

Question Paper

Financial Management – II (MSF1B4): July 2007

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

1. Which of the following is/are **not true** with regard to cumulative preference shares?

[< Answer >](#)

- I. The rate of dividend is variable.
- II. The issuer has the option to buy back the preference shares at any time before maturity.
- III. All unpaid dividends are carried forward and are payable.
- IV. The preference shares are convertible into equity shares.

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

(1 mark)

2. Which of the following is/are **true** with respect to private placement of securities?

[< Answer >](#)

- I. It involves selling out a significant portion of securities to an investor or a group of investors with a view to make a public issue within an agreed time frame.
- II. It involves fewer procedural formalities.
- III. It enables the companies to have faster access to funds.

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

(1 mark)

3. 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)

4. Which of the following statements is/are **true** as per the Net Operating Income Approach?

[< Answer >](#)

- I. Overall capitalization rate remains constant for all degrees of leverage.
- II. Cost of equity remains constant for all degrees of leverage.
- III. Cost of equity is a constant linear function of the debt-equity ratio.
- IV. Cost of debt remains constant for all degrees of leverage.

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

(1 mark)

5. Which of the following statements is **true** with respect to the capital structure theories?

[< Answer >](#)

- (a) According to net income approach, the costs of equity and debt remain constant irrespective of the degree of leverage
- (b) As per the traditional approach, the overall cost of capital for a firm remains same for all degrees of leverage
- (c) A firm should choose the debt-equity ratio in such a way that it will minimize the tax liability
- (d) The higher the degree of leverage, the lower the risk to the equity shareholders
- (e) According to the net operating income approach, the overall cost of capital increases as the degree of leverage increases.

(1 mark)

6. Which of the following is/are features of an optimal capital structure?

[< Answer >](#)

- I. The company should make minimum use of leverage to entail minimum cost.
- II. The company should be flexible to be able to meet the changing conditions.
- III. The capital structure should involve maximum dilution of control.

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

(1 mark)

7. Which of the following statements is **not true** with respect to the bankruptcy costs?

[< Answer >](#)

- (a) If the probability of bankruptcy is very high then, assets are likely to be sold at a significant discount to their true economic values
- (b) Bankruptcy entails high legal and administrative costs
- (c) Other things remaining the same the probability of bankruptcy is lower for a levered firm than for an unlevered firm
- (d) The equity shareholders expect a higher rate of return from a firm which is faced with the prospect of bankruptcy
- (e) Beyond a threshold level, the probability of bankruptcy increases at an increasing rate as the debt-equity ratio increases.

(1 mark)

8. According to which approach to dividend policy, the stock price increases as dividend increases and the stock price decreases as dividend decreases?

[< Answer >](#)

- (a) Walter's model
- (b) Gordon's model
- (c) Traditional approach
- (d) Rational expectations model
- (e) Miller and Modigliani approach.

(1 mark)

9. Which of the following is **not** an assumption made under the Modigliani and Miller approach for explaining the irrelevance of dividends policy for a firm?

[< Answer >](#)

- (a) Existence of perfect capital markets
- (b) Non-existence of differential tax rates for the dividend income and capital gains
- (c) Non-influence of single investor on the share value
- (d) Absence of transaction costs
- (e) Higher growth rate of dividends compared to cost of equity capital.

(1 mark)

10. The internal rate of return of M/s ABC Ltd. is 12%. Its equity capitalization rate is 13%. According to Walter's model, which of the following is/are **not true** in case of the firm?

[< Answer >](#)

- I. The price of the share will decrease with an increase in the dividend payout ratio.
- II. The price of the share will not be affected by the dividend payout ratio.
- III. The optimal dividend payout ratio is 100%.
- IV. The price of the share will remain constant up to a certain level and will then decrease with an increase in the dividend payout ratio.

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

(1 mark)

11. Which of the following is **not** an assumption under Gordon's Dividend Capitalization Model?

[< Answer >](#)

- (a) The cost of equity capital for the firm remains constant
- (b) The growth rate of the company remains constant
- (c) The firm has an infinite life
- (d) The new investment proposals will be financed by issuing external equity
- (e) The return on investment for the firm remains constant.

(1 mark)

12. The relationship between market price (P) and dividend per share (D) as per Traditional Approach is: (where E is the earnings per share and m is a multiplier chosen arbitrarily)

[< Answer >](#)

- (a) $P = 3m(D + E/4)$

- (b) $P = m(D + E)/3$
- (c) $P = m(D/3 + E)$
- (d) $P = m/3 (3D + E)$
- (e) $P = mD/3 + E.$

(1 mark)

[< Answer >](#)

13. Which of the following statements is **true** with respect to overtrading?

- (a) The firm has disproportionately high amount of working capital with respect to the level of sales
- (b) The firm has disproportionately low amount of working capital with respect to the level of sales
- (c) The firm has disproportionately high level of receivables with respect to total assets
- (d) The firm has disproportionately high level of cash with respect to total assets
- (e) The firm has been experiencing low turnover of working capital.

(1 mark)

[< Answer >](#)

14. Which of the following is **not** a source of long-term finance?

- (a) Secured Premium Notes
- (b) Fully Convertible Debentures
- (c) Cumulative Preference Shares
- (d) Commercial Paper
- (e) Lease Arrangement.

(1 mark)

[< Answer >](#)

15. Which of the following is/are **true** with regard to the working capital financing policy of a company?

- I. Working capital margin is generally provided by the short term borrowing by a company.
- II. Negative net working capital implies that short term funds are used to finance long term assets.
- III. A company that follows conservative working capital management policy generally maintains a very low current ratio in comparison to its peers.
- IV. Time value of money must be considered for the estimation of the working capital needs.

- (a) Only (I) above
- (b) Only (II) above
- (c) Both (I) and (II) above
- (d) Both (II) and (III) above
- (e) Both (III) and (IV) above.

(1 mark)

[< Answer >](#)

16. Which of the following is/are **not true** with regard to cash credit offered by a bank?

- I. The customer is charged interest on the amount actually utilized subject to some minimum service charge.
- II. The customer is allowed to borrow the entire funds under the cash credit limit.
- III. No security is required from the customer against the borrowed amount.

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

(1 mark)

[< Answer >](#)

17. Which of the following types of factoring offers short-term finance, sales ledger administration as well as credit protection simultaneously?

- (a) Recourse factoring
- (b) Non-recourse factoring
- (c) Maturity factoring
- (d) Invoice factoring
- (e) Bulk factoring.

(1 mark)

[< Answer >](#)

18. Which of the following is **not true** with respect to the ABC system of inventory management?

- (a) It is a very selective approach to inventory management
- (b) It facilitates a better control on the costlier items
- (c) It helps the beginners to learn the various techniques of inventory management
- (d) It helps the usage of the scientific system for the inventory management
- (e) It helps to maintain the optimum level of stocks.

(1 mark)

[< Answer >](#)

19. Other things remaining constant, which of the following decreases the economic order quantity for a firm?

- (a) An increase in carrying cost as a percentage of unit price
- (b) An increase in the fixed ordering cost per order

- (c) An increase in the purchase price of the inventory items
- (d) Increase in the delivery time of the materials
- (e) Availing the discount for purchasing the materials.

(1 mark)

20. Which of the following **does not** form part of the total carrying costs?

[< Answer >](#)

- (a) Cost of insurance
- (b) Rent of warehouse
- (c) Salaries of storekeeper
- (d) Cost of obsolescence
- (e) Cost of transportation of materials ordered for.

(1 mark)

21. Which of the following statements about stock-out acceptance factor is/are **true**?

[< Answer >](#)

- I. It depends on the stock-out percentage specified.
- II. Other things remaining the same, an increase in the stock-out acceptance factor would increase the reorder point.
- III. It depends on the probability distribution of usage that is assumed to follow a binomial distribution.

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

(1 mark)

22. Komal Projects Ltd. is planning to invest in a new plant. The initial investment is expected to be Rs.250 lakh, and the plant is expected to generate after-tax cashflows of Rs.30 lakh a year for the next 20 years. There will be an additional investment of Rs.100 lakh needed to upgrade the plant in the tenth year. If the discount rate is 10%, the NPV of the project is

[< Answer >](#)

- (a) – 33.18 lakh
- (b) – 42.54 lakh
- (c) 25.35 lakh
- (d) 33.18 lakh
- (e) 40.67 lakh.

(1 mark)

23. If the average daily usage of material is 150 units, lead time for procuring materials is 25 days, average number of units per order is 3,000 units and the reorder level is 10,000, the stock-out acceptance factor is

[< Answer >](#)

- (a) 1.06
- (b) 1.26
- (c) 1.36
- (d) 1.56
- (e) 1.86.

(1 mark)

24. The finance department of Jagan Electronics Ltd. provides the following information:

[< Answer >](#)

The carrying costs per unit of inventory are Rs.10.

The fixed costs per order are Rs.20.

The number of units required is 30,000 per year.

The total number of orders in a year and the time gap between two orders is

- (a) 74 orders; 4 days
- (b) 87 orders; 4 days
- (c) 87 orders; 6 days
- (d) 92 orders; 6 days
- (e) 92 orders; 7 days.

(2 marks)

25. Which of the following is/are **true**?

[< Answer >](#)

- I. If credit standards are made more stringent, sales are likely to decrease and less amount of money will be locked up in receivables.
- II. If credit period is lengthened, sales are likely to increase but bad debt losses are likely to decrease.
- III. If cash discount is increased, discount paid is likely to increase and amount of receivable is likely to reduce.

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

(1 mark)

26. Which of the following is **not** a relevant factor in an efficient cash management system for a business entity?

[< Answer >](#)

- (a) Billing promptly and thereafter mailing the same to the customers
- (b) Collection of receivables from the branch level
- (c) To deposit the cheques immediately to the bank on receiving the same from the customers
- (d) Payment of interest on term loans whenever it is due
- (e) Making a centralized payment system for the suppliers.

(1 mark)

27. Which of the following represents the pattern of collections associated with credit sales?

[< Answer >](#)

- (a) Day's sales outstanding
- (b) Ratio analysis
- (c) Average collection period analysis
- (d) Collection matrix
- (e) Ageing schedule.

(1 mark)

28. Which of the following statements is/are **not true**?

[< Answer >](#)

- I. 'Collection float' indicates the amount of cheques issued by a company, awaiting payment by the bank.
- II. If the collection float is more than the payment float, the company is said to have positive net float.
- III. When the bank balance as per the books of the company is less than that in the bank's books, the company can play the float.

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

(1 mark)

29. When the net float is negative, which of the following statements is **true**?

[< Answer >](#)

- (a) The company has used the short term sources of funds for financing long term assets
- (b) The current ratio is less than unity
- (c) The payment float is larger than the collection float
- (d) The balance in the books of the bank is less than the balance in the books of the firm
- (e) The outstanding debtors are more than the outstanding creditors.

(1 mark)

30. Which of the following statements is **true** if the Net Present Value (NPV) of a project is greater than one?

[< Answer >](#)

- (a) The pay-back period of the project is less than one year
- (b) The discount rate is equal to the risk free rate of return
- (c) Benefit cost ratio is less than unity
- (d) Internal Rate of Return (IRR) is greater than the cost of capital
- (e) Accepting the project has an indeterminate effect on shareholders.

(1 mark)

31. Which of the following is **false** with regard to the accounting rate of return as an appraisal criterion for projects?

[< Answer >](#)

- (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 cash flows
- (d) It serves as a measure of profitability of the investment
- (e) Profitability measure based on the accounting rate of return is not a reliable criterion.

(1 mark)

32. Which of the following is/are **true** if the internal rate of return on a project is same as the cost of capital?

[< Answer >](#)

- (a) Net benefit cost ratio of the project is equal to zero
- (b) Net benefit cost ratio of the project is negative
- (c) Net present value of the project is positive
- (d) Net present value of the project is negative
- (e) The project provides excess returns to the equity shareholders.

(1 mark)

33. The economic appraisal of projects assesses the costs and benefits arising out of the project, from the point of view of the

[< Answer >](#)

- (a) Shareholders
- (b) Short-term lenders
- (c) Long-term lenders

- (d) Society as a whole
(e) Suppliers.

(1 mark)

[< Answer >](#)

34. Which of the following is/are **true** with regard to the Internal Rate of Return (IRR)?

- I. It considers the cash flows over the entire project life.
II. It considers the time value of money.
III. It is the rate of return at which the present value of benefits is equal to the present value of costs.
IV. It is uniquely defined in case of projects which entail cash inflows and outflows that are interspersed with each other.

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

(1 mark)

[< Answer >](#)

35. The finance manager of Kavitha Industries Ltd. is analyzing a project with a life of 5 years, which requires an initial investment in equipment and machinery of Rs.100 lakh. The equipment is expected to have a 5-year lifetime and have no salvage value and is to be depreciated on straight line basis. The project is expected to generate revenues of Rs.40 lakh each year for the 5 years and have operating expenses (not including depreciation) amounting to 30% of revenues. The tax rate and the cost of capital are 40% and 11% respectively. The after-tax operating cash flow each year on this project and its profitability index respectively are

- (a) Rs.20.4 lakh; 0.75
(b) Rs.24.8 lakh; 0.75
(c) Rs.24.8 lakh; 0.92
(d) Rs.30.6 lakh; 0.92
(e) Rs.34.8 lakh; 1.00.

(2 marks)

[< Answer >](#)

36. Given below are three mutually exclusive projects with the following cash flows to the firm:

Year	Project A	Project B	Project C
0	–Rs.10,000	–Rs. 5,000	–Rs.18,000
1	Rs. 8,000	Rs. 5,000	Rs.10,000
2	Rs. 7,000	Rs. 8,000	Rs.10,000

The cost of capital is 12%.

Which of the following statements is **true**?

- (a) Project A is to be selected when NPV is used as the appraisal criteria
(b) Project B is to be selected when either NPV or the BCR criteria is used
(c) Project C should be selected as NPV and BCR of project C are the highest
(d) NPV of project A is less than that of project B but its BCR is the highest among the three
(e) NPV and BCR of project A are the highest among the three and hence it should be accepted.

(2 marks)

[< Answer >](#)

37. Suman Enterprises Ltd. is evaluating a project which requires an initial investment of Rs.40 lakh and generates the following cash flows for four years:

(Rs.)	
Year	Cash flows
1	20,00,000
2	15,00,000
3	12,50,000
4	10,00,000

The IRR of the project is

- (a) 14.64%
(b) 16.57%
(c) 18.00%

- (d) 18.96%
(e) 22.71%.

(2 marks)

38. Lohit Motors Ltd. is considering an asset which requires a cash outlay of Rs.50,00,000 and has an economic life of five years. If the company provides depreciation of 30% on written down value method, the book value of the asset at the end of 5th year is [< Answer >](#)

- (a) Rs. 7,50,000
(b) Rs. 8,40,350
(c) Rs.10,50,000
(d) Rs.12,00,000
(e) Rs.15,00,000.

(1 mark)

39. Moolika Pharamceuticals Ltd. is evaluating a new air condition system which is expected to have an economic life of six years. The initial outlay and annual operating costs associated with this system are as follows: [< Answer >](#)

Year	0	1	2	3	4	5	6
Costs	15,00,000	1,00,000	1,10,000	1,25,000	1,10,000	1,30,000	2,00,000

If the cost of capital is 12%, the annual capital charge associated with the system is

- (a) Rs.3,87,690.50
(b) Rs.4,45,362.40
(c) Rs.4,89,162.80
(d) Rs.5,03,456.50
(e) Rs.5,84,562.80.

(1 mark)

40. United Press India Ltd. (UPIL) currently uses a machine whose book value is Rs.12 lakh and has a remaining useful life of 5 years and a salvage value of Rs.2 lakh at the end of the useful life. [< Answer >](#)

UPIL is proposing to replace the machine by a new machine costing Rs.20 lakh and has a useful life of 5 years and salvage value of Rs.4 lakh at the end of 5 years. The new machine is expected to reduce the annual operating costs by Rs.50,000 and increase the annual income by Rs.1,00,000. The old machine can be sold at Rs.9 lakh. UPIL uses straight line depreciation and is in the tax bracket of 40%.

The initial investment and the net incremental cash flow in the 5th year respectively are

- (a) – Rs.20 lakh, Rs.3.38 lakh
(b) – Rs.11 lakh, Rs.3.38 lakh
(c) – Rs.11 lakh, Rs.4.10 lakh
(d) – Rs.20 lakh, Rs.2.10 lakh
(e) – Rs.11 lakh, Rs.2.10 lakh.

(2 marks)

41. Consider the following data regarding a product: [< Answer >](#)

Total cost of ordering and carrying inventory	Rs.785
Annual Usage of the material	15,000 units
Carrying cost	2% of the purchase price
Fixed cost per order	Rs.95
Purchase price	Rs.10

The quantity per order is

- (a) 1,000 units
(b) 2,000 units
(c) 4,000 units
(d) 5,000 units
(e) 7,500 units.

(2 marks)

42. Mr. Uday Kiran, Stores Manager of Hyderabad Industries Ltd. is worried about the stock level of rollers to be maintained. Total 20,000 of these rollers are being used in the factory. The normal consumption during the lead time is 2,760 units. The lead time consumption exceeding the normal consumption level with the respective probabilities are as follows: [< Answer >](#)

Lead time consumption (units)	Probability
6000	0.09
4200	0.18

3000	0.15
2800	0.10
	0.52

If the stock-out cost is estimated to be Rs.10 per unit and the carrying cost for the period under consideration is Rs.3 per unit then the optimum reorder level would be

- (a) 2,100 units
- (b) 2,800 units
- (c) 3,000 units
- (d) 4,200 units
- (e) 6,000 units.

(2 marks)

43. Govind Electrical Industries Ltd. needs 1,20,000 pieces of aluminum bars to produce switchgears. The price of each bar is Rs.200, cost of placing an order is Rs.2,400 and the carrying cost is 2 percent. The purchase manager has set the economic order quantity based on the EOQ model, as 24,000 units. Recently, a supplier has offered discounts of 6 percent against an order size of 40,000 units or more. What will be the incremental benefit to the company, if such discount is availed?

[< Answer >](#)

- (a) – Rs. 9,50,600
- (b) – Rs.12,17,600
- (c) Rs.10,37,600
- (d) Rs.14,17,600
- (e) Rs.16,54,600.

(2 marks)

44. The following information is given about the debentures issued by M/s. X Ltd.:

[< Answer >](#)

Face Value	Rs.100
Rate of interest	12% p.a.
Amount realized per debenture	Rs.98
Corporate tax rate	40%

Debenture is redeemable at a premium of 5% after 6 years. The difference between the redemption price and the net amount realized can be written off over the life of the debenture and the amount so written off is tax-deductible. The cost of debenture capital is

- (a) 4.56%
- (b) 6.45%
- (c) 6.67%
- (d) 7.78%
- (e) 5.32%.

(1 mark)

45. Kumar Enterprises Ltd. is considering raising new capital for its plant expansion purposes. The following details are available regarding the long term sources of finance of Kumar Enterprises Ltd.:

[< Answer >](#)

Source of finance	Range of new financing from the source (Rs. crore)	Cost %
Equity	0 – 10	14
	10 – 20	15
	20 & above	16
Preference	0 – 2	13
	2 & above	14
Debt	0 – 12	8
	12 – 18	9
	18 & above	10

The company is considering to expand its operations and requires Rs.50 crore for the same. It is planning to raise in the following proportions:

Equity shares	0.4
Debt	0.4
Preference shares	0.2

The weighted marginal cost of newly financed capital of Rs.28 crore is

- (a) 11.4%
- (b) 12.0%
- (c) 12.8%
- (d) 13.0%
- (e) 13.2%.

(2 marks)

46. The current market price of the shares of Kamal Auto India Ltd. (KAIL) is Rs.45. The company recently paid a dividend of Rs.3.00 per share that is expected to grow at a rate of 8 percent. If the issue expenses are 3 percent of the current market price, the cost of retained earnings and the cost of external equity to KAIL? [< Answer >](#)
- (a) 12.34%; 13.00%
 (b) 12.34%; 13.67%
 (c) 13.02%; 14.34%
 (d) 15.02%; 15.32%
 (e) 15.20%; 15.42%.

(2 marks)

47. The following figures are taken from the current Balance sheet of Puma Software Ltd. [< Answer >](#)

	(Rs.)
Share capital	8,00,000
Share premium	2,00,000
Reserves	6,00,000
Shareholders' funds (Face value = Rs.10)	16,00,000
12% Irredeemable debentures (Face value = Rs.100)	4,00,000

An annual ordinary dividend of Rs.2 per share has been paid during the recently ended financial year. The dividends are expected to grow at a rate of 10% per annum. Annual interest has been recently paid on the debentures. The company falls in the tax bracket of 40%. The ordinary shares are currently quoted at Rs.27.5 and the debentures are selling at Rs.80. The weighted average cost of capital for the company (based on market values) is

- (a) 15.04%
 (b) 16.62%
 (c) 17.04%
 (d) 18.12%
 (e) 18.76%.

(2 marks)

48. Indhra Enterprises Ltd. is considering the most desirable capital structure for their company. The finance manager of the company has made the following estimates of the cost of debt capital (after tax) have been made at various levels of debt-equity mix: [< Answer >](#)

Debt as percentage of total capital employed	Cost of debt	Cost of equity
0	7.0	15.0
10	7.0	15.0
20	7.0	15.5
30	7.5	16.0
40	8.0	17.0
50	8.5	19.0
60	9.5	20.0

Which of the following debt equity ratios is ideal for the firm?

- (a) 1
 (b) 1/2
 (c) 1/3
 (d) 2/3
 (e) 2/5.

(2 marks)

49. The expected EBIT of Surya Technologies Ltd. is Rs.2,00,000. The firm has recently issued 8% debentures of Rs.5,00,000. The shareholders' required rate of return is 10%. Value of the firm and the overall cost of capital as per Net Income Approach is [< Answer >](#)
- (a) Rs.18 lakh; 8.0%
 (b) Rs.18 lakh; 8.5%
 (c) Rs.21 lakh; 9.0%
 (d) Rs.21 lakh; 9.5%
 (e) Rs.25 lakh; 10.0%.

(2 marks)

50. Likhita Enterprises Ltd. is an unlevered firm with an equity capitalization rate of 20%. The company presently has 22,500 equity shares of Rs.10 each. The company proposes to issue Rs.5,00,000 worth 15% debentures during the next year. If its [< Answer >](#)

plan is implemented the market price of the share is expected to go up to Rs.20 per share. Assuming Net Operating Income approach for capital structure holds good, what is the cost of equity of the firm if it issues debentures?

- (a) 18.00%
- (b) 20.00%
- (c) 24.00%
- (d) 25.56%
- (e) 27.56%.

(2 marks)

51. ABC Ltd. is an unlevered firm having total assets of Rs.50,00,000 (all represented by equity) and the firm's equity capitalization rate is 10%. The firm has an EBIT of Rs.10,00,000 subject to corporate tax @ 40%. There is another firm XYZ Ltd. also having assets of Rs.50,00,000 and alike in all respects of ABC Ltd. except that XYZ Ltd. has issued 8% debt of Rs.20,00,000. The value of the firm XYZ Ltd. as per MM hypothesis and its overall capitalization rate respectively are

[< Answer >](#)

- (a) Rs.56 lakh; 8.82%
- (b) Rs.68 lakh; 8.82%
- (c) Rs.68 lakh; 10.42%
- (d) Rs.75 lakh; 10.42%
- (e) Rs.82 lakh; 12.82%.

(2 marks)

52. Consider the following data for Kiwi Industries Ltd.

[< Answer >](#)

Earnings Per Share (EPS)	Rs.15
Dividend Payout Ratio	40%
Equity Capitalization Rate	14%
Rate of Return on Investments	15%

If the number of shares outstanding for the firm is 5,00,000 the market value of equity of the firm as per Walter's model for dividend policy is

- (a) Rs.514.3 lakh
- (b) Rs.534.3 lakh
- (c) Rs.558.7 lakh
- (d) Rs.574.3 lakh
- (e) Rs.598.3 lakh.

(2 marks)

53. The dividend payout ratio of a firm is 50%. The firm follows traditional approach to dividend policy with a multiplier of 12. If the firm reported a net profit of Rs.10 lakh during the recently ended financial year and has 2 lakh equity shares outstanding, the price of the company's share is

[< Answer >](#)

- (a) Rs.22.0
- (b) Rs.29.0
- (c) Rs.33.5
- (d) Rs.40.5
- (e) Rs.50.0.

(2 marks)

54. The following information is collected from the annual reports of GK Enterprises Ltd.:

[< Answer >](#)

EBIT	Rs.3.0 crore
Interest	Rs.0.5 crore
Tax rate	40 percent
Retention ratio	40 percent
Number of outstanding shares	50,00,000
Equity capitalization rate	12 percent
Rate of return on investment	15 percent

What should be the dividend yield on the company's share as per Gordon's model on dividend policy?

- (a) 4%
- (b) 5%
- (c) 6%
- (d) 8%
- (e) 10%.

(2 marks)

55. The market values of debt and equity of a firm are Rs.100 lakh and Rs.200 lakh respectively while the costs of equity and debt are 12 percent and 9 percent respectively. Assume that the firm maintains 100 percent dividend payout ratio and no taxes are present. What is the net profit for the firm as per the Net Operating Income (NOI) approach?

[< Answer >](#)

- (a) Rs.15 lakh
- (b) Rs.18 lakh
- (c) Rs.25 lakh
- (d) Rs.33 lakh
- (e) Rs.40 lakh.

(2 marks)

56. Delta Industries Ltd. had 10 lakh equity shares outstanding at the beginning of July 2007 and these shares are traded on the NSE of India at Rs.150 each. The capitalization rate appropriate to the risk class to which the firm belongs is 12%. The net income for the year is Rs.2 crore. The firm is planning to take up new projects for which the investment budget is Rs.4 crore. If the company pays no dividend for the year and the additional fund requirement is entirely financed by new issue of equity shares. If Modigliani-Miller hypothesis for dividends holds good the number of equity shares to be issued by the company is [< Answer >](#)

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

(2 marks)

57. Consider the following information about Mayuri Industries Ltd.: [< Answer >](#)

Opening balance of accounts receivable	Rs.10,00,000
Closing balance of accounts receivable	Rs.15,00,000
The average collection period	10 days

Assuming 360 days in a year, the annual credit sales for the company are

- (a) Rs.225 lakh
- (b) Rs.345 lakh
- (c) Rs.400 lakh
- (d) Rs.450 lakh
- (e) Rs.520 lakh.

(2 marks)

58. The cost incurred by M/S Tasty Foods Ltd. for making the payment after 15th day but before 45th day is 25%. If it is assumed that there are 360 days in a year, what is the rate of discount offered by the supplier for the company if it paid before 15th day? If the supplier increases the rate of discount by another 1%, what would the implicit cost of trade credit to the company? [< Answer >](#)

- (a) 0.5%; 25%
- (b) 1.0%; 25%
- (c) 1.5%; 37%
- (d) 2.0%; 37%
- (e) 2.0%; 46%.

(2 marks)

59. The following information is furnished about Goel Confectioneries for the current financial year: [< Answer >](#)

Gross operating cycle	145 days
Annual credit purchases	Rs.3,60,000
Opening balance of Accounts payable	Rs.60,000
Closing balance of Accounts payable	Rs.90,000

Next year, the firm expects that the raw material storage period would increase by 15 days, work-in-process conversion period would decrease by 10 days, finished goods storage period would increase by 5 days, average collection period would improve by 20 days and the average payment period would decrease by 10 days. Considering the above changes, what would be the change in the net operating cycle of the company?

- (a) Zero
- (b) Decreases by 5 days
- (c) Decreases by 10 days
- (d) Increases by 10 days
- (e) Increases by 40 days.

(2 marks)

60. The current assets of a company are Rs.1,290 lakh, current liabilities (other than bank borrowings) are Rs.610 lakh, and bank borrowings are Rs.614 lakh. The Maximum Permissible Bank Finance (MPBF) under the methods I and II of the Tandon committee respectively are [< Answer >](#)

- (a) Rs.424.68 lakh and Rs.247.30 lakh
- (b) Rs.510.00 lakh and Rs.222.46 lakh
- (c) Rs.510.00 lakh and Rs.247.30 lakh
- (d) Rs.510.00 lakh and Rs.357.50 lakh
- (e) Rs.631.34 lakh and Rs.247.30 lakh.

(2 marks)

61. Gangotri Enterprises Ltd. plans to sell 30,000 units of its products during the next year. The expected cost of goods sold is [< Answer >](#) as follows:

	Rs.(per unit)
Raw material	100
Manufacturing expenses	30
Selling, administration and financial expenses	20
Selling price	200

The duration at various stages of the operating cycle is expected to be as follows:

Raw material stage	2 months
Work-in-progress stage	1 month
Finished goods stage	½ month
Debtors stage	1 month

Assuming a monthly sales level of 2,500 units, which of the following represents the gross working capital requirement if the desired cash balance is 5% of the gross working capital requirement, and work-in-progress is 50% complete with respect to manufacturing expenses?

- (a) Rs.14,78,450
- (b) Rs.15,02,550
- (c) Rs.15,26,316
- (d) Rs.15,67,550
- (e) Rs.16,02,550.

(2 marks)

62. Other things remaining the same, if the average daily consumption of raw materials is increased to two times its original level, then the raw materials storage period [< Answer >](#)
- (a) Reduces to half of the original period
 - (b) Increases to two times the original period
 - (c) Reduces unpredictably
 - (d) Increases to four times the original period
 - (e) Reduces to one-fourth of the original period.

(1 mark)

63. The following table contains the amount of cheques issued and the amount of cheques deposited in the bank by a company [< Answer >](#) from 25th June 2007 to 30th June 2007:

Date	25, June	26, June	27, June	28, June	29, June	30, June
Amount of cheques issued (Rs.)	17,000	28,000	34,000	16,000	28,000	32,000
Amount of cheques deposited in bank (Rs.)	23,000	33,000	50,000	40,000	25,000	15,000

On an average, cheque issued by the company takes five days for actual payment and a cheque deposited by the company is realized after three days. On the morning of 25th 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 net float available to the company at the end of June 30, 2007 is

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

(3 marks)

64. The sales figures for Joshi Foods Ltd. in the second quarter of 2007 are expected to be as follows: [< Answer >](#)

Month	Sales in (Rs.)
July 2007	75,000
August 2007	87,500
September 2007	93,750

80% of the sales in each month are credit sales. 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 expected cash receipts from sales in the month of September 2007 will be

- (a) Rs.55,000
- (b) Rs.35,000
- (c) Rs.60,000
- (d) Rs.68,000
- (e) Rs.86,750.

(2 marks)

65. Anand Industries Ltd. has planned its sales during July – September 2007 as follows:

[< Answer >](#)

Month	July	August	September
Sales (Rs.)	5,00,000	6,00,000	6,50,000

The following additional information is available:

- (i) The products are sold on credit where 50 percent is realized in the month of sale whereas the rest portion is recovered by the next month.
- (ii) The purchases (amounting to 50% of the month's sales) are paid in the following month of purchase. Wages and administrative expenses per month amount to Rs.1,50,000 and Rs.80,000 respectively and are paid in the following month in which they are incurred.
- (iii) Depreciation and amortization of preliminary expenses amount to Rs.80,000 and Rs.50,000 respectively. On July 1, a testing equipment worth of Rs.20,000 has been procured with a credit period of 45 days while on September 30, a fixed deposit will mature (maturity value Rs.1,50,000).
- (iv) The closing cash balance on July 31, 2007 is Rs.1,00,000.

The closing cash balance by the end of the August 2007 would be

- (a) Rs. 20,000
- (b) Rs.1,50,000
- (c) Rs.2,10,000
- (d) Rs.2,60,000
- (e) Rs.3,00,000.

(2 marks)

66. The cum-rights price per share is Rs.48 and the theoretical value of the right is Rs.4. The subscription price at which the rights are issued is Rs.36 per share. The number of existing shares required for a rights share is

[< Answer >](#)

- (a) One
- (b) Two
- (c) Three
- (d) Four
- (e) Five.

(1 mark)

67. Presently Geeta Enterprises Ltd. sells 30,000 units of jet pumps at an average price of Rs.28,000 per unit. The contribution to sales ratio is 10%. The credit terms of the company are 1/20, Net 30. 10% of the customers avail the discount and the average collection period is 30 days. The bad-debts to sales ratio is 0.15%.

[< Answer >](#)

In order to improve the sales level, the finance manager has suggested changing the credit terms to 2/10, Net 30. With the new policy, sales are expected to increase by 4000 units and 40% of the old customers and 60% of the new customers are expected to avail the discount. The average collection period and bad debt to sales ratio are expected to remain the same. The cost of capital of the company is 15%.

The net benefit accruing to the firm if it implements the new policy would be

- (a) – Rs.15.00 lakh
- (b) – Rs.23.56 lakh
- (c) Rs.25.48 lakh
- (d) Rs.53.20 lakh
- (e) Rs.77.76 lakh.

(2 marks)

68. Aniruddh Machines Ltd. (AML) has placed two orders to Narmada Enterprises Ltd. (NEL) for purchasing turbines from them. Each turbine is sold at a price of Rs.10,00,000 at a profit margin of 25 percent. Past experience shows that the probability of default is 15 percent for the first order and 10 percent for the second order. What is the expected profit to NEL if it agrees to grant the second credit to AML, assuming that the payment for the first order has been paid?

[< Answer >](#)

- (a) Rs. 65,000
- (b) Rs. 80,000
- (c) Rs. 95,000
- (d) Rs.1,05,000
- (e) Rs.1,27,500.

(1 mark)

69. Meenakshi Textiles has furnished the following details for the current financial year:

[< Answer >](#)

Sales	Rs.200 lakh
Average collection period	60 days
Bad debt losses	5% of sales
Collection expenses	Rs.1 lakh
Cost of funds	15%
Variable cost to sales ratio	60%

The company is contemplating to enhance the collection effort by reducing the amount of receivables and the incidence of bad debt losses. In view of the above, the company has undertaken a new program which is likely to reduce the average collection period to 45 days, decrease bad debt losses to 3% of sales but increase the collection expenses by Rs.2 lakh. Assuming that the sales remain constant, the change in profits would be

- (a) Rs.1,72,500
- (b) Rs.2,15,500
- (c) Rs.3,25,000
- (d) Rs.3,65,000
- (e) Rs.4,72,500.

(2 marks)

Suggested Answers

Financial Management – II (MSF1B4): July 2007

1. Answer : (d)

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Reason : In a cumulative preference share the unpaid dividends are all carried forward and payable. Statement (III) is true. The rate of dividend is not variable, there is no compulsory condition that the issuer can purchase the preference share at any time before maturity nor are the preference shares compulsorily convertible. Therefore statements (I), (II) and (IV) are not true. Hence (d) is the answer.

2. Answer : (d)

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Reason : The private placement method of financing involves direct selling of securities to a limited number of institutional or high net worth investors. This avoids the delay involved in going public and also reduces the expenses involved in a public issue.

The major advantages of privately placing the securities are:

- Easy access to any company
- Fewer procedural formalities
- Lower issue cost
- Access to funds is faster.

Hence statements (II) and (III) are true but statement (I) is incorrect and the answer is (d).

3. Answer : (a)

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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.

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.

4. Answer : (e)

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Reason : According to net operating income approach, the overall capitalization rate and cost of debt remain constant for all degrees of leverage. As long as k_d remains constant, the cost of equity is a constant linear function of the debt-equity ratio. Hence, statements I, III and IV are correct. So (e) is the correct answer.

5. Answer : (a)

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Reason : According to net income approach, the cost of equity and debt remains constant irrespective of the degree of leverage. As per the traditional approach, the overall cost of capital for a firm increases as the degree of leverage increases. A firm should choose the debt-equity ratio in such a way that it will minimize the cost of capital, not tax liability. The higher the degree of leverage, the more the risk of insolvency and hence correspondingly the higher will be risk to the equity shareholders. According to the net operating income approach, the overall cost of capital increases as the degree of leverage increases

6. Answer : (a)

Reason : An optimal capital structure should make maximum use of leverage at a minimum cost and involve minimum dilution of control. Hence, statement I and III are not the features of an optimal capital structure. An optimal capital structure should be flexible to be able to meet the changing conditions. Hence, statement II is a feature of optimal capital structure. Hence (a) is the answer.

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7. Answer : (c)

Reason : In the absence of bankruptcy costs, assets can be sold at their economic values and legal and administrative expenses are not present but if the probability of bankruptcy is high then the assets are likely to be sold at a significant discount to their true economic values. Statement (a) is true. Bankruptcy entails substantial expenditure on legal and administrative proceedings. Statement (b) is true. The probability of bankruptcy is higher for a levered firm than an unlevered firm. Statement (c) is not true. The equity shareholders will require a higher rate of return if the firm faces the prospects of bankruptcy. Statement (d) is true. Beyond a threshold level, the probability of bankruptcy increases at an increasing rate as the debt-equity ratio increases. Hence (c) is the answer.

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8. Answer : (c)

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.

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9. Answer : (e)

Reason : Modigliani and Miller approach makes the following assumptions:

Existence of a perfect market in which all investors are rational. There will be no transaction and floatation costs.

It is assumed that there are no differential tax rates for dividend income and capital gains.

The company has a constant investment policy.

Securities are infinitely divisible and hence no single investor is large enough to influence the share value.

Hence, option (e) is not true and is the answer.

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10. Answer : (e)

Reason : According to Walter's approach, when the internal rate of return is less than the cost of capital, the firm should distribute the earnings as dividends, because in such a case the investors will have a better investment opportunity than the firm. In such a situation, the price of the share will increase with increase in the dividend payout ratio. Consequently, the optimal dividend payout ratio that will maximize the price of the share in this case will be 100%. Hence options (I), (II), and (IV) are not true and option (III) is true. Hence (e) is the answer.

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11. Answer : (d)

Reason : Gordon's dividend capitalization approach makes the following assumptions:

The firm will be an all-equity firm with the new investment proposals being financed solely by the retained earnings.

Return on investment (r) and the cost of equity capital (k_e) remain constant.

Firm has an infinite life

The retention ratio remains constant and hence the growth rate also is constant ($g = br$).

$k > br$ i.e. cost of equity capital is greater than the growth rate.

Hence all statements except statement (d) are correct. Therefore (d) is the answer.

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12. Answer : (d)

Reason : According to the Traditional Approach, market price and dividend are related as $P = m(D + E/3)$, which can be written as $m/3(3D+E)$. Hence (d) is the answer.

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13. Answer : (b)

Reason : Overtrading means that the firm has disproportionately low level of working capital with respect to the level of sales. To define it as a state in which the firm has disproportionately high level of working capital with respect to sales or a disproportionately high level of receivables with respect to total assets or a disproportionately high level of cash with respect to total assets or low turnover of working capital is incorrect.

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14. Answer : (d)

Reason : Commercial paper is a short-term, unsecured promissory note issued by companies having a high credit rating. Secured premium notes, partially convertible debentures, cumulative preference shares and lease arrangement are long-term sources of finance. Hence option (d) is the answer.

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15. Answer : (b)

Reason : A firm generally employs long term sources of funds to finance its working capital margin that is the difference between the current assets and current liabilities. A negative net working capital implies that current

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assets are less than current liabilities and hence the statement (II) is true. A current ratio of less than unity means current liabilities are more than current assets that signifies the usage of the short term funds for financing the long term assets. A company that follows a conservative working management policy generally maintains a very high current ratio in comparison to its peers while the opposite thing occurs in case of aggressive working capital management policy. Therefore statements (I), (III) and (IV) are not true. Hence (b) is the answer.

16. Answer : (e)

Reason : In cash credit, the customer is charged interest on the outstanding amount borrowed but the customer is allowed to borrow only up to a pre-specified limit, against suitable securities as per the terms of the bank. Borrowings may be made as often as required by the customer. Moreover, irrespective of the number of borrowings and the pre-specified borrowing limit, the customer is required to pay a fee to the bank. Therefore statement (I) is only true and statements (II) and (III) are not true. Hence (e) is the answer.

17. Answer : (b)

Reason : In case of non-recourse factoring, the factor offers short-term finance, sales ledger administration as well as credit protection simultaneously. It is not available in any other mode of factoring. Hence (b) is the answer.

18. Answer : (c)

Reason : ABC system of inventory management has the following advantages:

It leads a closer control on the costly items where a large amount of funds is blocked.

A scientific method of controlling inventories can be developed based on the ABC system that will lead to the reduction of clerical costs are reduced

ABC system also helps to maintain the optimum level of stocks.

The stock turnover rate can be maintained at a comparatively higher level through scientific control of inventories.

But it cannot help the beginners to learn the different techniques of inventory management. Hence option (c) is the answer.

19. Answer : (a)

Reason : The economic order quantity (EOQ) is directly related to the annual usage and the fixed cost per order while inversely related to the carrying cost of the inventories. An increase in the carrying cost for the inventories will decrease the EOQ for a company while the conditions as mentioned in the other options will increase the economic order quantity. Hence, the option (a) is the correct one.

20. Answer : (e)

Reason : Carrying costs are the expenses incurred for storing goods. These costs include insurance, rent/ depreciation of warehouse, salaries of storekeeper and security personnel, financing cost of money locked up in inventories, obsolescence, spoilage and taxes.

Hence options (a), (b), (c) and (d) are included in carrying costs.

Transportation costs of materials will be a part of the ordering costs and not carrying costs. Hence, option (e) is the answer.

21. Answer : (d)

Reason : Reorder point = $S \times L +$

S = Usage in units

L = Lead time in days

R = Average number of units per order

F = Stock out acceptance factor

Hence an increase in the stock-out acceptance factor would increase the reorder point. Hence statement II is correct.

The stock-out acceptance factor, 'F', depends on the stock-out percentage rate specified and the probability distribution of usage which is assumed to follow a Poisson distribution. Hence statement I is correct but statement III is incorrect.

Therefore option (d) is the answer as both statements I and II are correct.

22. Answer : (a)

Reason : NPV of the project = PV of cash inflows – PV of cash outflows

Cash inflows = Rs.30 lakh for 20 years

Cash outflows: 1. Rs.250 lakh as initial investment

2. Rs.100 lakh in the 10th year for upgradation of the plant.

$NPV = 30 \times PVIFA_{(10\%, 20)} - 100 \times PVIF_{(10\%, 10)} - 250$

$= 30 \times 8.514 - 100 \times 0.386 - 250$

$= - 33.18 \text{ lakh.}$

23. Answer : (e)

Reason : Reorder level =

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Where S is usage in units, L is lead time in days,

F is the stock-out acceptance factor and R is the average number of units per order

Therefore, $10,000 =$

Hence $F = 1.86$.

24. Answer : (b)

Reason : Number of orders in a year =

Time gap between two orders =

EOQ =

Number of orders in a year =

Time gap between two orders

Hence (b) is the answer.

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25. Answer : (d)

Reason : If credit period is lengthened, more customers are induced to take the credit and the sales tend to increase and there are more chances of bad debts occurring. Hence, statement II is not true. If credit standards are made more straight, sales are likely to reduce as the customers are expected to fulfill the rigid credit standards specified by the company. With the decrease in the sales, the money blocked in receivables will also reduce and hence, statement I is true. If cash discount is increased, the amounts of discount paid tend to increase even when same proportion of customers avail the discount. As many customers tend to avail the discount and pay within the discount period the amount blocked in receivables will be less. Hence, statement III is true and the answer is (d).

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26. Answer : (d)

Reason : Whether or not to pay for the outstanding interest on term loans depends on the financial position of the company and its willingness to pay for the same. A cash management policy may influence this but this payment is not a part of the cash management policy. Hence (d) is the answer.

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27. Answer : (d)

Reason : In collection matrix, the payment behavior of the customers is studied through the pattern of collections associated with the credit sales. In day's sales outstanding (DSO), the idea regarding the average collection period is obtained while in the ageing schedule, the age wise distribution of the receivables at a given point of time is depicted. Ratio analysis is not relevant in this context. So, the option (d) is correct.

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28. Answer : (c)

Reason : When the payment float is greater than the collection float, it implies that the balance in the books of the company is less than that in the bank's books because of certain cheques issued by the company that are still not paid by the bank. In such a case, the firm can play the float. Hence, statement III is true. Collection float can be defined as the amount of cheques deposited by a company in the bank awaiting clearance. Payment float indicates the amount of cheques issued by a company, awaiting payment by the bank.

Hence, statement I is not true. When collections float is more than the payment float, the company is said to have negative net float. Hence statement II is also not true and the answer is (c).

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29. Answer : (d)

Reason : When the net float is negative the balance in the books of bank is less than the balance in the books of the firm. Any relationship between the current asset and current liability does not play any role in the determination of the net float as it is related to the cash balance.

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30. Answer : (d)

Reason : If cost of capital is less than IRR of a project, the NPV of the project will be positive. Similarly, the benefit cost ratio is less than unity indicates the present value of the benefits is less than the present value of costs at a given cost of capital, thereby making the NPV a negative one. Similarly, a discount rate is greater than the IRR will make the NPV a negative one and hence for a project of benefit cost ratio is less than unity. Such a project will have a positive effect on the wealth of the shareholders, not an indeterminate effect.

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31. Answer : (b)

Reason : The ARR gives more weight to the later receipts than earlier receipts. Statement (b) is incorrect. The ARR considers accounting profits and not cash flows. It considers the profits over the entire life of the project and it serves as a measure of profitability of the investment. Because cash flows are not used, profitability measure based on the accounting rate of return is not a reliable criterion. Statements (a), (c), (d) and (e) are true. Hence (b) is the answer.

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32. Answer : (a)

Reason : The net benefit cost ratio of any project is defined as the ratio between the net present value of the project and the initial investments. As the IRR is zero at the cost of capital, the NPV of the project will also be zero, which in turn implies a zero net benefit cost ratio for the project. If the project provides excess returns to the equity investors, the internal rate of return on a project will be more than the cost of capital.

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33. Answer : (d)

Reason : The economic appraisal of projects is an exercise to assess the costs and benefits entailing from the

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project, from the point of view of the society as a whole (d) and not any particular entity like shareholders (a), short-term lenders (b), long-term lenders (c) or suppliers (e).

34. Answer : (d)

Reason : IRR considers the cash flows over the entire project life. Statement (I) is true. It considers the time value of money. Statement (II) is true. It is the rate of return at which the present value of benefits is equal to the present value of costs. Statement (III) is true. It is not uniquely defined when the project entails cash inflows and outflows that are interspersed with each other. Therefore statement (IV) is false. Hence (d) is the answer.

35. Answer : (c)

Reason :

	Year 0	Rs.(lakh) Years 1 – 5
Initial investment	100	
Revenues		40
Operating expenses		12
Depreciation (100/5)		20
Earnings before tax		8
Tax @ 40%		3.2
Profit after tax		4.8
Operating cash flow = PAT + Depreciation		24.8
Profitability Index =	(11%, 5)	

36. Answer : (b)

Reason :

NPV of project A = 11.88
NPV of project B = 24.88
NPV of project C = -1.22
Therefore B has highest NPV followed by A and C has negative NPV. Project C should not be selected at all.
BCR of project A = 1.1188
BCR of project B = 1.2488
BCR of project C = 0.9878
Project B can be selected when either of the two criteria is used.
Hence (b) is the answer.

37. Answer : (d)

Reason : IRR is that rate of return where the PV of cash inflows is equal to the PV of cash outflows.

Therefore

'r' is the IRR in the above equation.

By trial and error,

For r = 18%, R.H.S = 44.88

For r = 19%, R.H.S = 39.804

By interpolation,

r = 18% +

Hence (d) is the answer.

38. Answer : (b)

Reason :

Year	Book Value of the asset (Rs.)	Depreciation (Rs.)	Remaining book value (Rs.)
1	50,00,000	15,00,000	35,00,000
2	35,00,000	10,50,000	24,50,000
3	24,50,000	7,35,000	17,15,000
4	17,15,000	5,14,500	12,00,500
5	12,00,500	3,60,150	8,40,350

Hence (b) is the answer.

39. Answer : (c)

Reason :

Annual capital charge = (12%, 5)

PV of costs associated with the system =

capital charge =

(12%, 5)

Annual

40. Answer : (b)

Reason : Net incremental cash flow during year 0 is

$$= - (\text{Investment for new machine} - \text{present realizable value of old machine})$$

$$= - (20 - 9) = - \text{Rs.11 lakhs}$$

Net incremental cash flow during year 5 is

$$= \text{Incremental PAT} + \text{Incremental Depreciation} + \text{Incremental realizable value}$$

Depreciation of old machine =

Depreciation of new machine =

$$\text{Incremental depreciation} = \text{Rs.3,20,000} - 2,00,000 = \text{Rs.1,20,000}$$

Net incremental cash flow during year 5

$$= (50,000 + 1,00,000 - 1,20,000) 0.6 + 1,20,000 + 2,00,000$$

$$= \text{Rs.3,38,000} = 3.38 \text{ lakh.}$$

Hence, answer is (b).

41. Answer : (d)

Reason : Total costs associated with inventory = Ordering cost + carrying cost

=

where U is the annual usage

Q is the quantity ordered

F is fixed cost per unit

P is the purchase price per unit

C is the carrying cost expressed as a percentage of the purchase price.

Hence, 785 =

$$785 =$$

$$0.1Q^2 - 785Q + 14,25,000 = 0$$

$$Q^2 - 7850Q + 14,25,000 = 0$$

$$Q^2 - 5000Q - 2850Q + 14,25,000 = 0$$

$$Q(Q - 5,000) + 2850(Q - 5,000) = 0$$

Therefore Q = 5,000 units.

42. Answer : (c)

Reason : Given: Normal consumption during lead time = 2,760 units

Safety stock has to be maintained over and above the normal consumption.

Safety stock level has to be maintained at 40 units, 240 units, 1440 units and 3240 units.

Levels of safety stocks and associated costs:

Afety Stock	Stock Outs	Probability	Expected Stock Outs	Expected Stock Outs Cost	Carrying Cost	Total Cost
3240	0	0	0	0	Rs.9,720	Rs.9.720
1440	1800	0.09	162	Rs.1620	Rs.4320	Rs.5940
240	3000	0.09	270			
	1200	0.18	216			
			486	4860	720	Rs.5580
40	3200	0.09	288			
	1400	0.18	252			
	200	0.15	30			
			570	5700	120	Rs.5820

As the total cost is minimum when safety stock is 240 units i.e. reorder level should be

2760 + 240 or 3000 units

43. Answer : (d)

Reason : The economic order quantity (EOQ) = 24,000 units

$$U = 1,20,000 \text{ units, } F = \text{Rs.2,400} \text{ and } PC = \text{Rs.200} \times 2 \text{ percent} = \text{Re.4.}$$

$$\text{Discount per unit} = 200 \times 0.06 = 12$$

$$\text{Benefits due to the discounts} = U \times D = \text{Rs.12} \times 1,20,000 = \text{Rs.14,40,000}$$

Benefits due to the savings in ordering costs =

Incremental carrying costs =

Hence, the net amount of benefits will be

$$= (U \times D) +$$

$$= 14,40,000 + 4,800 - 27,200 = \text{Rs.14,17,600.}$$

Hence (d) is the answer.

44. Answer : (d)

Reason : Cost of debt capital when the difference between the redemption price and the net amount realized can be written off over the life of the debenture and the amount so written off is tax-deductible, is given by

$$k_d = \frac{\text{Interest}}{\text{Net Proceeds}} = \frac{0.0778}{1} = 0.0778 \text{ or } 7.78\%$$

Hence (d) is the answer.

45. Answer : (b)

Reason : Calculation of breaking point:

Source of finance	Cost (%)	Range of new financing (Rs. in crores)	Breaking point (Rs. in crores)	Range of total new financing (Rs. in crores)
Equity	14	0 – 10	10/0.4 = 25	0 – 25
	15	10 – 20	20/0.4 = 50	25 – 50
	16	20 and above	–	50 and above
Preference	13	0 – 2	2/0.2 = 10	0 – 10
	14	2 and above	–	10 and above
Debt	8	0 – 12	12/0.4 = 30	0 – 30
	9	12 – 18	18/0.4 = 45	30 – 45
	10	18 and above	–	45 and above

If the new financing is Rs.28 lakh, it falls in the range of Rs.25 – 30 crores

Cost of equity = 15%

Cost of preference = 14%

Cost of debt = 8%

Weighted marginal cost of capital in the above range

$$= 0.15 \times 0.4 + 0.14 \times 0.2 + 0.08 \times 0.4 = 12\%$$

Hence, answer is (b).

46. Answer : (e)

Reason : The cost of equity^{*} for Tractor India is:

$$K_e = \frac{\text{Dividend}}{\text{Price}} + \text{Growth Rate} = \frac{1.5}{10} + 0.137 = 15.2\%$$

Cost of retained earnings is same as the cost of equity. Therefore the cost of retained earnings = 15.2%

The cost of external equity will be =

Hence (e) is the answer.

47. Answer : (c)

Reason : In order to calculate the WACC, the specific cost of capital and debt capital are to be calculated as follows:

$$k_e = \frac{\text{Dividend}}{\text{Price}} + \text{Growth Rate}$$

Market value of equity = Rs.27.5 x 80,000 = Rs.22,00,000.

$$k_d = \frac{\text{Interest}}{\text{Net Proceeds}}$$

Market value of debt = Rs.4,000 x 80 = Rs.3,20,000

Total capital = Rs.25,20,000

WACC =

Hence (c) is the answer.

48. Answer : (d)

Reason : The ideal debt equity would be where the weighted average cost of capital (WACC) would be the lowest. The WACC of the firm may be ascertained as follows:

Debt %	k_d (%)	$k_d \times \text{Debt}$ (%) -- A	Equity %	K_e (%)	$K_e \times \text{Debt}$ (%) -- B	WACC A + B
0	7.0	0	100	15.0	15.0	15.00
10	7.0	0.70	90	15.0	13.5	14.20
20	7.0	1.40	80	15.5	12.4	13.80
30	7.5	2.25	70	16.0	11.2	13.45
40	8.0	3.20	60	17.0	10.2	13.40
50	8.5	4.25	50	19.0	9.5	13.75
60	9.5	5.70	40	20.0	8.0	13.70

The capital structure consisting of 40% debt and 60% equity ideal for the firm because WACC is lowest at this level. Therefore at this level, the debt equity ratio = 40/60 = 2/3. Hence (d) is the answer.

49. Answer : (d)

Reason :

EBIT	Rs.2,00,000
(-) Interest	Rs.40,000
Net profit	Rs.1,60,000
k_e	10%
Value of equity (Net profit/ k_e) – S	Rs.16,00,000
Value of debt – B	Rs.5,00,000
Value of the firm (S + B)	Rs.21,00,000
k_o (EBIT/V)	9.5%

Hence (d) is the answer.

50. Answer : (d)

Reason : $k_o =$

For an unlevered firm $k_e = k_o$

Before issuing debentures, $k_e = 0.2 = K_o$

Value of the firm (S) = $22,500 \times 10 = \text{Rs.}2,25,000$

After issuing debentures

$K_d = 0.15$

$S = 22,500 \times 20 = \text{Rs.}4,50,000$

Value of the debentures (B)

$B = \text{Rs.}5,00,000$

As per NOI approach k_o remains constant for any level of leverage.

$\therefore k_o =$

$0.2 =$

By solving $k_e = 25.56\%$

51. Answer : (b)

Reason : In general, when corporate taxes are considered in the MM model, the value of the firm that is levered would be equal to the value of the unlevered firm increased by the tax shield associated with debt, i.e.,

Value of the levered firm (V_L)

$=$

$= \text{Rs.}68,00,000.$

For an unlevered firm $k_e = k_o$

Overall capitalization rate k_o of levered firm =

Equity in levered firm = $\text{Rs.}68,00,000 - \text{Rs.}20,00,000 = \text{Rs.}48,00,000$

Equity capitalization rate of levered firm, $k_e = k_o + (k_o - k_d)$

$= 0.10 + (0.10 - 0.08) = 10.5\%$

Now, $k_o =$

$= 8.82\%.$

Hence (b) is the answer.

52. Answer : (c)

Reason : According to Walter's Model

$P_o =$, where symbols are in standard use.

Substituting the given values we get

$=$

$= 42.86 + 68.88$

$= \text{Rs.}111.74$

Number of shares outstanding = 5,00,000

Market value of equity = $P_o \times N = 111.74 \times 5,00,000$

$= \text{Rs.}558.7$ lakh.

Hence (c) is the answer.

53. Answer : (e)

Reason : According to the Traditional approach

Where symbols are in their standard use

Substituting the values, we get

EPS =

$$= \text{Rs.}50$$

54. Answer : (c)

Reason : $\text{EBIT} - \text{Interest} = \text{Profit before tax} = 3 \text{ crore} - 0.5 \text{ crore} = \text{Rs.}2.5 \text{ crore.}$

Hence, the profit after tax = $\text{Rs.}2.50 \text{ crore} (1 - 0.40) = \text{Rs.}1.50 \text{ crore}$

The amount of dividend paid = $\text{Rs.}1.50 \text{ crore} (1 - 0.40) = \text{Rs.}0.90 \text{ crore} = \text{Rs.}90,00,000$

Hence, the amount of dividend paid per share = $90/50 = \text{Rs.}1.80$

According to the Gordon's capitalization model,

The share price $p = \frac{D}{r - b}$

Here, $E(1 - b) = \text{Rs.}1.80$, $K_e = 12\%$, $r = 15\%$ and $b = 0.40$.

$P =$

Dividend yield on the company's share =

55. Answer : (a)

Reason : The overall capitalization rate for the company is given by,

$$k_o = k_d \times$$

$$= 9 \times \text{percent}$$

While the overall capitalization rate is also defined as:

$$K_o =$$

Here, the market value of the firm is $\text{Rs.}100 \text{ lakh} + \text{Rs.}200 \text{ lakh} = \text{Rs.}300 \text{ lakh}$

$\Rightarrow$ Net operating income = $\text{Rs.}300 \times 11 \text{ percent} = \text{Rs.}33 \text{ lakh.}$

Net profit = Net operating income – Interest on debt

Interest on debt = $\text{Rs.}200 \times 0.09 = \text{Rs.}18 \text{ lakh}$

Net profit = $\text{Rs.}33 \text{ lakh} - \text{Rs.}18 \text{ lakh} = \text{Rs.}15 \text{ lakh.}$

56. Answer : (c)

Reason : The market price per share is given by
where symbols are in standard use.

If no dividends are declared

150

$$P_1 = 168$$

Net income = $\text{Rs.}2 \text{ crore}$

Investments budget = $\text{Rs.}4 \text{ crore}$

Amount to be raised by issue of new shares = $\text{Rs.}2 \text{ crore}$

$\therefore$ Number of new shares to be issued =

Hence (c) is the answer.

57. Answer : (d)

Reason : $\text{Average Accounts receivable} = \frac{\text{Annual credit sales}}{360} = \text{Rs.}12,50,000.$

Average collection period = $\text{Average Accounts receivable} / \text{Average daily sales} = 10 \text{ days.}$

Average daily sales = $\text{Average accounts receivable} / \text{Average collection period}$

$$= 12,50,000/10 = \text{Rs.}1,25,000$$

Therefore, annual credit sales = $1,25,000 \times 360 = \text{Rs.}4,50,00,000 = \text{Rs.}450 \text{ lakh.}$

Hence (d) is the answer.

58. Answer : (d)

Reason : Cost of trade credit =

Therefore the rate of discount offered by the company if it paid before 15th day is 2%.

Now if the rate of discount is increased by 1%,

Cost of trade credit =

Hence (d) is the answer.

59. Answer : (a)

Reason : Net Operating cycle = Gross operating cycle – Average payment period

Average payment period =

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Net operating cycle = 145 days – 75 days = 70 days.

If the expected changes take place,

$70 + 15 - 10 + 5 - 20 - (-10) = 70$ days.

Therefore there is no change in the net operating cycle of the company. Hence (a) is the answer.

60. Answer : (d)

Reason : The MPBF as per the Method I of the Tandon committee = 0.75 (Current assets – Current liabilities other than bank borrowings) = 0.75 (1,290 – 610) = Rs.510 lakh.

MPBF under the Method-II of the Tandon committee = (0.75 x Current assets) – Current liabilities = 0.75 x 1,290 – 610 = Rs.357.5 lakh.

Hence option (d) is the correct answer.

61. Answer : (c)

Reason : Gross working capital means the total of current assets.

	Amount (Rs.)	Amount (Rs.)
Stock of raw material (2,500 x 2 x 100)		5,00,000
Work-in-progress:		
Raw materials (2,500 x 1 x 100)	2,500,00	
Manufacturing expenses (50% of (2,500 x 30))	<u>37,500</u>	2,87,500
Finished goods:		
Raw materials (2,500 x $\frac{1}{2}$ x 100)	1,25,000	
Manufacturing expenses (2,500 x $\frac{1}{2}$ x 30)	<u>37,500</u>	1,62,500
Debtors (2,500 x 200)		<u>5,00,000</u>
		<u>14,50,000</u>
Cash balance (14,50,000 x 5/95)		76,316
Working capital requirement		<u>15,26,316</u>

62. Answer : (a)

Reason : Raw material storage period =

If the average daily consumption of raw materials is increased to two times its original level then the raw materials storage period reduces to half the original level. Hence (a) is the answer.

63. Answer : (b)

Reason :

Day		Books of Company (Rs.)	Book of the Bank (Rs.)	Float (Rs.)
25, 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
26, 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
27 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
28, June	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
29, June	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
30, June	Cheque issued = Rs. 32,000 Cheque deposited =	67,000 + 15,000 – 32,000 = 50,000	83,000 + 50,000 – 17,000 = 116,000	66,000

	Rs. 15,000			
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So, the net float available to the company at the end of 30th June is Rs. 66,000.

64. Answer : (e)

Reason : Cash sales in September 2007 = Rs.93,750 x 0.2 = Rs.18,750
Amount collected in the same month = 20% x 75,000 = Rs.15,000
Amount collected from August credit sales = 50% x 70,000 = Rs.35,000
Amount collected from July credit sales = 30% x 60,000 = Rs.18,000
= **Rs.86,750**

Hence (e) is the answer.

65. Answer : (b)

Reason : Closing balance on July 31, 2007 will be the opening balance on August 1, 2007.

Cash budget for the month of August 2007:

(Rs.)	
	August 2007
a. Opening Balance	1,00,000
b. Inflows:	
Sales realizations: Current month	3,00,000
Previous month	2,50,000
c. Outflows:	
Purchases	2,50,000
Wages	1,50,000
Administrative Expenses	80,000
Payment for the equipment	20,000
Total	500,000
d. Closing Balance (a + b – c)	150,000

Therefore, the required closing balance by the end of the month of July will be = Rs.150,000.

66. Answer : (b)

Reason : The theoretical value of a right = $\frac{P_0 - S}{N}$ where P_0 is the cum-rights price, S is the subscription and N is the number of shares required for a rights share. Hence, $4 = \frac{P_0 - S}{N}$.
By solving, N=2. Hence (b) is the answer.

67. Answer : (c)

Reason : Net benefit = $\Delta P - \text{Change in Cost of carrying receivables} - \text{Change in Bad debt} - \Delta \text{Dis}$

Increase in profit = $4,000 \times 0.1 \times 28,000 = \text{Rs.112 lakh}$

(Old credit terms):

Cost of discount = $0.1 \times 28,000 \times 30,000 \times 0.01 = \text{Rs.8.4 lakh}$

Receivables =

= 700 lakhs

Cost of carrying receivables = $15\% \times 700 \text{ lakhs} = 105 \text{ lakhs}$

Bad debts = $28,000 \times 30,000 \times 0.15\% = \text{Rs.12.60 lakhs}$

(New credit terms):

Cost of discount = $0.4 \times 28,000 \times 30,000 \times 0.02 + 0.6 \times 28,000 \times 4,000 \times 0.02 = 67.2 + 13.44 = \text{Rs.80.64 lakh}$

Receivables =

Cost of carrying receivables = $15\% \times 784 \text{ lakhs} = 117.6 \text{ lakhs}$

Bad debts = $28,000 \times 34,000 \times 0.15\% = \text{Rs.12.60 lakhs} = 14.28 \text{ lakhs}$

Increase in discount = $72.4 \text{ lakhs} (80.64 - 8.4)$

Increase in cost of carrying receivables = $117.6 - 105 = 12.6 \text{ lakhs}$

Increase in bad debts = $14.28 - 12.6 = 1.68 \text{ lakhs}$

Now net benefit = $112 - 72.4 - 12.6 - 1.68 = 25.48 \text{ lakh}$

Hence (c) is the answer.

68. Answer : (e)

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

$0.85 \{0.90 \times 2,50,000 - 0.10 \times 7,50,000\} = 0.85 \times 1,50,000 = \text{Rs.1,27,500}$.

Hence (e) is the answer.

69. Answer : (c)

Reason : The effect of the new collection program on the profits of the company can be estimated from the following formula:

$\bullet P = \bullet S (1 - V) - k \bullet I - \bullet BD - \bullet C$

Where,

•P = Change in profits

•S = Change in sales

V = Variable cost to sales ratio

k = Cost of capital

•I = Increase in investment in receivables
=

• BD = Increase in bad debts cost

$$= b_n(S_0 + \bullet S) - b_0 S_0$$

•C = Increase in collection expenses

Since there is no change in sales, •S = 0

•I =

$$\bullet BD = b_n(S_0 + \bullet S) - b_0 S_0 = 0.03(200) - 0.05(200) = - \text{Rs.4 lakh}$$

•C = Rs.2 lakh

$$\bullet P = \bullet S (1-V) - k \bullet I - \bullet BD - \bullet C$$

$$= 0 - 0.15 \times (-8.33) - (-4) - (2)$$

$$= \text{Rs.3.25 lakh} = \text{Rs.3,25,000.}$$

Hence (c) is the answer.

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