Planning

5. The balance sheet of Musa Limited is given for your consideration:

<i>Liabilities</i>		<i>Assets</i>	
Capital and Reserves	355	Net Fixed Assets	265
P & L Credit Balance	7	Cash	1
Loan from SFC	100	Receivables	125
Bank Overdraft	38	Stocks	128
Creditors	26	Prepaid Expenses	1
Provision for Tax	9	Intangible Assets	30
Proposed Dividend	<u>15</u>		
	<u>550</u>		<u>550</u>

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Based on the above information, you are required to compute the following ratios:

- (a) Current Ratio
- (b) Quick Ratio
- (c) Debt Equity Ratio
- (d) Proprietary ratio
- (e) Net Working Capital
- (f) If Net Sales is Rs.15 Lac, then what would be the Stock Turnover Ratio in times?
- (g) Debtors Velocity Ratio if the sales are Rs. 15 Lacs.
- (h) Creditors Velocity Ratio if purchases are Rs.10.5 Lacs.

Investment Decisions

6. Gamma Limited is considering three projects A, B and C. The cash flows associated with the projects are given below:

Cash flows associated with the Three Projects (Rs.)					
Project	C_0	C_1	C_2	C_3	C_4
A	(5,000)	1,000	1,000	3,000	0
B	(1,000)	0	1,000	2,000	3,000
C	(5,000)	1,000	1,000	3,000	5,000

You are required to:

- (a) Calculate the Payback period of each of the three projects.
- (b) If the cut-off period is two years, then which projects should be accepted?
- (c) Projects with positive NPVs if the opportunity cost of capital is 10 percent.
- (d) "Payback gives too much weight to cash flows that occur after the cut-off date". True or false?
- (e) "If a firm used a single cut-off period for all projects, it is likely to accept too many short-lived projects." True or false?

Financing Decisions

7. Mahadev Limited is considering the installation of a new project costing Rs. 80,00,000. Expected annual sales revenue from the project is Rs. 90,00,000 and its variable costs are 60 percent of sales. Expected annual fixed cost other than interest is Rs. 10,00,000. Corporate tax rate is 30 percent. The company wants to arrange the funds through issue of 4,00,000 equity shares of Rs. 10 each and 12 percent debentures of Rs. 40,00,000.

You are required to:

- (a) Calculate the operating, financial and combined leverages and earnings per share (EPS); and also
- (b) Determine the likely level of EBIT, if EPS is (i) Rs. 4, (ii) Rs. 2, (iii) 0.

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Working Capital Management

8. Temco Limited manufactures foundry equipments and caters to the steel industry. To assess the need of working capital, the following data relating to Temco Limited is given for your consideration:

Turnover for the year	Rs. 15,00,000
<i>Costs as percentages of Sales</i>	<i>%</i>
Direct Materials	30
Direct Labour	25
Variable Overheads	10
Fixed Overheads	15
Selling and Distribution Overheads	5

Additional information:

On an average:

- (a) Debtors take 2.5 months before payment.
- (b) Raw materials are in stock for three months.
- (c) Work-in-progress represents two months of half produced goods.
- (d) Finished goods represent one month's production.
- (e) Credit is taken as follows:

Direct Materials	2 months
Direct Labour	1 week
Variable Overheads	1 month
Fixed Overheads	1 month
Selling and Distribution	0.5 months
- (f) Work-in-progress and finished goods are valued at material, labour and variable expense cost.

You are required to prepare a projected statement of working capital requirement of Temco Limited assuming that the labour force is paid for 50 working weeks a year.

Financial Analysis and Planning

9. The following are the summarised Balance Sheet of Ganesha Limited as on 31st March, 2009 and 2010:

<i>(Rs. in 000')</i>					
<i>Liabilities</i>	<i>31.3.09</i>	<i>31.3.10</i>	<i>Assets</i>	<i>31.3.09</i>	<i>31.3.10</i>
Share Capital	3,900	5,200	Plant & Machinery	3,978	5,525
Reserves and Surplus	1,690	2,600	Land & Building	1,040	1,040

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12% Debentures	-	1,300	Investment	130	130
Sundry Creditors	936	1,222	Inventories	676	975
Outstanding Rent	52	65	Sundry Debtors	728	1,131
Income-tax Payable	520	195	Prepaid Selling Expenses	26	52
			Cash at Bank	494	1,677
			Cash in Hand	<u>26</u>	<u>52</u>
	<u>7,098</u>	<u>10,582</u>		<u>7,098</u>	<u>10,582</u>

Profit & Loss Account for the year ended 31st March, 2010

(Rs. in 000')

	Rs.		Rs.
To Opening stock	806	By Sales	6,331
To Purchases	2,080	By Closing Stock	1,105
To Wages	650		
To Gross Profit C/d	<u>3,900</u>		
	<u>7,436</u>		<u>7,436</u>
To Depreciation	390	By Gross Profit B/d	3,900
To Office Expenses	390	By Discount	39
To Rent	130	By Commission	91
To Selling & Distribution Expenses	780	By Dividend	260
To Income-tax	1,040		
To Net Profit C/d	<u>1,560</u>		
	<u>4,290</u>		<u>4,290</u>
To Dividend	650	By Balance B/d	1,690
To Balance C/d	<u>2,600</u>	By Net Profit B/d	<u>1,560</u>
	<u>3,250</u>		<u>3,250</u>

You are required to prepare a Cash flow statement as per AS 3 (revised).

Time Value of Money

10. You are required to calculate the effective annual rate of interest of:
- 15% nominal per annum compounded quarterly; and
 - 24% nominal per annum compounded monthly.

Working Capital Management

11. Junio Limited is a small manufacturing company which is suffering cash flow problems. The company already utilizes its maximum overdraft facility. Junio Limited sells an

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average of Rs. 4,00,000 of goods per month at invoice value, and customers are allowed 40 days to pay from the date of invoice. Two possible solutions to the company's cash flow problems have been suggested. They are as follows:

- **Option 1:** Junio Limited would factor its trade debts. A factor has been found who would advance Junio Limited's 75 percent of the value of the invoices immediately on receipt of the invoices, at an interest rate of 10 percent per annum. The factor would also charge a service fee amounting to 2 percent of the total invoices. As a result of using the factor, Junio Limited would save administration costs estimated at Rs. 5,000 per month.
- **Option 2:** The company could offer a cash discount to customers for prompt payment. It has been suggested that customers could be offered a 2% discount for payments made within ten days of invoicing.

You are required to:

- (a) Discuss the issues that should be considered by management when a policy for credit control is formulated.
 - (b) Identify the services that may be provided by factoring organizations.
 - (c) Calculate the annual net cost (in Rs.) of the proposed factoring agreement.
 - (d) Compute the annualized cost (in percentage terms) of offering a cash discount to customers.
 - (e) Discuss the merits and demerits of the two proposals.
12. Differentiate between the following:
- (a) Finance Lease and Operating Lease
 - (b) Spontaneous Sources and Negotiated Sources of Working Capital Finance
 - (c) Explicit Cost and Implicit Cost.
13. Write short notes on the following:
- (a) Role of Chief Financial Officer (CFO)
 - (b) Perpetuity
 - (c) Bridge Finance.

SUGGESTED ANSWERS/HINTS

1. (a) Computation of Cost of Equity

	Rs.
Net operating income of the company i.e. EBIT	1,80,000
Less: Interest on Debt (12% of Rs. 5,25,000)	<u>63,000</u>
Earnings available for equity shareholders	<u>1,17,000</u>

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Overall cost of capital (k_o) = 16%

$$\begin{aligned}\text{Total Value of Company} &= \frac{\text{EBIT}}{K_O} = \frac{1,80,000}{0.16} \\ &= \text{Rs. } 11,25,000\end{aligned}$$

$$\begin{aligned}\text{Cost of Equity } (k_e) &= \frac{\text{Earnings available to equity share holders}}{\text{Market value of equity}} \times 100 \\ &= \frac{1,17,000}{11,25,000 - 5,25,000} \times 100 = \frac{1,17,000}{6,00,000} \times 100\end{aligned}$$

Cost of Equity = 19.5%

(b) Concept of Venture Capital Financing

The venture capital financing refers to financing of new high risky venture promoted by qualified entrepreneurs who lack experience and funds to give shape to their ideas. In broad sense, under venture capital financing, venture capitalists make investments to purchase equity or debt securities from inexperienced entrepreneurs who undertake highly risky ventures with a potential of success. Some of the characteristics of Venture Capital Funding are:

- It is basically equity finance in new companies.
- It can be viewed as a long-term investment in growth-oriented small/medium firms.
- Apart from providing funds, the investor also provides support in form of sales strategy, business networking and management expertise, enabling the growth of the entrepreneur.

(c) Limitations of Capital Rationing

- (i) In capital rationing it may also be more desirable to accept several small investment proposals than a few large investment proposals so that there may be full utilisation of budgeted amount. This may result in accepting relatively less profitable investment proposals if full utilisation of budget is a primary consideration.
- (ii) Capital rationing may also mean that the firm foregoes the next most profitable investment following after the budget ceiling even though it is estimated to yield a rate of return much higher than the required rate of return. Thus capital rationing does not always lead to optimum results.

(d) Characteristics of Debentures

Some of the characteristics of Debentures or Bonds are:

- Debentures are normally issued in different denominations ranging from Rs. 100 to Rs. 1,000 and carry different rates of interest.
- Normally, debentures are issued on the basis of a debenture trust deed which lists the terms and conditions on which the debentures are floated.

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- Debentures are either secured or unsecured.
- The cost of capital raised through debentures is quite low since the interest payable on debentures can be charged as an expense before tax.
- From the investors' point of view, debentures offer a more attractive prospect than the preference shares since interest on debentures is payable whether or not the company makes profit.
- Debentures are thus instruments for raising long-term debt capital.

(e) Various Fundamental Principles to be kept in mind while choosing a Suitable Capital Structure

While choosing a suitable financing pattern, certain fundamental principles should be kept in mind like:

- (i) **Cost Principle**
- (ii) **Risk Principle**
 - Business risk
 - Financial risk
- (iii) **Control Principle**
- (iv) **Flexibility Principle**
- (v) **Other Considerations**
 - Nature of industry
 - Timing of issue
 - Competition in the industry.

2. (a) Working Notes

(i) Sales Value

	Nov	Dec	Jan	Feb	Mar	Apr
Sales (units)	1,000	1,200	1,400	1,600	1,800	2,000
Sales value at Rs. 50 (Rs.)	50,000	60,000	70,000	80,000	90,000	1,00,000

Sales revenue will be received two months after the sale is made.

(ii) Production Costs

	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Production (units)	1,200	1,400	1,600	2,000	2,400	2,600	2,400	2,200
	'000	'000	'000	'000	'000	'000	'000	'000
Wages at Rs. 8	-	-	<u>12.8</u>	<u>16.0</u>	<u>19.2</u>	<u>20.8</u>	<u>19.2</u>	<u>17.6</u>
Variable o/h at Rs. 2	<u>2.4</u>	<u>2.8</u>	<u>3.2</u>	<u>4.0</u>	<u>4.8</u>	<u>5.2</u>	<u>4.8</u>	<u>4.4</u>

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50% paid in month	1.2	1.4	1.6	2.0	2.4	2.6	2.4	2.2
50% in following month	-	1.2	<u>1.4</u>	<u>1.6</u>	<u>2.0</u>	<u>2.4</u>	<u>2.6</u>	<u>2.4</u>
Total payment	-	-	<u>3.0</u>	<u>3.6</u>	<u>4.4</u>	<u>5.0</u>	<u>5.0</u>	<u>4.6</u>
Material at Rs. 26	<u>31.2</u>	<u>36.4</u>	<u>41.6</u>	<u>52.0</u>	<u>62.4</u>	<u>67.6</u>	<u>62.4</u>	<u>57.2</u>
Payment after two months			<u>31.2</u>	<u>36.4</u>	<u>41.6</u>	<u>52.0</u>	<u>62.4</u>	<u>67.6</u>

Cash Budget for First Six Months of Next Year

	Jan	Feb	Mar	Apr	May	June
	'000	'000	'000	'000	'000	'000
Receipts						
Sales Revenue	50.0	60.0	70.0	80.0	90.0	100.0
Sale of Old Machine	<u>1.2</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
	51.2	60.0	70.0	80.0	90.0	100.0
Payments						
Wages	12.8	16.0	19.2	20.8	19.2	17.6
Variable Overhead	3.0	3.6	4.4	5.0	5.0	4.6
Material	31.2	36.4	41.6	52.0	62.4	67.6
Fixed Overhead	5.5	5.5	5.5	5.5	5.5	5.5
New Machine	<u>-</u>	<u>34.0</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
	52.5	95.5	70.7	83.3	92.1	95.3
Net Cash flow	(1.3)	(35.5)	(0.7)	(3.3)	(2.1)	4.7
Opening Cash Balance	35.5	34.2	(1.3)	(2.0)	(5.3)	(7.4)
Closing Cash Balance	34.2	(1.3)	(2.0)	(5.3)	(7.4)	(2.7)

(b) The cash budget shows that Goodluck Limited will require more cash than is available from February onwards. Management might decide to arrange an overdraft to cover the deficit. Alternatively, they could reduce or avoid the deficit by taking actions such as the following:

- (i) Negotiate credit facilities or stage payments for the purchase of the machine.
- (ii) Defer the purchase of the machine or lease it instead of buying.
- (iii) Defer payments to material suppliers, although the company already takes two months credit for these purchases.
- (iv) Attempt to collect payment from debtors more quickly.

3. Advise to Beetal Limited based on Internal Rate of Return (IRR)

Annual depreciation = $(80,000 - 10,000) / 5 = \text{Rs. } 14,000$

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Step 1: Calculate the net present value (NPV), using a rate that is two-thirds of the return on investment.

The return on investment would be:

$$\frac{(20,000 - 14,000)}{\frac{1}{2}(80,000 + 10,000)} = \frac{6,000}{45,000} = 13.3\%$$

Two thirds of 13.3% is 8.9% and so we can start by trying 9%

The IRR is the rate for the cost of capital at which the NPV = 0

Year	Cash Flow Rs.	PV Factor 9%	PV of Cash flow Rs.
0	(80,000)	1.000	(80,000)
1-5	20,000	3.890	77,800
5	10,000	0.650	<u>6,500</u>
		NPV	<u>4,300</u>

This is fairly close to zero. It is also positive, which means that the actual rate of return is more than 9%. 9% can be used as one of the two NPVs close to zero.

Step 2: Calculate the NPV, using a rate that is greater than the first rate, as the first rate gave a positive answer. 12% can be tried.

Year	Cash Flow Rs.	PV Factor 12%	PV of Cash flow Rs.
0	(80,000)	1.000	(80,000)
1-5	20,000	3.605	72,100
5	10,000	0.567	<u>5,670</u>
		NPV	<u>(2,230)</u>

This is fairly close to zero and negative. The real rate of return is, therefore, greater than 9% (positive NPV of Rs. 4,300) but less than 12% (negative NPV of Rs. 2,230).

Step 3: Use the two NPV values to estimate the IRR.

The interpolation method assumes that the NPV rises in linear fashion between the two NPVs close to 0. The real rate of return is, therefore, assumed to be on a straight-line between NPV = Rs. 4,300 at 9% and NPV = Rs. 2,230 at 12%.

$$\text{IRR} = 9 + \left[\frac{4,300}{4,300 + 2,230} \times (12 - 9) \right] \% = 10.98\% \text{ or } 11\%$$

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Advise: If it is Beetal Limited's policy to undertake investments which are expected to yield 10% or more, then this project should be undertaken.

4. (a) Cost of Irredeemable Debentures

$$\text{Cost of Irredeemable Debentures} = \frac{I}{P_0} = \frac{\text{Rs. 10}}{\text{Rs. 90}} \times 100\% = 11.1\%$$

(b) Cost of Redeemable Debentures

The capital profit that will be made from now to the date of redemption is Rs. 10 i.e. (Rs. 100 – Rs. 90). This profit will be made over a period of ten years which gives annualized profit of Re. 1 which is about 1% of current market value. The best trial and error figure to try first is, therefore, 12%.

Year		Cash flow	Discount factor 12%	PV Rs.	Discount factor 11%	PV Rs.
0	Market value	(90)	1.000	(90.00)	1.000	(90.00)
1-10	Interest	10	5.650	56.50	5.889	58.89
10	Capital Repayment	100	0.322	<u>32.20</u>	0.352	<u>35.20</u>
				<u>(1.30)</u>		<u>4.09</u>

$$\begin{aligned} \text{Cost of Redeemable Debentures} &= \left(11 + \frac{4.09}{(4.09 - -1.30)} \times 1\right) \\ &= 11 + \frac{4.09}{(5.39)} \times 1 = 11 + 0.758 \\ &= 11.758 = 11.76\% \end{aligned}$$

5. Computation of Different Ratios

(a) Current Ratio

$$\begin{aligned} \text{Current Ratio} &= \text{Current Assets} / \text{Current Liabilities} \\ &= (125 + 128 + 1 + 1) / (38 + 26 + 9 + 15) = 255 / 88 = 2.89: 1 \end{aligned}$$

(b) Quick Ratio

$$\begin{aligned} \text{Quick Ratio} &= \text{Quick Assets} / \text{Current Liabilities} \\ &= (125 + 1) / 88 = 1.43: 1 \end{aligned}$$

(c) Debt Equity Ratio

$$\begin{aligned} \text{Debt to Equity Ratio} &= \frac{\text{Total Liabilities}}{\text{Shareholders' Equity}} \quad \text{Or} \quad = \frac{\text{Long-term Liabilities}}{\text{Tangible Network}} \\ &= 100 / (362 - 30) \\ &= 100 / 332 = 0.30: 1 \end{aligned}$$

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(d) Proprietary Ratio

$$\begin{aligned}\text{Proprietary Ratio} &= (\text{Tangible Networth} / \text{Tangible Assets}) \times 100 \\ &= [(362 - 30) / (550 - 30)] \times 100 \\ &= (332 / 520) \times 100 = 64\%\end{aligned}$$

(e) Net Working Capital

$$\begin{aligned}\text{Net Working Capital Ratio} &= \text{Current Assets} - \text{Current Liabilities (excluding short - term bank borrowings)} \\ &= 255 - 88 = 167\end{aligned}$$

(f) Stock Turnover Ratio in Times if Net Sales is Rs.15 Lacs.

$$\begin{aligned}\text{Stock Turnover Ratio} &= \text{Net Sales} / \text{Average Stock} \\ &= 1,500 / 128 = 12 \text{ times approximately}\end{aligned}$$

(g) Debtors Velocity Ratio if Sales are Rs. 15 Lacs.

$$\begin{aligned}\text{Debtors Velocity Ratio} &= (\text{Average Debtors} / \text{Net Sales}) \times 12 \\ &= (125 / 1,500) \times 12 = 1 \text{ month}\end{aligned}$$

(h) Creditors Velocity Ratio if Purchases are Rs.10.5 Lacs.

$$\begin{aligned}\text{Creditors Velocity Ratio} &= (\text{Average Creditors} / \text{Purchases}) \times 12 \\ &= (26 / 1,050) \times 12 = 0.3 \text{ months}\end{aligned}$$

6. (a) Computation of Payback Periods

Year	Project A		Project B		Project C	
	Cash flows	Cumulative Cash flows	Cash flows	Cumulative Cash flows	Cash flows	Cumulative Cash flows
1	1,000	1,000	0	0	1,000	1,000
2	1,000	2,000	1,000	1,000	1,000	2,000
3	3,000	5,000	2,000	3,000	3,000	5,000
4	0	5,000	3,000	6,000	5,000	10,000

When projects cash flows are not uniform, then Payback period is calculated by the process of cumulative cash flows till the time when the cumulative cash flows become equal to the original investment. Taking this into consideration, therefore, the Payback Periods for Projects A, B and C are:

Payback Period for Project A = 3 years,

Payback Period for Project B = 2 years, and

Payback Period for Project C = 3 years.

(b) If cut-off period is 2 years then, Project B should be accepted.

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(c) Computation of Net Present Values (NPVs) of Projects A, B and C

Year	Discount factor @10%	Project A		Project B		Project C	
		Cash flows	Present Value of Cash flows	Cash flows	Present Value of Cash flows	Cash flows	Present Value of Cash flows
0		(5,000)		(1,000)		(5,000)	
1	0.909	1,000	909	0	0	1,000	909
2	0.826	1,000	826	1,000	826	1,000	826
3	0.751	3,000	2,253	2,000	1,502	3,000	2,253
4	0.683	0	<u>0</u>	3,000	<u>2,049</u>	5,000	<u>3,415</u>
			<u>3,988</u>		<u>4,377</u>		<u>7,403</u>
		NPV	(1,012)		3,377		2,403

Advise: Projects B and C should be accepted as they have positive net present values. (NPV_B = Rs. 3,377; NPV_C = Rs. 2,403)

(d) False.

(e) True.

7. (a) Calculation of Leverages and Earnings per Share (EPS)

Income Statement

	Rs.
Sales Revenue	90,00,000
Less: Variable Cost @ 60%	<u>54,00,000</u>
Contribution	36,00,000
Less: Fixed Cost other than Interest	<u>10,00,000</u>
Earnings before Interest and Tax (EBIT)	26,00,000
Less: Interest (12% on Rs. 40,00,000)	<u>4,80,000</u>
Earnings before tax (EBT)	21,20,000
Less: Tax @ 30%	<u>6,36,000</u>
Earnings after tax (EAT)	<u>14,84,000</u>

(i) Calculation of Operating Leverage (OL)

$$\begin{aligned}
 \text{Operating Leverage} &= \frac{\text{Contribution}}{\text{EBIT}} \\
 &= \frac{\text{Rs. } 36,00,000}{26,00,000} \\
 &= 1.3846
 \end{aligned}$$

(ii) Calculation of Financial Leverage (FL)

$$\begin{aligned}\text{Financial Leverage} &= \frac{\text{EBIT}}{\text{EBT}} \\ &= \frac{\text{Rs. 26,00,000}}{\text{Rs. 21,20,000}} \\ &= 1.2264\end{aligned}$$

(iii) Calculation of Combined Leverage (CL)

$$\begin{aligned}\text{Combined Leverage} &= \text{OL} \times \text{FL} \\ &= 1.3846 \times 1.2264 \\ &= 1.6981\end{aligned}$$

(iv) Calculation of Earnings per Share (EPS)

$$\begin{aligned}\text{EPS} &= \frac{\text{EAT}}{\text{Number of Equity Shares}} \\ &= \frac{\text{Rs. 14,84,000}}{4,00,000} \\ &= 3.71\end{aligned}$$

(b) Calculation of likely levels of EBIT at Different EPS

$$\text{EPS} = \frac{(\text{EBIT} - I)(1 - T)}{\text{Number of Equity Shares}}$$

(i) If EPS is Rs. 4

$$4 = \frac{(\text{EBIT} - 4,80,000)(1 - 0.3)}{4,00,000}$$

$$\text{EBIT} - 4,80,000 = \frac{16,00,000}{0.70}$$

$$\text{EBIT} - 4,80,000 = 22,85,714$$

$$\text{EBIT} = \text{Rs. 27, 65,714}$$

(ii) If EPS is Rs. 2

$$2 = \frac{(\text{EBIT} - 4,80,000)(1 - 0.3)}{4,00,000}$$

$$\text{EBIT} - 4,80,000 = \frac{8,00,000}{0.70}$$

$$\text{EBIT} - 4,80,000 = 11,42,857$$

$$\text{EBIT} = \text{Rs. 16, 22,857}$$

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(iii) If EPS is Rs. Zero

$$0 = \frac{(\text{EBIT} - 4,80,000)(1 - 0.3)}{4,00,000}$$

EBIT = Rs. 4,80,000

8. (a) Calculation of Annual Costs Incurred

		Rs.
Direct Materials	30% of Rs. 15,00,000	4,50,000
Direct Labour	25% of Rs. 15,00,000	3,75,000
Variable Overheads	10% of Rs. 15,00,000	1,50,000
Fixed Overheads	15% of Rs. 15,00,000	2,25,000
Selling and Distribution	5% of Rs. 15,00,000	75,000

(b) Calculation of Average Value of Current Assets

		Rs.	Rs.
Raw Materials	3/12 × Rs. 4,50,000	1,12,500	
Work-in-progress			
Materials (50% complete)	1/12 × Rs. 4,50,000	37,500	
Labour (50% complete)	1/12 × Rs. 3,75,000	31,250	
Variable Overheads (50% complete)	1/12 × Rs. 1,50,000	<u>12,500</u>	
			81,250
Finished Goods			
Materials	1/12 × Rs. 4,50,000	37,500	
Labour	1/12 × Rs. 3,75,000	31,250	
Variable Overheads	1/12 × Rs. 1,50,000	12,500	
			81,250
Debtors	2.5/12 × Rs. 15,00,000	<u>3,12,500</u>	
			<u>5,87,500</u>

(c) Calculation of Average Value of Current Liabilities

Materials	2/12 × Rs. 4,50,000	75,000
Labour	1/50 × Rs. 3,75,000	7,500
Variable Overheads	1/12 × Rs. 1,50,000	12,500
Fixed Overheads	1/12 × Rs. 2,25,000	18,750
Selling and Distribution	0.5/12 × Rs. 75,000	<u>3,125</u>
		<u>1,16,875</u>
Working Capital Requirement (b) – (c)		<u><u>4,70,625</u></u>

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Note: It has been assumed that all the direct materials are allocated to work-in-progress when production starts.

9. Cash Flow Statement for the year ending 31st March, 2010
[as per AS 3 (revised)]

		(Rs. in '000')
(A) Cash flow from Operating Activities		
Cash from Sales	5,928	
Commission Received	<u>91</u>	
		6,019
Cash Payments		
Cash Purchases	1,755	
Wages	650	
Office Expenses	390	
Rent	117	
Selling and Distribution Expenses	<u>806</u>	
		<u>3,718</u>
		2,301
Less : Tax Paid		<u>1,365</u>
Cash flow from Operating Activities		936
(B) Cash flow from Investing Activities		
Purchase of Plant & Machinery	(1,937)	
Dividend Received	<u>260</u>	
Net Cash used in Investing Activities		(1,677)
(C) Cash flow from Financing Activities		
Issue of Shares	1,300	
Issue of 12% Debentures	1,300	
Dividend Paid	<u>(650)</u>	
Net Cash flow from Financing Activities		<u>1,950</u>
Net Increase in Cash and Cash Equivalents during the year (A+B+C)		1,209
Add: Cash and Cash Equivalents at 1-4-2009		<u>520</u>
Cash and Cash Equivalents at 31-3-2010		<u>1,729</u>

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Working Notes:

1. Cash Sales

$$\begin{aligned}\text{Cash Sales} &= \text{Total Sales} - \text{Increase in Debtors} \\ &= 6,331 - (1,131 - 728) \\ &= 6,331 - 403 = \text{Rs. } 5,928\end{aligned}$$

2. Cash Purchases

$$\begin{aligned}\text{Cash Purchases} &= \text{Total Purchases} - \text{Increase in Creditors} \\ &= 2,080 - (1,222 + 39 - 936) \\ &= 2,080 - 325 = \text{Rs. } 1,755\end{aligned}$$

3. Rent

	Rs.
Rent	130
Add: Rent Outstanding as on 31-3-2009	<u>52</u>
	182
Less: Rent Outstanding as on 31-3-2010	<u>65</u>
	<u>117</u>

4. Tax Payable

<i>Tax Payable A/c</i>			
	Rs.		Rs.
To Tax paid	1,365	By Balance b/d	520
To Balance c/d	<u>195</u>	By Profit and Loss A/c	<u>1,040</u>
	<u>1,560</u>		<u>1,560</u>

5. Selling and Distribution Expenses

	Rs.
Selling and Distribution Expenses	780
Add: Prepaid Selling Expenses on 31-3-2010	<u>52</u>
	832
Less: Prepaid Selling Expenses on 31-3-2009	<u>26</u>
	<u>806</u>

10. (a) Computation of Effective Rate of Interest if Nominal rate is 15% per annum

15% per annum (nominal rate) = 3.75% per quarter.

$$\text{The effective annual rate of interest} = [1.0375^4 - 1] = 0.1587 = 15.87\%$$

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(b) Computation of Effective Rate of Interest if Nominal rate is 24% per annum

24% per annum (nominal rate) = 2% per month.

The effective annual rate of interest = $[1.02^{12} - 1] = 0.2682 = 26.82\%$

11. (a) Policy for Credit Control for Junio Limited

When a policy is being formulated, management should consider the following issues:

- (i) The **average period of credit** to be given. Whether this should be longer than average to encourage sales or less than average, to speed up sales.
- (ii) **Policy for making decisions** on granting credit to individual customers:
 - How customers are to be **investigated for creditworthiness**? (e.g. by direct assessment by the company, or indirect assessment using credit references from banks, or other assessment agencies)
 - How the **amount and timing of credit** is to be decided? (e.g. whether credit is to be increased progressively).
- (iii) **Debt collection policies**: Whether to employ specific people for this work. Issue of debtors' statements, reminder letters, whether and when to make use of professional debt collectors and when to consider legal action.
- (iv) **Accounting reports** required: Aged debtors lists etc.
- (v) Policies on persuading debtors to pay promptly: Discount schemes.
- (vi) Whether to make use of **factoring services**.

For all the above, it will be necessary to consider the costs and benefits of the alternative course of action. This will include considerations on how credit is to be financed.

(b) A factor normally manages the debts owed to a client on the client's behalf.

Services Provided by Factoring Organisations

- (i) **Administration** of the client's invoicing, sales accounting and debt collection service.
- (ii) **Credit protection** for the client's debts, whereby the factor takes over the risk of loss from bad debts and so 'insures' the client against such losses. The factor may purchase these debts 'without recourse' to the client, which means that if the client's debtors do not pay what they owe, the factor will not ask for the money back from the client.
- (iii) **'Factor finance'** may be provided, the factor advancing cash to the client against outstanding debts. The factor may advance up to 85 percent of approved debts from the date of invoice.
- (iv) **A confidentiality agreement** may be offered to conceal the existence of the arrangement from customers.

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(c) Calculation of Annual Cost of Factoring

It is assumed that the factor finance will not replace any existing credit lines, and therefore, the full interest cost of the agreement will be relevant when determining the cost of factoring.

Annual Sales = Rs. 4,00,000 × 12 = Rs. 48,00,000

Daily Sales = Rs. 48,00,000/365 = Rs. 13,151

The annual cost of factoring can now be found:

	Rs.
Interest (Rs. 13,151 × 40 days × 75% × 10%)	39,453
Service Fee (Rs. 48,00,000 × 2%)	<u>96,000</u>
Total Annual Charge	1,35,453
Less: Internal Cost Savings (Rs. 5,000 × 12)	<u>60,000</u>
Net Annual Cost	<u>75,453</u>

(d) Computation of Annualised Cost of Offering Cash Discount to Customers

$$\text{Cost} = \left(\frac{100}{100-d} \right)^{\frac{365}{t}} - 1$$

Where,

$$t = 40 - 10 = 30 \text{ days}$$

$$d = 2\%$$

$$\begin{aligned} \text{Cost} &= \left(\frac{100}{100-98} \right)^{\frac{365}{30}} - 1 \\ &= 27.9\% \end{aligned}$$

(e) Key Issues in the Discounting Option

- (i) The proposal is expensive. The company should be able to get cheaper overdraft finance than this, and longer-term debt should cost even less.
- (ii) The company may need to offer a discount in order to make its terms competitive with other firms in the industry.
- (i) The level of take-up among customers is uncertain, and will affect the cash flow position.
- (ii) Problems may arise when customers take both the discount and the full forty day credit period. This will increase administrative costs in seeking repayment.

Key Issues in the Factoring Option

- (i) The factor may be able to exercise better credit control than is possible in a small company.
- (ii) The amount of finance that will be received is much more certain than for the discounting option as 75 percent of the value of the invoices will be provided immediately.
- (iii) The relationship with the customers may deteriorate partly due to the reduction in the level of contract with the company, and partly due to the historical view of the factor as the lender of last resort.

Thus, the final decision must take into consideration all the above issues. However, the most important points to consider are the ability of each proposal to meet the financing requirements, and the relative costs of the different sources of finance.

12. (a) Finance Lease and Operating Lease

Finance Lease	Operating Lease
(i) The risk and reward incident to ownership are passed on to the lessee. The lessor only remains the legal owner of the asset.	The lessee is only provided the use of the asset for a certain time. Risk incident to ownership belongs wholly to the lessor.
(ii) The lessee bears the risk of obsolescence.	The lessee is only provided the use of asset for a certain time. Risks incidental to ownership belong wholly to the lessor.
(iii) The lessor is interested in his rentals and not in the asset. He must get his principal back along with interest. Therefore, the lease is non-cancellable by either party.	As the lessor does not have difficulty in leasing the same asset to other willing lessor, the lease is kept cancelable by the lessor.
(iv) The lessor enters into the transaction only as financier. He does not bear the cost of repairs, maintenance or operations.	Usually, the lessor bears cost of repairs, maintenance or operations.
(v) The lease is usually full pay out, that is, the single lease repays the cost of the asset together with the interest.	The lease is usually non-payout, since the lessor expects to lease the same asset over and over again to several users.

(b) Spontaneous Sources and Negotiated Sources of Working Capital Finance

Spontaneous sources of finance are those which naturally arise in the course of business operations. Trade credit, credit from employees, credit from suppliers of services, etc. are some of the examples which may be quoted in this respect. Whereas, on the other hand, **Negotiated sources**, as the name implies, are those

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which have to be specifically negotiated with lenders say, commercial banks, financial institutions, general public etc.

(c) **Explicit Cost and Implicit Cost**

The **Explicit cost** of any source of capital may be defined as the discount rate that equals that present value of the cash inflows that are incremental to the taking of financing opportunity with the present value of its incremental cash outflows.

Whereas, on the other hand, **Implicit cost** is the rate of return associated with the best investment opportunity for the firm and its shareholders that will be foregone if the project presently under consideration by the firm was accepted. Opportunity costs are technically referred to as implicit cost of capital.

13. (a) **Role of Chief Financial Officer (CFO)**

A new era has ushered during the recent years for chief financial officers. His role assumes significance in the present day context of liberalization, deregulation and globalisation. The chief financial officer of an organisation plays an important role in the company's goals, policies, and financial success. His responsibilities include:

- (i) **Financial Analysis and Planning:** Determining the proper amount of funds to employ in the firm, i.e. designating the size of the firm and its rate of growth.
- (ii) **Investment Decisions:** The efficient allocation of funds to specific assets.
- (iii) **Financing and Capital Structure Decisions:** Raising funds on favourable terms as possible i.e. determining the composition of liabilities.
- (iv) **Management of Financial Resources (such as working capital).**
- (v) **Risk Management:** Protecting assets.

(b) **Perpetuity**

Perpetuity is an annuity in which the periodic payments or receipts begin on a fixed date and continue indefinitely or perpetually. Fixed coupon payments on permanently invested (irredeemable) sums of money are prime examples of perpetuities.

The formula for evaluating perpetuity is relatively straight forward. Two points which are important to understand in this regard are:

- (i) The value of the perpetuity is finite because receipts that are anticipated far in the future have extremely low present value (today's value of the future cash flows).
- (ii) Additionally, because the principal is never repaid, there is no present value for the principal.

Therefore the price of perpetuity is simply the coupon amount over the appropriate discount rate or yield.

(c) Bridge Finance

Bridge finance refers to loans taken by a company normally from commercial banks for a short period because of pending disbursement of loans sanctioned by financial institutions. Though it is a of short term nature but since it is an important step in the facilitation of long term loan, therefore it is being discussed along with the long term sources of funds. Normally, it takes time for financial institutions to disburse loans to companies. However, once the loans are approved by the term lending institutions, companies, in order not to lose further time in starting their projects, arrange short term loans from commercial banks.

The bridge loans are repaid/ adjusted out of the term loans as and when disbursed by the concerned institutions. Bridge loans are normally secured by hypothecating movable assets, personal guarantees and demand promissory notes. Generally, the rate of interest on bridge finance is higher as compared with that on term loans.