

Question Paper

Financial Management – II (142) : July 2004

- • Answer all questions.
- • Marks are indicated against each question.

1. Which of the following is **true** about equity capital as a source of finance? [< Answer >](#)
- (a) Using equity capital to finance working capital may lead to a situation of technical insolvency
 - (b) Assessing the cost of equity capital is a difficult and complex task
 - (c) Equity capital provides tax benefits to the issuing company
 - (d) Cost of equity capital is less than the cost of debt capital
 - (e) The more a company depends on equity capital, the higher will be the financial risk of the company.
- (1 mark)
2. Which of the following can be noticed in the situation of overtrading in a company? [< Answer >](#)
- I. The turnover of current assets is very high in comparison to the sales of the company.
 - II. Volume of sales exceeds that of production.
 - III. A company is overcapitalized compared to the volume of sales.
- (a) Only (I) above
 - (b) Only (II) above
 - (c) Only (III) above
 - (d) Both (I) and (III) above
 - (e) Both (II) and (III) above.
- (1 mark)
3. Which of the following statements is/are **not true** regarding the cash flows used in capital budgeting decisions? [< Answer >](#)
- I. Cash flows must be measured in incremental terms.
 - II. Cash flows should consider both sunk costs and opportunity costs.
 - III. Allocated overhead costs should be ignored.
- (a) Only (I) above
 - (b) Only (II) above
 - (c) Only (III) above
 - (d) Both (II) and (III) above
 - (e) All (I), (II) and (III) above.
- (1 mark)
4. Which of the following will generally **not** result from liberalizing credit standards? [< Answer >](#)
- (a) Increase in sales
 - (b) Decrease in investment in receivables
 - (c) Higher cost of collection
 - (d) Increase in number of customers
 - (e) Increase in bad debt loss.
- (1 mark)
5. Despite a rigorous collection effort, a company is facing difficulties in getting prompt payments. What should be the possible course(s) of action? [< Answer >](#)
- (a) Attractive cash discounts should be offered at the time of selling
 - (b) Quality of accounts receivables is to be improved
 - (c) Volume of credit disbursed is to be increased
 - (d) Collection efforts are to be reduced
 - (e) Both (a) and (b) above.
- (1 mark)
6. Which of the following statements is **true**? [< Answer >](#)
- (a) Participating debentures are secured corporate debt securities
 - (b) Preference shares are identical to equity shares except in respect of voting rights
 - (c) A portion of partly convertible debenture is converted into equity after a specified period
 - (d) A secured premium note (SPN) is similar to a fully convertible debenture
 - (e) A debenture is a non-marketable legal contract.
- (1 mark)

7. Which of the following is **not true** with regard to the internal rate of return (IRR) criterion? [< Answer >](#)
- (a) It considers the time value of money
 - (b) It considers the cash flow stream over the entire investment horizon
 - (c) It remains unaffected by the pattern of cash inflows and outflows
 - (d) It is the rate of return which equates the present value of cash inflows to the present value of cash outflows
 - (e) If the net cash flows are discounted by the IRR, the net present value will be equal to zero.
- (1 mark)
8. In which of the following arrangements, the bank assumes the risk of default while the supplier provides the credit? [< Answer >](#)
- (a) Cash credit
 - (b) Overdraft
 - (c) Letter of credit
 - (d) Pledge
 - (e) Hypothecation.
- (1 mark)
9. If the annual cash inflows from a project are discounted with a zero discount rate, then the present value of the cash inflows will be [< Answer >](#)
- (a) Equal to the simple sum of all the cash inflows
 - (b) Less than the simple sum of all the cash inflows
 - (c) More than the simple sum of all the cash inflows
 - (d) Equal to two times the simple sum of all the cash inflows
 - (e) Equal to half of the simple sum of all the cash inflows.
- (1 mark)
10. Which of the following is/are **not** feature(s) of preference shares? [< Answer >](#)
- I. Preference shareholders have preference over equity shareholders to the post-tax earnings in the form of dividends.
 - II. Preference-dividend is tax deductible.
 - III. Voting rights can be given to the preference shareholders in the case of cumulative preference shares, if there are arrears in dividends for two or more years.
- (a) Only (I) above
 - (b) Only (II) above
 - (c) Only (III) above
 - (d) Both (I) and (III) above
 - (e) Both (II) and (III) above.
- (1 mark)
11. Net working capital can be said to be financed by [< Answer >](#)
- (a) Cash credit
 - (b) Overdraft
 - (c) Equity capital only
 - (d) Term loan only
 - (e) Long term sources of capital.
- (1 mark)
12. In inventory management, the time period between the purchase of inventory on credit and the payment of cash to the supplier is called [< Answer >](#)
- (a) Creation Lag
 - (b) Storage Lag
 - (c) Sale Lag
 - (d) Purchase Lag
 - (e) Payment Lag.
- (1 mark)
13. As a general rule, the capital structure that maximizes the market value of a company also [< Answer >](#)
- (a) Maximizes its average cost of capital
 - (b) Maximizes its earnings per share
 - (c) Maximizes the chance of bankruptcy
 - (d) Minimizes the cost of capital of the company
 - (e) Minimizes the cost of debt capital of the company.
- (1 mark)

14. Which of the following statements is/are **true** regarding 'Numerical Credit Scoring'? [< Answer >](#)
- (a) It is a method for computing the cash discount to be extended to the customer
 - (b) It is a method of computing the credit period
 - (c) It is an index that is used to study the creditworthiness of a customer
 - (d) It is an index used to study the efficiency of the credit standards of the firm
 - (e) It is a technique for evaluating the effort of a company in collecting the receivables.
- (1 mark)
15. Which of the following is **true**? [< Answer >](#)
- (a) The cost of retained earnings is more than the cost of external equity
 - (b) The cost of external equity is always less than the cost of debt capital
 - (c) The cost of retained earnings is less than the cost of external equity
 - (d) The retained earnings are a cost free source of finance
 - (e) Retained earnings are invested in fixed assets only.
- (1 mark)
16. Which of the following is a factor influencing the credit policy of a firm? [< Answer >](#)
- (a) Cash credit limit
 - (b) Average payment period
 - (c) Collection effort
 - (d) Outstanding creditors
 - (e) None of the above.
- (1 mark)
17. Which of the following is/are **not true** regarding capital structure theory as stated by Miller & Modigliani? [< Answer >](#)
- I. If the given assumptions hold, the total market value of the firm is independent of the degree of leverage.
 - II. In the presence of taxes, the market value of the firm is increased by the tax shield of debt.
 - III. If bankruptcy costs are considered, the expected cost of bankruptcy decreases, when the debt-equity ratio increases.
- (a) Only (I) above
 - (b) Only (II) above
 - (c) Only (III) above
 - (d) Both (II) and (III) above
 - (e) All (I), (II) and (III) above.
- (1 mark)
18. Which of the following approaches support(s) the existence of a unique optimal capital structure? [< Answer >](#)
- (a) Traditional approach
 - (b) Net operating Income Approach
 - (c) Net Income Approach
 - (d) All of the above
 - (e) Both (a) and (c) above.
- (1 mark)
19. Which of the following factors influences the choice of liquidity mix to be maintained by a company? [< Answer >](#)
- (a) Nature of control with the managers
 - (b) Extent of leverage
 - (c) Marginal cost of capital
 - (d) Quality of the product of the company
 - (e) Uncertainty in cash flows.
- (1 mark)
20. Which of the following approaches to compute the cost of equity capital assumes that actual returns will be in line with the expected returns? [< Answer >](#)
- (a) Realized Yield Approach
 - (b) Bond Yield Plus Risk Premium Approach
 - (c) Earnings-Price Ratio Approach
 - (d) Dividend Capitalization Approach
 - (e) Capital Asset Pricing Model.
- (1 mark)
21. Which of the following 'C's is **not** used for the assessment of the creditworthiness of a debtor? [< Answer >](#)
- (a) Character
 - (b) Capacity
 - (c) Contingencies
 - (d) Collateral
 - (e) None of the above.

(1 mark)

[< Answer >](#)

22. If the benefit cost ratio of a project is unity, its NPV
- (a) Will be zero (b) Will be plus 1 (c) Will be minus 1
(d) Will be any value (e) Cannot be determined.

(1 mark)

[< Answer >](#)

23. Which of the following is/are **true** regarding aggressive financing policy for current assets?
- I. The financing mix will be tilted towards equity.
II. Risk of technical insolvency will be high.
III. The cost of financing will be high.
- (a) Only (I) above (b) Only (II) above (c) Only (III) above
(d) Both (II) and (III) above (e) Both (I) and (III) above.

(1 mark)

[< Answer >](#)

24. The cost of which of the following sources of finance can be found out by the bond yield plus risk premium approach?
- (a) Bonds (b) Term loan (c) Trade credit
(d) Preference capital (e) Equity capital.

(1 mark)

[< Answer >](#)

25. Which of the following is a technique for monitoring the status of the receivables?
- (a) Ageing schedule (b) Outstanding creditors (c) Selection matrix
(d) Funds flow analysis (e) Credit evaluation.

(1 mark)

[< Answer >](#)

26. Which of the following is **false** with regard to the accounting rate of return as an appraisal criterion for projects?
- (a) It considers the profits over the entire life of the project
(b) It gives more weight to the earlier receipts than the later receipts
(c) It considers accounting profits instead of cashflows
(d) It serves as a measure of profitability of the investment
(e) None of the above.

(1 mark)

[< Answer >](#)

27. Which of the following types of current assets is most likely to be absent in a firm, which undertakes trading business only?
- (a) Inventory of finished goods
(b) Cash
(c) Receivables
(d) Work-in-process
(e) Prepaid expenses.

(1 mark)

[< Answer >](#)

28. Which of the following means of financing **does not** need any collateral security?
- (a) Cash credit from a private sector bank
(b) Overdraft from a public sector bank
(c) Cash credit from a co-operative bank
(d) Public deposit
(e) Term loan from a financial institution.

(1 mark)

[< Answer >](#)

29. Which of the following is/are **true** in the context of playing the float?
- I. The amount of cheques issued by the company, which are awaiting payment by the bank is called payment float.
II. If the payment float is greater than the collection float, the company is said to have a positive net float.

(a) Only (I) above (b) Only (III) above (c) Both (I) and (II) above
(d) Both (I) and (III) above (e) All (I), (II) and (III) above.

< Answer >

- (a) Carrying cost as a percentage of unit price increases
- (b) Fixed ordering costs per order drop by half
- (c) Purchase price of inventory items doubles
- (d) Delivery is not instantaneous but has a lead time
- (e) None of the above.

< Answer >

- The book value weights are independent of the fluctuations of the market prices
- The calculation of weights is simple
- The book values of the different sources of finance are approximately related to their present economic values
- The book value weights are suitable for a firm whose securities are not traded regularly
- The book value weights are the most suitable for the unlisted firms.

< Answer >

- I. If the degree of uncertainty surrounding cash flow projections is low, the companies will be tilted more towards marketable securities and intercorporate deposits.
- II. If the attitude of the management towards risk is conservative, the portfolio tends to have a higher proportion of intercorporate deposits.
- III. If the company has access to non-bank sources of funds, it will tend to have a higher proportion of intercorporate deposits and marketable securities.

(a) Only (I) above (b) Only (III) above (c) Both (I) and (II) above
(d) Both (I) and (III) above (e) All (I), (II) and (III) above.

< Answer >

- Past and present consumption trends
- Availability of the required quality and quantity of raw materials and other inputs
- Impact of the project on the distribution of income in the society
- Price and cross-elasticity of demand
- Production constraints.

< Answer >

- Since the expectations of the investors are always rational, there will be no effect of dividend policy on the valuation of the firm
- If the investors have rational expectations, they will value a dividend paying firm more than a non-dividend paying firm
- If the investors have rational expectations, they will value a non-dividend paying firm more than a dividend paying firm
- If the declared dividend is in line with the expectations of the investors, there will be no effect on the valuation of the firm
- If the declared dividend is in accordance with the expectations of the investors, the value of the firm will fall by the extent dividend is paid.

< Answer >

(a) Minimizes ordering costs (b) Minimizes carrying costs

(1 mark)

[< Answer >](#)

43. Bhavani Cements Limited uses the iron slag for the production of cement. The annual usage of the iron slag is 100 thousand tonnes. The price of the iron slag is Rs.1230 per ton. The ordering cost is Rs.340 per order and the carrying cost is 20% of average value of inventory. At present the company procures 10 thousand tonnes of iron slag in each order and avails a discount of 3% from the supplier. The supplier has introduced 6% discount for an order size of 20 thousand tonnes and above. What would be the annual benefit to the company, if they switch to the new discount offered by the supplier?

- (a) Rs.14,37,100 (b) Rs.25,72,400 (c) Rs.28,70,000
(d) Rs.32,29,566 (e) There will not be any monetary benefit.

(2 marks)

[< Answer >](#)

44. The sales figures for M/s. PQR Ltd. are as follows:

Month	Sales in Rs.
November 2003	1,20,000
December 2003	1,40,000
January 2004	1,50,000

The receivables from the credit sales are expected to be collected in the following manner: 20% of the receivables are collected in the month of sales, 50% of the sales are collected one month after the month of sale and 30% after two months from the date of sale. The total cash receipts from sales in the month of January are

- (a) Rs.70,000 (b) Rs.1,10,000 (c) Rs.1,20,000 (d) Rs.1,36,000 (e) Rs.1,40,000.

(2 marks)

[< Answer >](#)

45. Consider the following costs and benefits of a project:

Year	0	1	2	3	4	5
Cash flows	(Rs.50000)	Rs.10000	Rs.12500	Rs.17500	Rs.10000	Rs.10000

The pay-back period of the project is

- (a) 2 years (b) 3 years (c) 4 years (d) 4.5 years (e) 5 years.

(1 mark)

[< Answer >](#)

46. The following figures are projected by the production manager of Kakatiya Plastics:

Average Daily Usage (Units)	Probability	Lead Time (in days)	Probability
150	0.25	3	0.30
250	0.50	4	0.40
350	0.25	5	0.30

The stock out cost is estimated to be Rs.5,000 per unit and the carrying cost is Rs.1,000 per unit for the period under consideration. What is the probability of stock out when no safety stock is maintained?

- (a) 0.30 (b) 0.35 (c) 0.40 (d) 0.45 (e) 0.50.

(3 marks)

[< Answer >](#)

47. The price per share of Sruthi & Sruthi Company Ltd. as on April 1, 2003 and April 1, 2004 was Rs.30 and Rs.25 respectively. The company has declared a dividend of 25% during the year 2003-2004. The face value of each share is Rs.20. The wealth ratio for the year 2003-04 was

- (a) 0 (b) 0.92 (c) 1.00 (d) 1.09 (e) 1.40.

(1 mark)

[< Answer >](#)

48. If the tax rate on stock income is 10%, the tax rate on debt income is 12.5% and the corporate tax rate is 30%, the tax advantage associated with a debt capital of Rs.12,00,000 is

- (a) Nil (b) Rs.3,36,000 (c) Rs.3,62,500 (d) Rs.4,84,000 (e) Rs.5,62,500.

(2 marks)

[< Answer >](#)

49. M/s. Raj Industries Ltd. is considering a project, which will entail the following revenues and expenses:

(Rs. in lakh)

Year	1	2	3	4	5
Profit before tax	12	15	18	18	16
Depreciation	4	4	4	4	4
Interest on short-term loan	3	3	3	3	3
Interest on term loan	1.2	0.96	0.72	0.48	0.24
Repayment of term loan	2	2	2	2	2

The following additional information is provided for the year 2:

- Total expenses include allocated costs of Rs.1,00,000.
- A machine if not used for this project could earn an income of Rs.50,000.

If the tax rate is 40%, the net cash flow during the year 2 is

- (a) Rs.11.876 lakh (b) Rs.14.860 lakh (c) Rs.15.876 lakh
(d) Rs.16.476 lakh (e) Rs.17.676 lakh.

(2 marks)

[< Answer >](#)

50. Dhruva Universal's balance sheet shows debt of Rs.222.60 million. The firm has 49 million outstanding shares, and the market price of each share is Rs.85 (Face Value Rs.100). It is considering to issue Rs.850 million more debt and use the cash to repurchase its equity. Management estimates that as a result of this restructuring, the market price per share will jump to Rs.100. The value lost if the firm doesn't take up the restructuring is

- (a) 0 (b) Rs.387.6 million
(c) Rs.512 million (d) Rs.585 million
(e) Rs.735 million.

(2 marks)

[< Answer >](#)

51. Consider the following data:

Raw-material storage period 50 days
Average stock of raw materials Rs.6,51,000
Average balance of trade creditors Rs.2,65,000

Assume 360 days in a year and all purchases are made on credit.

If the closing stock of raw-materials is 10% higher than the opening stock of raw-materials, the average payment period is : (Round off the value to the nearest integer).

- (a) 15 days (b) 18 days (c) 20 days (d) 25 days (e) 30 days.

(3 marks)

[< Answer >](#)

52. Srujana Automobiles Ltd. is trying to determine the optimal order quantity for a critical spare part with the following particulars:

Annual usage = 50,000 units, Price of each unit = Rs.120, Fixed cost per order = Rs.1000, Inventory carrying cost = 10 percent.

Recently, a supplier of the company has offered a discount of Rs.10 per unit, provided the quantity ordered in a single purchase should be at least 10,000 units. What will be the net incremental benefit of ordering 10,000 units in comparison to the economic order quantity?

- (a) Rs.474,641 gain (b) Rs.474,641 loss (c) Rs.447,641 gain
(d) Rs.447,641 loss (e) Rs.447,461 gain.

(3 marks)

[< Answer >](#)

53. M/S Sadhana Textiles is proposing to go for debenture issue to finance a profitable investment opportunity. The details of the issue are as follows:

12%, 1,00,000 Debentures with face value of Rs.100

Issue Price : a discount of 4% on face value

Redemption Price : a premium of 4% on face value

M/S Sadhana Textiles is planning to write off the difference between the redemption price and the net amount realized evenly over the life of the debentures and avail of the tax benefit. If maturity period of the debentures is 10 years and tax rate is expected to be 30%, the cost of debentures is

- (a) 6.86% (b) 8.96% (c) 9.68% (d) 10.68 (e) 11.89%.

(2 marks)

54. Consider the following data regarding an electronic goods manufacturing company: [< Answer >](#)

Cost of equity 14%
 Cost of debt 10%
 Tax rate 40%
 Debt/Equity 1.0

The increase (decrease) in the cost of capital, if debt to equity of the company is changed to 0:1 is

- (a) (4)% (b) (0.18)% (c) 0.18% (d) 4% (e) 4.20%.

(1 mark)

55. The average daily cost of production is Rs.55 lakh and average conversion period is 5 days. The closing stock of work in process is 20% higher than the opening stock of work in process. The value of closing stock of work in process is [< Answer >](#)

- (a) 280 lakh (b) 300 lakh (c) 320 lakh (d) 330 lakh (e) 350 lakh.

(2 marks)

56. The annual interest cost associated with credit terms of 1/10, net 30 (assuming 360 days in a year) is approximately [< Answer >](#)

- (a) 12.65% (b) 15.37% (c) 17.18% (d) 18.18% (e) 24.49%.

(1 mark)

57. The current market price per share of ABC Co. Ltd. is Rs.80. The last dividend declared is Rs.6 per share and the expected growth rate in dividends is 8% per annum. If the cost of issuing external equity as a percentage of the existing market price is 4%, the cost of external equity to the company, according to the dividend capitalization model, is approximately [< Answer >](#)

- (a) 13.4% (b) 14.4% (c) 15.4% (d) 16.4% (e) 17.4%.

(1 mark)

58. Consider the following data about Srujana Industries Ltd: [< Answer >](#)

Annual credit purchases Rs.86, 94,300.
 Opening balance of accounts payable Rs.19, 50,000.
 Closing balance of accounts payable Rs.36, 10,000.
 (Assume 1 Year = 365 Days)

The average payment period (in days) for Srujana Industries Ltd. is : (Round off the value to the nearest integer).

- (a) 113 (b) 117 (c) 120 (d) 126 (e) 129.

(2 marks)

59. The cash flows associated with a project are as follows: [< Answer >](#)

Year	0	1	2	3	4
Cash Flows (in Rs. lakh)	(50)	16	17	15	23.50

What is the IRR of this project? (Round off your answer to the nearest integer)

- (a) 12 percent (b) 13 percent (c) 14 percent (d) 15 percent (e) 16 percent.

(2 marks)

60. Eastern Paints Ltd had 10 lakh equity shares outstanding at the beginning of July 2004 and these shares were traded in NSE at Rs. 150 each. The rate of capitalization appropriate to the risk class to which the firm belongs is 12%. The net income for the year is Rs. 2 crore and the investment budget is Rs.4 crore. Assume that no dividend is declared and the additional fund requirement is financed by new issue of equity shares. If Modigliani-Miller hypothesis holds good, the number of equity shares to be issued by the company is [< Answer >](#)

- (a) 1,09,048 (b) 1,09,248 (c) 1,19,048 (d) 1,19,248 (e) 1,29,348.

(2 marks)

61. If the average daily usage of material is 4,000 units, lead time for procuring material is 10 days, the average number of units per order is 800 units and the stock out acceptance factor considered is 1.6, the reorder level is : (Round off the value to the nearest integer). [< Answer >](#)
- (a) 49,999 units (b) 40,999 units (c) 49,099 units (d) 49,051 units (e) 45,091 units.

(1 mark)

62. The following table contains the amount of cheques issued and the amount of cheques deposited in the bank by a company: [< Answer >](#)

Date	Monday 23, June	Tuesday 24, June	Wednesday 25, June	Thursday 26, June	Friday 27, June	Saturday 28, June	Monday 30, June	Tuesday 01, July
Amount of Cheque issued (Rs.)	17,000	28,000	34,000	16,000	28,000	32,000	44,000	38,000
Amount of cheque deposited in bank (Rs.)	23,000	33,000	50,000	40,000	25,000	15,000	21,000	35,000

On an average, cheque issued by the company takes five days for actual payment and a cheque deposited by the company takes three days for realization. On the morning of 23rd June the opening balance in company's books is Rs.19,000 where as it is Rs.27,000 in the bank's book. The offices of the company were closed due to some internal problem during the week June 16, 2004 to June 21, 2004. The net float available to the company at the end of June 30, 2004 is

- (a) Rs. 16,000 (b) Rs. 66,000 (c) Rs. 95,000 (d) Rs.1,01,000 (e) Rs.1,23,000.

(2 marks)

63. The market value of debt and equity of a firm are Rs.40 lakh and Rs.60 lakh and the costs of equity and debt are 15% and 12% respectively. Assuming the firm follows 100% dividend payout ratio and there is no income tax, corporate or personal, the net operating income for the firm is [< Answer >](#)
- (a) Rs.9.2 lakh (b) Rs.11.4 lakh (c) Rs.13.8 lakh (d) Rs.16.6 lakh (e) Rs.19.4 lakh.

(1 mark)

64. Jha Enterprises Ltd. (JEL) has placed two orders to Trupti Machineries Ltd. (TML) in order to purchase lathe machines from them. Each machine is sold at a price of Rs.300,000 at a profit margin of 10 percent. It is estimated that the probability of default is 5 percent for the first order and 2 percent for the second order. What is the expected profit to TML from granting the second credit to JEL, assuming the payment for the first order has been paid? [< Answer >](#)

- (a) Rs.12,300 (b) Rs.15,600 (c) Rs.18,900 (d) Rs.20,600 (e) Rs.22,800.

(2 marks)

65. The following figures are collected from annual report of Chennai Textiles: [< Answer >](#)

	2002 (in Rs. 000s)	2003 (in Rs.000s)
Raw materials inventory – Closing Balance	90	106
Work in process inventory – Closing Balance	12.5	22.5
Purchases of raw materials during the year	542.5	596
Manufacturing expenses during the year	582.5	640
Depreciation	37.5	50

What should be the average conversion period of Chennai Textiles for the year 2003? (Assume 360 days in a year)

- (a) 3 days (b) 5 days (c) 7 days (d) 9 days (e) 11 days.

(2 marks)

66. The dividend history of Rajastan Light Chemicals Ltd.(RLCL) is as follows: [< Answer >](#)

Month and Year	March 2001	March 2002	March 2003	March 2004
Dividend per share (Rs.)	1.80	2.40	3.20	4.50
Dividend Yield (percentage)	2.50	3.00	3.80	5.00

If the market price per share for RLCL is Rs.67 on March 2000, what is the amount of realized yield?

- (a) 10.70 percent (b) 11.50 percent (c) 11.95 percent
(d) 13.35 percent (e) Cannot be determined.

(2 marks)

67. The following information regarding material 'P' has been extracted from the stores ledger of Apple Labs Ltd.

[< Answer >](#)

Opening stock	200 units	@ Rs.10/unit
Purchases:		
June 5	100 units	@ Rs.12/unit
June 18	200 units	@ Rs.15/unit

If an issue of 200 units was made on June 20, according to the weighted average method of pricing, the value of the issue was

- (a) Rs.2,000 (b) Rs.2,400 (c) Rs.2,480 (d) Rs.2,800 (e) Rs.3,000.

(1 mark)

68. Sadhana Machineries Ltd. (SML) purchases components from Morocco Engineers Ltd. (MEL) on terms of 1/10, net 45. SML requested MEL to increase the cash discounts to 2 percent without changing the discount period. MEL wants to modify the terms in such a way that after obtaining the requested discount rate of 2 percent, SML faces at least three times the cost of not paying within the discount period as before. Which of the following alternatives represents the correct course of action for MEL?

[< Answer >](#)

- (a) Decrease the credit period by 12 days (b) Decrease the credit period by 10 days
(c) Increase the discount period by 11 days (d) Decrease the discount period by 5 days
(e) Increase the credit period by 13 days.

(2 marks)

69. Raj & Raj Chemicals is planning to invest Rs.800 crore in a new project, although the actual amount may vary in future due to uncertainties. The mode of financing is expected to be done through equity capital, preference capital and term loan in the ratio of 4:2:4. The investment banker and financial institutions have given the following information:

[< Answer >](#)

Source of finance	Range of financing (in Rs. lakh)	Post-tax Cost (%)
Equity Capital	Up to 160	14
	160 to 320	15
	320 and above	16
Preference Capital	Up to 100	12
	100 to 200	13
	200 and above	14
Term loan	Up to 120	8
	120 and above	10

What should be the weighted average cost of capital, if the actual amount invested reached at Rs.900 lakh?

- (a) 11.50 percent (b) 12.00 percent (c) 12.50 percent (d) 13.00 percent
(e) 14.50 percent.

(3 marks)

70. Varsha Chemicals Ltd is planning to set up a plant for the production of organic chemicals. Profit margin, it is willing to maintain is 20%. The set up cost for each production run is Rs.10,000. Cost of carrying inventory is 12%p.a. on cost of sales of average inventory. The plant has capacity of 3 million kg of chemical. If the sales price of the chemical is Rs.1200 per kg., the optimum production quantity for this plant would be : (Round off the value to the nearest integer).

[< Answer >](#)

- (a) 202.65 kg (b) 212.67 hundred kg
(c) 228.22 hundred kg (d) 255.24 hundred kg
(e) 278.46 hundred kg.

(2 marks)

71. Sarigama Herbal Products Limited is considering the purchase of a new mixing machine to replace an existing machine that has a book value of Rs.1,65,000 and can be sold for Rs.1,00,000. The estimated salvage value of the old machine in five years would be zero, and it is depreciated on a straight-line basis. The new machine will contribute Rs.3,00,000 as annual cash savings over the old machine. The new machine has a life of five years. The costs of new machine is Rs.6,50,000 and can be sold for an expected amount of Rs.90,000 at the end of fifth year. Assuming straight-line depreciation, and a 35% tax rate, in the fourth year of operation the net cash flows associated with this replacement decision would be
- (a) Rs.64,150 (b) Rs.93,550 (c) Rs.1,32,650 (d) Rs.2,22,650 (e) Rs.3,12,650.

(2 marks)

72. If the average stock of work-in-process is Rs.55.75 lakh and the average conversion period is 3 days, the annual cost of production (assuming 360 days in a year) is
- (a) Rs.5,670 lakh (b) Rs.6,690 lakh
(c) Rs.7,690 lakh (d) Rs.8,650 lakh
(e) Rs.9,870 lakh.

(1 mark)

73. Regular Suppliers Ltd. (an FMCG company) targets to limit its average collection period to 20 days. For the financial year 2004, it targets a sales turnover of Rs.1440 lakh. What should be the maximum amount of average receivables? (Assume that one year is equal to 360 days and all sales are on credit basis).
- (a) Rs.40 lakh (b) Rs.60 lakh (c) Rs.80 lakh (d) Rs.100 lakh (e) Rs.120 lakh.

(1 mark)

74. Consider the following data about two companies:

	Company S	Company T
No. of shares Outstanding	90,000	1,50,000
Market Price per share	Rs.120	Rs.100
6% Debentures	Rs.60,00,000	Nil
Profit before Tax	Rs.18,00,000	Rs.18,00,000

Mr.Rabina holds 10% of shares in company S. Assuming that the MM hypothesis holds good, the gain to the investor by switching from company S to company T is

- (a) Rs.20, 600 (b) Rs.20, 060 (c) Rs.21, 060 (d) Rs.21, 600 (e) Rs.21, 760.

(2 marks)

END OF QUESTION PAPER

Suggested Answers

Financial Management – II (142) : July 2004

1. Answer : (b) [<TOP>](#)
Reason : Assessing the cost of equity capital is a difficult and complex task because the dividend stream receivable by the shareholders is not specified by any legal contract as in the case of borrowed funds.
2. Answer : (a) [<TOP>](#)
Reason : Overtrading can be observed from the disproportionately high turnover of current assets compared to the volume of sales. Hence statement I is correct, and the answer is (a). Overtrading explains only the investment in current assets in comparison to sales and in no way links to the production. Hence, II is incorrect. Overtrading also indicates that less amount of funds are invested in current assets compared to the volume of sales i.e. a company is under capitalized compared to the volume of sales. Hence statement III is incorrect.
3. Answer : (b) [<TOP>](#)
Reason : While computing cash flows for capital budgeting decisions the following have to be considered:
The cash flows must be measured in incremental terms. In other words, the increments in the present levels of costs and benefits that occur on account of the adoption of the project are alone relevant for the purpose of determining the net cash flows. Hence statement I is correct.
While computing cash flows, sunk costs i.e. the costs which have already been incurred should be ignored and opportunity costs should be included. Hence, statement II is incorrect.
Allocated overhead costs should be ignored while computing the same. Hence statement III is also correct and the answer is (b).
4. Answer : (b) [<TOP>](#)
Reason : Liberalizing credit standards will increase sales, cause an increase in the investment in receivables, result in higher collection costs, increase the number of customers and increase the bad debt loss.
5. Answer : (e) [<TOP>](#)
Reason : If a company faces difficulties in getting prompt payments despite a rigorous collection effort, it may consider for an attractive cash discount as well as to improve the quality of the receivables. If the volume of credit disbursed is increased or the collection effort is reduced, the amount of bad debt will be piled up to a significant amount. Hence, the option (e) is the answer.
6. Answer : (c) [<TOP>](#)
Reason : Convertible debentures are convertible into equity of the issuer at a pre-specified time. If the debenture is a partly convertible debenture, a portion of the debenture is converted and the balance will be redeemed. Hence, (c) is correct.
Participating debentures are unsecured corporate debt securities. Hence, (a) is incorrect. Preference shares have some features identical to equity and some identical to debentures. They differ from equity in the payment of dividends and have preference over equity in the event of liquidation. Hence (b) is incorrect. A secured premium note is a kind of NCD with an attached warrant. Hence, (d) is incorrect. A debenture is a marketable legal contract. Hence (e) is also incorrect and the answer is (c).
7. Answer : (c) [<TOP>](#)
Reason : Alternatives (a), (b), (d) and (e) are true with regard to the internal rate of return. Alternative (c) is not true because the pattern of cash inflows and outflows affect the internal rate of return.
8. Answer : (c) [<TOP>](#)
Reason : In the letter of credit arrangement the bank undertakes the responsibility to honor the obligation of its customer, when the customer fail to do so. Hence the bank assumes the risk of default while the supplier provides the credit.
9. Answer : (a) [<TOP>](#)
Reason : If the annual cash inflows from a project are discounted at a zero discount rate then present value of the cash inflows will be equal to the simple sum of all the cash inflows (a). The present value will be less than the simple sum (b) when the discount rate is positive and more than the simple sum when the discount rate is negative (c). It cannot be logically inferred whether the present value should be equal to two times or half the simple sum. Hence (d) and (e) are incorrect.

10. Answer : (b) [< TOP >](#)

Reason : Preference shares have the following features:

- i. Preference shareholders earn a fixed rate of dividend.
- ii. The dividends received by preference shareholders are not tax-deductible.
- iii. Preference shareholders have preference over equity shareholders to the post-tax earnings in the form of dividends, and assets in the event of liquidation.
- iv. With the commencement of Companies Act, 1956, the issue of preference shares with voting rights has been restricted to the following cases:
 - when there are arrears in dividends for two or more years in case of cumulative preference shares.
 - when preference dividend is due for a period of two or more consecutive preceding years.
 - when in the preceding six years including the immediately preceding financial year, the company has not paid the preference dividend for a period of three or more years.

Hence statement I and III are the features and II is not feature of preference shares and the answer is (b).

11. Answer : (e) [< TOP >](#)

Reason : Working capital margin is generally financed by the long-term sources of funds that mostly comprises of the equity capital and part of the term loan. Cash credit and overdraft are the short-term bank borrowings to finance the current assets, not to finance the working capital margin.

12. Answer : (a) [< TOP >](#)

Reason : The time period between the purchase of inventory on credit and the payment of cash to the supplier is called creation lag.

13. Answer : (d) [< TOP >](#)

Reason : Self explanatory.

14. Answer : (c) [< TOP >](#)

Reason : Numerical credit scoring is an index based on several factors that is used to study the creditworthiness of a customer. It is the weighted sum of the facts that ostensibly have a bearing on the credit worthiness of the customer. Hence (c) is the correct choice.

15. Answer : (c) [< TOP >](#)

Reason : The cost of retained earnings is considered to be equal to the cost of the equity share capital employed by the company. The cost of external equity is higher than the cost of the existing equity share capital of the company because of the factors of under-pricing and issue expenses. Moreover, the cost of debt capital is less than the cost of internal as well as external equity. The retained earnings are not cost free because their cost is equal to the cost of the existing equity share capital of the company. Retained earnings may be invested in fixed as well as current assets. Hence alternative (c) is true.

16. Answer : (c) [< TOP >](#)

Reason : The credit policy variables are: cash discounts, credit standards, collection efforts and credit period. Therefore, the option (c) is the correct one.

17. Answer : (c) [< TOP >](#)

Reason : As per M&M approach, if bankruptcy costs are considered, the expected cost of bankruptcy increases when the debt equity ratio increases.

18. Answer : (e) [< TOP >](#)

Reason : According to the Net income approach and traditional approach, the optimal capital structure would occur at a point where the value of the firm is maximum and the overall cost of capital is minimum. Hence, option (e) is the correct choice.

According to Net operating income approach, the overall cost of capital remains constant throughout all degrees of leverage. Hence, as per the approach there is no unique optimal capital structure.

19. Answer : (e) [< TOP >](#)

Reason : A company generally chooses the liquidity mix on the basis of the level of uncertainty in the cash flows. Nature of control with the managers, extent of leverage, marginal cost of capital and the quality of the products of the company does not play any role in this respect.

20. Answer : (a) [<TOP>](#)
Reason : Realized yield approach assumes that
(i) The actual returns are in line with the expected return.
(ii) The investors will continue to have the same expectations from the security.
Hence (a) is the correct answer.
Bond yield plus Risk Premium Approach is based on the logic that the risk borne by the equity holders is more than that of the bondholders and hence return required by equity holders should be more than the bondholders. According to earnings price ratio, cost of equity is E/P based on the assumption that the EPS will remain constant. Dividend capitalization approach defines cost of equity as the rate at which the intrinsic value is equal to the market price of the share. According to CAPM cost of equity is defined as Risk free rate + Beta of the stock (Market Return – Risk-free rate).
Hence, (a) is the answer.
21. Answer : (c) [<TOP>](#)
Reason : In judging the creditworthiness of a customer, three C's are considered. These are character (willingness to meet the obligations), capacity (ability to pay at the required time) and collateral (the quality of security offered). The contingencies faced by the customer are not at all considered.
22. Answer : (a) [<TOP>](#)
Reason : Benefit cost ratio (BCR) of a project is the ratio between the present value of benefits and the initial investments. If the BCR is unity, the NPV of the project (the present value of the benefits minus initial investments) will be zero.
23. Answer : (b) [<TOP>](#)
Reason : Statement I is not true because in an aggressive financing policy for current assets the financing mix is tilted more towards short term sources of financing.
Statement II is true because risk of technical insolvency is high in aggressive current asset financing policy, as the debt servicing obligations are high in the short run.
Statement III is not true because cost of financing is usually low in aggressive current asset financing policy.
24. Answer : (e) [<TOP>](#)
Reason : The bond yield plus risk premium approach is used to find out the cost of equity capital. It is illogical to apply for finding out the cost of bonds because the basis of this approach is the yield or cost of the bond itself. The cost of preference capital is found out by discounting the preference dividends and redemption value, and the cost of term loan is found out by adjusting the nominal interest cost for tax. Generally there are no explicit costs associated with trade credit and there is no logical connection between the cost of trade credit and bond yields.
25. Answer : (a) [<TOP>](#)
Reason : Ageing schedule is used to monitor the status of the receivables. Outstanding creditors in the balance sheet indicate the position of accounts receivables but do not help to monitor the status of the same. Selection matrix, funds flow analysis and credit evaluation do not play any role in this respect.
26. Answer : (b) [<TOP>](#)
Reason : The ARR gives more weight to the later receipts than earlier receipts. Hence (b) is incorrect. The ARR considers accounting profits and not cash flows (c). It considers the profits over the entire life of the project (a) and it serves as a measure of profitability of the investment (d).
27. Answer : (d) [<TOP>](#)
Reason : A firm which undertakes trading business only will not have work-in-process (d) because work-in-process arises in the context of manufacturing firms. However such a firm will have the finished goods inventory (a), cash (b), receivables (c) if it sells goods on credit and prepaid expenses if it pays for some services like insurance in advance.
28. Answer : (d) [<TOP>](#)
Reason : Public deposit may be raised by a company by duly following certain norms as per the Companies Act. 1956 without the requirement of any collateral security. While in the other cases, security is to be provided compulsorily.
29. Answer : (c) [<TOP>](#)

Reason : Statement I is true by the definition of playing the float.

Statement II is true because $\text{Net float} = \text{Payment float} - \text{Collection float}$.

Statement III is not true because when the payment float is less than the collection float the cash balance in the books of the company is more than the cash balance in the books of the bank.

30. Answer : (d)

[<TOP>](#)

Reason : If delivery is not instantaneous EOQ gets modified through inclusion of safety stock. All other options (a), (b) and (c) result in decrease of EOQ.

31. Answer : (c)

[<TOP>](#)

Reason : The book values of the different sources of finances may not be related to their current economic values e.g. the land price may appreciate, the machine may become obsolete, etc. The reasons stated in the other options are the advantages of using book values as the basis of the weights for the calculation of the cost of capital.

32. Answer : (d)

[<TOP>](#)

Reason : Statement I is true because low degrees of uncertainty surrounding the cash flow projections implies that there will be less uncertainty surrounding the availability of cash from operations. Hence the firm may reduce the amount of cash (because it earns no return) and invest funds in liquid assets like marketable securities and intercorporate deposits which earn returns.

Statement II is not true because a conservative attitude, on the part of management, towards risk means that the firm will avoid investing its funds in intercorporate deposits which are unsecured instruments.

Statement III is true because a company which has access to non-bank sources of funds will not tend to keep idle cash and will invest its funds in intercorporate deposits and marketable securities which earn returns. Hence there will be a higher proportion of investment in intercorporate deposits and marketable securities.

33. Answer : (b)

[<TOP>](#)

Reason : Past and present consumption trends, Price and cross-elasticity of demand and production constraints are the issues to be considered market aspects of project appraisal. Impact of the project on the distribution of income in the society is issue to be considered under economic aspects of project appraisal. Availability of the required quality and quantity of raw materials and other inputs is the issue relating technical aspects of project appraisal. Hence alternative (b) is the answer.

34. Answer : (d)

[<TOP>](#)

Reason : As per the hypothesis if the dividend is declared in line with the expectations of investor the same is already reflected in the market price of the share hence does not affect the valuation of the firm. Other alternatives are not correct.

35. Answer : (e)

[<TOP>](#)

Reason : Economic Ordering Quantity is the quantity, which minimizes the total of ordering and carrying costs.

36. Answer : (a)

[<TOP>](#)

Reason : Under speculative motive, firms maintain cash balances in order to take advantage of opportunities that do not arise in the ordinary course of business. Hence, option (a) is correct.

Precautionary motive indicates the amount of cash maintained to meet some unexpected contingencies and transaction motive indicates the amount of cash that is maintained to meet the day-to-day transactions of the firm.

37. Answer : (b)

[<TOP>](#)

Reason : Under Walter's Model, the optional payout ratio will be 100% if the internal rate of return is less than the cost of capital as in such a situation the investor will have a better investment opportunity than the firm. Hence option (b) is the correct choice.

38. Answer : (b)

[<TOP>](#)

Reason : The ABC system segregates the inventory of a firm into three groups: A, B and C.

The C group consists of a large number of items accounting for a small rupee investment. Hence, (II) is true. The items under the group A have the largest rupee investment. Hence, statement (I) is incorrect. Control of A items should be most intensive. Hence, (III) is incorrect and answer is (b).

39. Answer : (c)

[<TOP>](#)

Reason : According to the traditional approach to dividend policy when the dividends increase the stock price increases and vice versa. Walter's model (a) on dividend policy explains the relationship between dividends and share price on the basis of the return on investment and the cost of capital. Gordon's model (b) on the dividend policy explains the relationship between dividends and share price on the basis of retention ratio and growth rate. Rational expectations model (d) states that the share price changes only when the dividends differ from the expectations. MM model (e) states that dividends have no impact on share price.

40. Answer : (c)

[<TOP>](#)

Reason : The average payment period is deducted from the gross operating cycle period, which is the total of the raw materials storage period, work-in-process period, finished goods period and receivables period. Hence, an increase in the payment period will cause a decrease in the net operating cycle period. All the other alternatives represent changes, which cause an increase in the operating cycle period.

41. Answer : (b)

[<TOP>](#)

Reason : Ex-rights value of a share = $\frac{NP_0 + S}{N+1}$

Where N is number of existing shares required for a rights share.

P_0 is the cum rights price per share

S is the subscription price

$$\therefore 140 \leq \frac{5 \times 145 + S}{5+1}$$

$$S \geq 140 \times 6 - 5 \times 145 \geq \text{Rs.}115.$$

Hence option (b) is the answer.

42. Answer : (e)

[<TOP>](#)

Reason : According to Walter's model on dividend policy.

$$P = \frac{D}{k_e} + \frac{r(E-D)/k_e}{k_e}$$

$$\therefore \therefore 80 = \frac{D}{0.15} + \frac{(0.12)(12-D)/0.15}{0.15}$$

$$\text{or } 80(0.15) = D + \left(\frac{0.12}{0.15}\right)(12-D)$$

$$\text{or } 12 = D + 0.8(12) - 0.8D$$

$$\text{or } 0.2D = 2.4$$

$$\text{or } D = \frac{2.4}{0.2} = \text{Rs.}12$$

$$\therefore \text{Dividend payout ratio should be} = \frac{D}{\text{EPS}} = \frac{12}{12} = 1 \text{ i.e., } 100\%$$

43. Answer : (b)

[<TOP>](#)

Reason : Existing cost to the company : Cost of iron slag + Ordering cost + Carrying cost

$$\begin{aligned} &= 100,000 \times 1230 \times (1-0.03) + \frac{100,000}{10,000} \times 340 + \frac{10,000}{2} \times 1230(1-0.03) \times 0.20 \\ &= 11,93,10,000 + 3,400 + 11,93,100 \\ &= 12,05,06,500 \end{aligned}$$

If the company switches to the new discount then the total cost would be

$$\begin{aligned} &= 100,000 \times 1230(1-0.06) + \frac{100,000}{20,000} \times 340 + \frac{20,000}{2} \times 1230(1-0.06) \times 0.20 \\ &= 11,56,20,000 + 1,700 + 23,12,400 \end{aligned}$$

$$= 11,79,34,100$$

So the total benefit to the company would be

$$12,05,06,500 - 11,79,34,100 = \text{Rs.} 25,72,400$$

44. Answer : (d)

[< TOP >](#)

Reason : Amount collected in the same month = $20\% \times 1,50,000 = \text{Rs } 30,000$
Amount collected from previous month's sale = $50\% \times 1,40,000 = \text{Rs.} 70,000$
Amount collected from the sales that occurred in the month of November = $30\% \times 1,20,000$

$$= \text{Rs. } 36,000.$$

Hence, the total cash receipts in the month of January

$$= 30,000 + 70,000 + 36,000 = \text{Rs.} 1,36,000.$$

Hence, the correct option is (d).

45. Answer : (c)

[< TOP >](#)

Reason : The cumulative cash inflow at the end of 4 years stand Rs.50,000 which is equal to initial investment.

46. Answer : (c)

[< TOP >](#)

Reason : The expected daily usage = $150 \times 0.25 + 250 \times 0.50 + 350 \times 0.25 = 250$ units and the expected lead time = $3 \times 0.30 + 4 \times 0.40 + 5 \times 0.30 = 4$ days.

So, the normal consumption during the lead time = $250 \times 4 = 1000$ units

Now, the probable situations may be presented in the following table as:

Daily Usage Rate (Units)		Lead Time (in days)		Possible levels of usage	
Units	Probability		Probability		Probability
150	0.25	3	0.30	450	0.0750
		4	0.40	600	0.1000
		5	0.30	750	0.0750
250	0.50	3	0.30	750	0.1500
		4	0.40	1000	0.2000
		5	0.30	1250	0.1500
350	0.25	3	0.30	1050	0.0750
		4	0.40	1400	0.1000
		5	0.30	1750	0.0750

The possibility of stock out will occur, if the probable level of usage exceeds 1000 units. It is only possible when the possible levels of usages are 1050, 1250, 1400 or 1750 units. The probability of its occurrence is $(0.075 + 0.150 + 0.100 + 0.075) = 0.40$

47. Answer : (c)

[< TOP >](#)

$$\begin{aligned} \text{Reason : Wealth ratio} &= 1 + \text{Rate of return} = 1 + \frac{D_1 + (P_1 - P_0)}{P_0} = \frac{D_1 + P_1}{P_0} \\ &= \frac{(0.25)(20) + 25}{30} = 1.00 \end{aligned}$$

48. Answer: (b)

[< TOP >](#)

$$\begin{aligned} \text{Reason: Tax advantage associated with debt capital} &= \left[1 - \frac{(1 - t_c)(1 - t_{ps})}{(1 - t_{pd})} \right] \times B \\ &= \left[1 - \frac{(1 - 0.3)(1 - 0.10)}{(1 - 0.125)} \right] \times 12,00,000 \\ &= \text{Rs. } 3,36,000. \end{aligned}$$

49. Answer : (a)

[< TOP >](#)

Reason : According to principle of costs and benefits of a project, allocated costs should be ignored and opportunity costs should be included. In the given case, allocated costs of Rs.1,00,000 should be added to PBT and Rs.50,000 should be deducted.

∴ NCF during year 2

$$= (\text{PBT} + 1 - 0.5) 0.6 + \text{Depreciation} + \text{Interest on TL} (1 - t) - \text{TL repayment}$$

$$= (15 + 1 - 0.5) 0.6 + 4 + 0.96 \times 0.6 - 2 = \text{Rs.11.876 lakh.}$$

50. Answer : (d)

[< TOP >](#)

Reason : Current market value of the firm = Rs.(49×85 + 222.60) million = Rs.4387.60 million

Market value after restructuring = Rs.(39 × 100 + 1072.60) million

$$= \text{Rs.4972.6 million}$$

∴ Value lost if the firm doesn't go for restructuring = Rs.(4972.6 – 4387.60) million
= Rs.585 million

51. Answer : (c)

[< TOP >](#)

Reason : Raw material storage period

$$\frac{\text{Average stock of raw materials}}{\text{Daily consumption of RMs}}$$

$$\text{Daily consumption of Raw Material} = \frac{6,51,000}{50} = \text{Rs.13,020}$$

$$\text{Annual consumption} = 13,020 \times 360 = \text{Rs.46,87,200}$$

$$\text{Annual consumption} = \text{Opening stock} + \text{purchases} - \text{closing stock}$$

$$\text{Average stock of Raw Material} = \frac{\text{Opening} + \text{Closing}}{2}$$

Where opening stock = S and Closing stock = 1.1 S

$$6,51,000 = \frac{S + 1.1S}{2}$$

$$S = \text{Rs.6,20,000} = \text{Opening stock}$$

$$\text{Closing stock} = \text{Rs.6,82,000}$$

$$\text{Annual consumption} = 6,20,000 + P - 6,82,000$$

$$46,87,200 = 6,20,000 + P - 6,82,000$$

$$P = 47,49,200$$

$$\text{Average payment period} = \frac{\text{Average balance of creditors}}{\text{Purchases} / 360} = \frac{2,65,000}{47,49,200 / 360} = 20 \text{ days}$$

52. Answer : (a)

[< TOP >](#)

Reason : The economic order quantity for MAL is $Q^* = \sqrt{\frac{2UF}{PC}} = \sqrt{\frac{2 \times 50,000 \times 1000}{120 \times 0.1}} = 2,886.75 = 2887 \text{ units}$

If the order quantity is 10,000 units, net incremental benefit over EOQ will be =

$$= UD + \left(\frac{U}{Q^*} - \frac{U}{Q^1} \right) \times F - \left[\frac{Q^1 (P - D) C - Q^* PC}{2} \right]$$

Here, U = 50,000 units, $Q^* = 2887$ units, $Q^1 = 10,000$ units, P=Rs.120, D = Rs.10 and C = 10 percent.

So, the net benefit =

$$50,000 \times 10 + \left(\frac{50,000}{2887} - \frac{50,000}{10,000} \right) \times 1000 - \left[\frac{10,000 \times 110 \times 0.1}{2} - \frac{2887 \times 120 \times 0.1}{2} \right]$$

$$= 5,00,000 + 12,319 - 37,678$$

$$= \text{Rs.} 4,74,641$$

Hence, the incremental benefit will be Rs.4,74,641

53. Answer : (b)

[<TOP>](#)

$$\frac{12(1-0.3) + \frac{(104-96)(1-0.3)}{10}}{\frac{104+96}{2}} = \frac{8.96}{100} = 8.96\%$$

Reason :

%

54. Answer : (d)

[<TOP>](#)

Reason : Existing cost of capital

$$k_0 = w_e k_e + w_d(1-T) k_d$$

$$k_0 = 0.5 \times 14 + 0.5 \times (1-0.4) \times 10 = 10$$

It debt to equity ratio changes to 0:1 then, it becomes all equity firm, hence, $k_0 = k_e = 14\%$

Therefore, increase in cost of capital = $14 - 10 = 4\%$.

55. Answer : (b)

[<TOP>](#)

$$\text{Reason : Average conversion period} = \frac{\text{Average stock of WIP}}{\text{Average daily cost of production}}$$

$$\text{Average stock of WIP} = \frac{\text{Opening WIP} + \text{Closing WIP}}{2}$$

Substituting the given values, we get

$$\text{Average stock of WIP} = \frac{x + 1.20x}{2} = 1.1x$$

Substituting the values in the formula, we get

$$5 = \frac{1.1x}{55} \Rightarrow x = 250 \text{ lakhs}$$

$\therefore$ Closing stock of WIP = Rs.300 lakh

56. Answer : (d)

[<TOP>](#)

$$\text{Reason : Annual interest cost} = \frac{\text{Discount rate}}{1 - \text{Discount rate}} \times \frac{360}{\text{Credit period} - \text{Discount period}}$$

$$= \frac{0.01}{1-0.01} \times \frac{360}{(30-10)} = 0.1818 \text{ i.e., } 18.18\%$$

57. Answer : (d)

[<TOP>](#)

$$\text{Reason : Cost of external equity} = \frac{D_1}{P_0(1-f)} + g$$

Where D_1 is the expected dividend per share.

P_0 is the current market price.

f is the floatation costs involved as a % of market price of is the growth rate in dividends

$$\begin{aligned}\text{Cost of external equity} &= \frac{6(1+0.08)}{80(1-0.04)} + 0.08 \\ &= 0.164375 \text{ i.e. } 16.4\%\end{aligned}$$

Hence option (d) is the correct choice.

58. Answer : (b)

[<TOP>](#)

$$\begin{aligned}\text{Reason : Average payment period} &= \frac{\text{Average balance of trade creditors}}{\text{Average daily purchase}} \\ \text{Average balance of trade creditors} &= \frac{\text{opening creditors} + \text{closing creditors}}{2} \\ &= 27,80,000 \\ \text{Average daily purchases} &= \frac{\text{Annual Credit Purchases}}{\text{Number of days in a year}} = \frac{86,94,300}{365} = 23,820 \\ \text{Average payment period} &= \frac{27,80,000}{23,820} = 116.71 \text{ days} \approx 117 \text{ days}\end{aligned}$$

59. Answer : (d)

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Reason : Let r be the IRR of the project.

$$\text{So, } 50 = \frac{16}{1+r} + \frac{17}{(1+r)^2} + \frac{15}{(1+r)^3} + \frac{23.5}{(1+r)^4}$$

At $r = 15$ percent, the right hand side of the above equation = 50.066.

So, approximately, the required IRR is 15 percent

60. Answer : (c)

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Reason : The market price per share is given by

$$P_0 = \frac{P_1 + D_1}{1 + k_e} \text{ where symbols are in standard use.}$$

If no dividends are declared

$$150 = \frac{P_1 + 0}{1.12}$$

$$P_1 = 168$$

Net Income = Rs.2 crore

Investments budget = Rs.4 crore

Amount to be raised by issue of new shares = Rs.2 crore

$$\therefore \text{Number of shares to be issued} = \frac{2,00,00,000}{168} = 1,19,048$$

61. Answer : (d)

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$$\begin{aligned}\text{Reason : Reorder level} &= S \times L + F \sqrt{S \times R \times L}, \text{ where the notations are in their standard use.} \\ &= 4000 \times 10 + 1.6 \times \sqrt{4000 \times 800 \times 10} \\ &= 49,050.9668 \approx 49,051 \text{ units.}\end{aligned}$$

62. Answer : (d)

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Reason :

Day		Books of Company (Rs.)	Book of the Bank (Rs.)	Float (Rs.)
23 rd June	Opening balance	19,000	27,000	8,000

	Cheque issued = Rs. 17,000 Cheque deposited = Rs. 23,000	19,000 + 23,000 – 17,000 = 25,000	27,000 + 0 – 0 = 27,000	8,000
24 th June	Cheque issued = Rs. 28,000 Cheque deposited = Rs. 33,000	25,000 + 33,000 – 28,000 = 30,000	27,000 + 0 – 0 = 27,000	– 3000
25 th June	Cheque issued = Rs. 34,000 Cheque deposited = Rs. 50,000	30,000 + 50,000 – 34,000 = 46,000	27,000 + 0 – 0 = 27,000	–19000
26 th	Cheque issued = Rs. 16,000 Cheque deposited = Rs. 40,000	46,000+40,000 – 16,000 = 70,000	27,000 + 23,000 – 0=50,000	–20,000
27 th	Cheque issued = Rs. 28,000 Cheque deposited = Rs. 25,000	70,000+25,000–28,000 = 67,000	50,000 + 33,000 – 0= 83,000	16,000
28 th	Cheque issued = Rs. 32,000 Cheque deposited = Rs. 15,000	67,000+15000–32000 = 50,000	83,000 +50,000– 17,000 = 116000	66,000
30 th	Cheque issued = Rs. 44,000 Cheque deposited = Rs.21,000	50,000 + 21,000 – 44,000 = 27,000	116000+40,000 – 28,000 = 1,28,000	101000
1 st	Cheque issued = Rs. 38,000 Cheque deposited = Rs. 35,000	27,000 + 35,000 – 38,000=24,000	1,28,000 + 25,000 – 34,000 = 1,19,000	95,000

So, the net float available to the company at the end of 30th June is Rs. 1,01,000

63. Answer : (c)

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Reason : Capitalization rate for the company,

$$k_0 = k_d \frac{B}{B+S} + k_e \frac{S}{B+S}, \text{ where the notations are in their standard use}$$

$$k_0 = 12 \times \frac{40}{40+60} + 15 \times \frac{60}{40+60} = 13.8\%$$

$$\text{Further, } k_0 = \frac{\text{Net operating income}}{\text{Market value of firm}} = 0.138$$

$$\Rightarrow \text{Net operating income} = 0.138 \times 100 = \text{Rs.13.8 lakhs.}$$

64. Answer : (e)

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Reason : The expected profit from granting the second credit to JEL, assuming the payment for the first order has been made by JEL, is :

$$0.95 \{0.98 \times 30,000 - 0.02 \times 270,000\} = 0.95 \times 24,000 = \text{Rs.22,800}$$

65. Answer : (b)

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Reason : The amount of raw materials consumed = Opening balance + Purchases during the year – Closing balance

$$= (90,000 + 5,96,000 - 1,06,000) = \text{Rs.5,80,000}$$

$$\text{The average stock of work in process} = (12,500 + 22,500)/2 = \text{Rs.17,500}$$

$$\begin{aligned} \text{Annual cost of production} &= \text{Opening work in process} + \text{Consumption of raw materials} + \\ &\quad \text{Manufacturing expenses} + \text{Depreciation} - \text{Closing work in process} \\ &= 12,500 + 5,80,000 + 6,40,000 + 50,000 - 22,500 = \text{Rs.12,60,000} \end{aligned}$$

So, the average daily cost of production = Rs.3,500

Hence, the average conversion period = $17,500/3,500 = 5$ days

66. Answer : (b)

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Reason : The share price for the company is given as:

Year	March 2001	March 2002	March 2003	March 2004
Share Price at the beginning (Rs.)	67.00	72.00	80.00	84.00
Share Price at the end (Rs.)	72.00	80.00	84.00	90.00
Dividend (Rs.)	1.80	2.40	3.20	4.50

From the above table, the wealth ratio is obtained as:

$$\begin{aligned}
 &= \left(\frac{D_t + P_t}{P_{t-1}} \right)_{2001} \times \left(\frac{D_t + P_t}{P_{t-1}} \right)_{2002} \times \left(\frac{D_t + P_t}{P_{t-1}} \right)_{2003} \times \left(\frac{D_t + P_t}{P_{t-1}} \right)_{2004} \\
 &= \left(\frac{1.80 + 72}{67} \right) \times \left(\frac{2.40 + 80}{72} \right) \times \left(\frac{3.20 + 84}{80} \right) \times \left(\frac{4.50 + 90.00}{84.00} \right) \\
 &= 1.1015 \times 1.1444 \times 1.09 \times 1.125 \\
 &= 1.5458
 \end{aligned}$$

$$\text{So the realized yield} = \left\{ (1.5458)^{1/4} - 1 \right\} \times 100\%$$

$$= 11.50\% \text{ (approximately)}$$

The required amount of realized yield = 11.50 percent

67. Answer : (c)

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$$\text{Reason : Weighted average pricing of the issue} = \frac{(200 \times 10) + (100 \times 12) + (200 \times 15)}{(200 + 100 + 200)} \times 200 = \text{Rs.2480.}$$

68. Answer : (a)

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Reason : Existing cost faced by SML of not paying within the discount period

$$\begin{aligned}
 &= \frac{\text{Rate of discount}}{1 - \text{Rate of discount}} \times \frac{360}{\text{Credit period} - \text{Discount period}} \\
 &= \frac{0.01}{(1 - 0.01)} \times \frac{360}{(45 - 10)} = 0.1039 \text{ i.e., } 10.39\%
 \end{aligned}$$

Given: Proposed discount = 2%

Discount period = 10 days

Minimum cost to SML of not paying within the discount period = $3 \times 0.1039 = 0.3117$ i.e., 31.17%.

Since the values of cash discount percentage and discount period are known, the only variable that can be modified is the credit period.

Let the modified credit period be 'C'.

$$\frac{0.02}{(1 - 0.02)} \times \frac{360}{(C - 10)} \geq 0.3117$$

$$\text{or } \frac{0.02}{0.98} \times \frac{360}{0.3117} \geq C - 10$$

$$\text{or } 10 + \frac{0.02 \times 360}{0.98 \times 0.3117} \geq C$$

or $C \leq 33.6$ days.

Hence MEL should allow a maximum credit period of 33 days to SML i.e. MEL should reduce the credit period by 12 days. (Here, 33.6 have not been rounded off to the higher integral value 34 because doing that will reduce the cost faced by SML below three times the cost as before. Hence 33.6 have been

rounded off to 33 days).

69. Answer : (d)

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Reason : Calculation of the breaking points:

Source	Cost (%)	Range (in Rs. lakh)	Breaking Point (Rs.in lakh)	Range of total new financing
Equity	14	0 -160	$160/0.40 = 400$	0 – 400
	15	160 - 320	$320/0.40 = 800$	400 - 800
	16	320 and above	–	800 and above
Preference Capital	12	0 – 100	$100/0.20 = 500$	0 – 500
	13	100 – 200	$200/0.20 = 1000$	500 – 1000
	14	200 and above		1000 and above
Term loan	8	0 – 120	$120/0.4 = 300$	0 – 300
	10	120 and above	-	300 and above

Here, the amount actually invested is Rs.900 lakh comprising of Rs.360 lakh of equity capital, Rs.180 lakh of preference capital and term loan of Rs.360 lakh.

Hence, the weighted cost of capital = $16 \times 0.4 + 13 \times 0.20 + 10 \times 0.40 = 13.00$ percent

70. Answer : (c)

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Reason : The annual output is 3 million kg or 3×10^6 kg. The set-up cost of each production run is Rs.10,000.

Price of the chemical = Rs.1200/kg.

Margin = 20%

$\therefore \therefore$ Cost of sales = $1200(1 - 0.2) = \text{Rs. } 960/\text{kg}$.

$\therefore \therefore$ Cost of carrying inventory = $960 \times 0.12 = \text{Rs. } 115.2$

$$\begin{aligned}
 \therefore \therefore \text{ Optimum quantity of production} &= \sqrt{\frac{2UP}{S}} \\
 &= \sqrt{\frac{2 \times 3 \times 10^6 \times 10000}{115.2}} \\
 &= 22821.77 \quad ; \quad 228.22 \text{ hundred kg}
 \end{aligned}$$

71. Answer : (d)

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Reason :

	Year	0	1	2	3	4	5
A	Net investment in new machine	(5,50,000)					
B	Saving in costs		3,00,000	3,00,000	3,00,000	3,00,000	3,00,000
C	Incremental Depreciation		79,000	79,000	79,000	79,000	79,000
D	Pre-tax profit		2,21,000	2,21,000	2,21,000	2,21,000	2,21,000
E	Taxes		77,350	77,350	77,350	77,350	77,350
F	Post-tax profit		1,43,650	1,43,650	1,43,650	1,43,650	1,43,650
G	Initial Cash flow	(5,50,000)					
H	Operating cash flow		2,22,650	2,22,650	2,22,650	2,22,650	2,22,650
I	Terminal cash flow						90,000
J	Net cash flow	(5,50,000)	2,22,650	2,22,650	2,22,650	2,22,650	3,12,650

So, the net cash flow during forth year is Rs. 2,22,650.

72. Answer: (b)

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Reason:
$$\text{Average conversion period} = \frac{\text{Average stock of work-in-process}}{\text{Average daily cost of production}}$$
$$\text{Average daily cost of production} = 55.75 \text{ lakh}/3$$
$$\text{Hence, annual cost of production} = 360 \times 55.75 \text{ lakhs}/3 = \text{Rs. } 6690 \text{ lakh.}$$

73. Answer: (c)

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Reason: The average collection period is defined as:

$$\frac{\text{Average Accounts Receivable}}{\text{Average daily credit sales}}$$

Here, the average daily credit sales, as targeted, is Rs.1440/360 = Rs. 4.00 lakh

Hence, the maximum amount of average accounts receivable for the year 2004 will be =Rs.4.00 lakh × 20 days = Rs.80 lakh

74. Answer: (d)

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Reason: The investor will dispose of his share holding in company

The amount realized by him = 9000×120 = Rs.10,80,000

The amount so realized by sale of shares in company S along with additional funds of Rs. 600,000 by borrowing@ 6%, i.e. Rs.16,80,000 will be invested in shares of company T @ Rs.100 each

Through the above shift, from company S to company T the investor will gain as follows:

$$\begin{aligned} \text{Present Income in S Ltd.} &= \frac{9000}{90,000} \times (18,00,000 - 3,60,000) \\ &= \text{Rs. } 1,44,000 \end{aligned}$$

$$\begin{aligned} \text{Proposed Income in T Ltd.} &= \left(\frac{16,800}{1,50,000} \times 18,00,000 \right) - 36,000 \\ &= 2,01,600 - 36,000 = \text{Rs. } 1,65,600 \end{aligned}$$

$$\text{Increase in Income} = 1,65,600 - 144,000 = \text{Rs. } 21,600$$

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