

Question Paper

Financial Management – II (142) : October 2006

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

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

[< Answer >](#)

- (a) A debenture is a non-marketable legal contract
- (b) Participating debentures appeal to those investors who are not willing to accept risk
- (c) Preference shares are identical to equity shares except in respect of voting rights
- (d) Mortgage backed security is a synthetic instrument for securitization of debt
- (e) A secured premium note (SPN) is similar to a fully convertible debenture.

(1 mark)

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

[< Answer >](#)

- I. Access to funds is faster.
- II. Fewer procedural formalities.
- III. Accessible to only private limited companies.
- IV. Reduction of expenses involved in a public issue.

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

(1 mark)

3. Which of the following statements is **true** regarding the cost of capital of a firm?

[< Answer >](#)

- (a) It is the dividend paid on the equity capital
- (b) It is the average of the dividends paid on the equity capital and the preference capital
- (c) It is the interest paid on long-term debt
- (d) It is the weighted average cost of various sources of long-term finance used by it
- (e) It is the average of interest payments made on long term and short-term debt.

(1 mark)

4. Which of the following statements is **not true** regarding various approaches to measuring the cost of equity capital?

[< Answer >](#)

- (a) Dividend capitalization approach defines cost of equity as the rate at which the intrinsic value is equal to the market price of the share
- (b) Bond yield plus risk premium approach assumes that the return required by bondholders should be more than the return required by the equity holders
- (c) Earnings price ratio approach assumes that the earning per share will remain constant from the next year onwards
- (d) Realized yield approach assumes that the actual returns are in line with the expected return
- (e) CAPM approach defines cost of equity as risk free rate + beta of the stock x market risk premium.

(1 mark)

5. Which of the following assumptions underlie the definition of cost of capital as a measure for appraising new investments? [< Answer >](#)

- I. The risk characterizing the new project under consideration is not significantly different from the risk characterizing the existing investments of the firm.
- II. The firm will finance new investments without resorting to external financing.
- III. There will be no deviation from the debt-equity mix presently adopted by the firm.

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

(1 mark)

6. Which of the following statements is **not true**? [< Answer >](#)

- (a) The capital structure of a firm should involve minimum dilution of control
- (b) Any company should make maximum use of leverage at a minimum cost
- (c) Given the net operating income to be constant, the cost of capital is the discount rate at which the present value of net operating income is equal to the market value of the firm
- (d) The capital structure that maximizes the market value of a company also maximizes the cost of capital of the company
- (e) Capital structure theories assume that a firm can change its capital structure without incurring transaction costs.

(1 mark)

7. Which of the following statements is/are **true** as per the Net Operating Income Approach? [< Answer >](#)

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

8. Which of the following statements is/are **not true**? [< Answer >](#)

- I. Agency costs are certain restrictions on firm imposed by creditors.
- II. Monitoring costs entail legal and enforcement costs, which impair the operating efficiency of the firm.
- III. Bankruptcy costs are in the form of some protective covenants in the loan contract.

- (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)

9. Which of the following is/are **true** regarding Walter's model to dividend policy?

[< Answer >](#)

- I. When the return on investment is less than the cost of capital, there is an inverse relationship between the value of the share and the payout ratio.
- II. Retained earnings are the only source of finance available to the firm.
- III. For a given value of the firm, the dividend per share and the earnings per share remain constant.
- IV. When the return on investment is greater than the cost of capital, firm's value will always increase.

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

(1 mark)

10. Which of the following statements is **not true** regarding the Modigliani-Miller model for dividend policy?

[< Answer >](#)

- (a) It explains the irrelevance of a firm's dividend policy
- (b) It emphasizes that only the firm's investment policy has an impact on the share value of the firm
- (c) The market value of the shares of the two firms having similar risk-return profile will depend on their dividend payout ratios
- (d) The arbitrage process makes the investor indifferent to the dividend earnings and the capital gains
- (e) It is assumed that there are no differential tax rates for the dividend income and capital gains.

(1 mark)

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

[< Answer >](#)

- I. If the NPV of a project is greater than 0, its PI will equal 0.
- II. If the IRR of a project is 0%, its NPV, using a discount rate, k , greater than 0, will be 0.
- III. If the PI of a project is less than 1, its NPV should be less than 0.
- IV. If the IRR of a project is greater than the discount rate, k , its PI will be less than 1 and its NPV will be greater than 0.

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

(1 mark)

12. Which of the following asset-liability combinations helps the firms in lowering the risk of technical insolvency?

[< Answer >](#)

- (a) Decreasing current assets while lowering current liabilities
- (b) Increasing current assets while incurring more current liabilities
- (c) Reducing current assets, increasing current liabilities, and reducing long-term debt
- (d) Replacing short-term debt with a high proportion of equity and a small proportion of debentures
- (e) Replacing short-term debt with a high proportion of debentures and a small proportion of equity.

(1 mark)

13. Which of the following statements is **not true**?

[< Answer >](#)

- I. Shorter the duration of operating cycle period, slower the transformation of current assets into cash.
- II. The operating cycle approach is useful for both controlling and forecasting working capital.
- III. Gross operating cycle period less average collection period is the net operating cycle period.

- (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)

14. Which of the following statements is **true** regarding aggressive approach to investment in current assets?

[< Answer >](#)

- (a) The turnover of current assets will be less
- (b) The investment in current assets for a given level of forecast sales will be higher
- (c) A company following this approach is subject to a higher degree of risk
- (d) It imparts greater liquidity for the company
- (e) A company following this approach will have a low percentage of operating profitability.

(1 mark)

15. Which of the following services is **not** performed by a Factor with respect to the accounts receivables arising from the sale of goods or services?

[< Answer >](#)

- (a) Purchases all accounts receivables of the seller for immediate cash
- (b) Administers the sales ledger of the seller
- (c) Assumes the losses which may arise from bad debts
- (d) Handles certain specific bills or invoices arising out of credit sales
- (e) Provides relevant advisory services to the seller.

(1 mark)

16. Which of the statements is/are **true** regarding cost of trade credit?

[< Answer >](#)

- I. Cost of trade credit is the implicit cost associated with not availing cash discount within the stipulated period.
- II. Smaller the discount rate offered higher will be the cost of trade credit.
- III. Larger the spread between credit and cash discount periods, the lower will be the cost of trade credit.
- IV. Cash discount can be availed only when the cost of trade credit is lesser than the opportunity cost of cash.

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

(1 mark)

17. Which of the following statements regarding ABC Analysis is **not true**?

[< Answer >](#)

- (a) It ensures closer control on costly items in which a large amount of capital is invested
- (b) It helps in developing a scientific method of controlling inventories
- (c) It helps in reducing clerical costs while maintaining stock at optimum level
- (d) It analyzes the items according to their importance and not their value
- (e) It helps in achieving the main objective of inventory control at minimum cost.

(1 mark)

18. Which of the statements is **not true** with respect to Economic Order Quantity?

[< Answer >](#)

- (a) It is the quantity, which minimizes both order costs and carrying costs
- (b) The magnitude of safety stock depends upon the uncertainty in usage rate and lead time
- (c) As inflation increases, carrying costs increase and EOQ increases
- (d) The EOQ model can be modified to include varying unit prices
- (e) If delivery is not instantaneous, inclusion of a safety stock can modify EOQ model.

(1 mark)

19. Which of the following statements is **not true**?

[< Answer >](#)

- (a) Storage lag represents a cost to the firm
- (b) The time lapsed between the sale of goods and collection of cash is known as sale lag
- (c) Shelf stock refers to items that are stored by the firm and sold with little or no modification to customers
- (d) Inventories provide a buffer between purchasing, producing and marketing goods
- (e) Maintaining inventories enhances total ordering costs.

(1 mark)

20. Which of the following statements is **true** regarding the safety stock?

[< Answer >](#)

- I. Reorder level is one at which the total stock-out costs and the carrying costs are at their maximum.
 - II. Higher the quantity of safety stock, higher the stock-out cost.
 - III. Higher the quantity of safety stock, lower the incidence of carrying costs.
 - IV. The magnitude of safety stock depends upon the degree of uncertainty surrounding the usage rate and lead-time.
- (a) Only (II) above
 - (b) Only (IV) above
 - (c) Both (I) and (II) above
 - (d) Both (I) and (III) above
 - (e) Both (II) and (IV) above.

(1 mark)

21. Which of the following is **not** a cost of maintaining receivables?

[< Answer >](#)

- (a) Cost of additional funds required by the company
- (b) Cash discounts
- (c) Administrative cost
- (d) Collection cost
- (e) Defaulting cost.

(1 mark)

22. Which of the following statements is **not true**?

[< Answer >](#)

- (a) Rigorous cash discount policy will decrease the cost of discount
- (b) Stiff credit standards will decrease sales
- (c) Rigorous collection policy will increase the amount of money locked up in receivables
- (d) Liberal cash discount policy will reduce the average collection period
- (e) Lowering of credit period will reduce investment in receivables.

(1 mark)

23. Which of the following is **not** a relevant factor in efficient cash management?

[< Answer >](#)

- (a) Branch wise collection of receivables
- (b) Centralized purchases and payment to the suppliers
- (c) Availing long-term loans to the maximum possible limit
- (d) Prompt billing and mailing the same to the customers
- (e) Prompt depositing of the cheques received from customers to bank.

(1 mark)

24. Which of the following statements regarding net float are **true**?

[< Answer >](#)

- I. If the collection float is more than the payment float, the company is said to have positive net float.
 - II. 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.
 - III. Collection float indicates the amount of cheques issued by a company, awaiting payment by the bank.
- (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)

25. Which of the following is **not** an objective of an internal audit?

[< Answer >](#)

- (a) To scrutinize policies and procedures of the management to improve operational efficiency
- (b) To assist management to obtain maximum utilization of resources
- (c) To report on the financial position and operating capacity of the firm
- (d) To ensure that liabilities have been incurred for legitimate purposes of the business
- (e) To facilitate the annual audit to be conducted by external auditors.

(1 mark)

26. Which of the following statements is **not true** regarding the principles underlying measurement of cash flows arising from capital expenditure decisions?

[< Answer >](#)

- (a) The net cash flows are defined from the point of view of suppliers of long-term funds
- (b) The net cash flows must be measured in incremental terms
- (c) The effect of project on other product lines of the firm is to be quantified and considered while arriving at the net cash flows
- (d) The share of existing overhead costs, which is to be borne by the end products of the proposed project should be ignored
- (e) The opportunity costs associated with the utilization of the resources available with the firm must be ignored because such utilization does not entail explicit cash flows.

(1 mark)

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

[< Answer >](#)

- (a) NPV is positive when IRR exceeds the cost of capital
- (b) Accepting the project with a negative NPV may have an indeterminate effect on shareholders
- (c) When the cash inflows and cash outflows are interspersed, a project will have multiple internal rates of return
- (d) Benefit cost ratio (BCR) can be effectively used when investment outlay is spread over more than one period
- (e) BCR provides no means for aggregating several small projects into a package that can be compared with a large project.

(1 mark)

28. Which of the following statements is/are **true**?

[< Answer >](#)

- I. Technical appraisal throws light on how realistic were the assumptions underlying the project.
- II. Market appraisal of the projects will help in knowing the project's share in the total market.
- III. Economic appraisal verifies the contribution of the project towards socially desirable objectives.

- (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)

29. Which of the following statements is **not true** regarding Internal Rate of Return (IRR)?

[< Answer >](#)

- (a) It takes into account the time value of money
- (b) It considers the cash flow stream over the entire investment horizon
- (c) It gives misleading results while choosing between mutually exclusive projects that differ significantly in terms of outlays
- (d) It is always uniquely defined irrespective of the pattern of cash flows
- (e) IRR is the rate of return at which NPV is zero.

(1 mark)

30. Which of the following statements is **not true** regarding Gordon's Dividend Capitalization model?

[< Answer >](#)

- (a) It is assumed that cost of equity capital is greater than the growth rate
- (b) Investors prefer current dividends and discount the uncertain returns
- (c) Firms which have a rate of return less than the cost of capital should have a lower retention ratio
- (d) A firm's share value is negatively correlated with the pay-out ratio when $r_e < k_e$
- (e) Investors are interested to pay a higher price for stocks, which pay them current income.

(1 mark)

31. Deva Motors Ltd, is evaluating five independent projects for executing the production of its new car model. The finance manager feels that all the five projects are useful for the company, but the company has limited resources and so Mr.Kaushik is interested in ranking the projected according the Profitability index and dividing his budget accordingly. The table below shows the initial investment and cash inflows related to the five projects.

[< Answer >](#)

Rs.000s					
Year	I	II	III	IV	V
Initial investment	1,000	1,200	1,250	800	750
1	400	600	625	250	200
2	450	600	675	350	200
3	475	600	700	500	200
4	500	600	725	400	200
5	575	600	675	200	200

Which of the following represents the descending order of the projects based on the profitability index if the required rate of return is 14%?

- (a) I, II, III, IV and V
- (b) II, III, I, IV and V
- (c) V, IV, I, II and III
- (d) III, II, I, IV and V
- (e) IV, I, II, III and V.

(2 marks)

32. Arun Motors Ltd, has furnished the following data:

[< Answer >](#)

Earnings per share	Rs.5
Retention ratio	40%
Multiplier	12

The P/E ratio for the company as per Traditional approach to dividend policy is

- (a) 9.5
- (b) 10.4
- (c) 11.2
- (d) 12.0
- (e) 13.1.

(1 mark)

33. The net benefit cost ratio of a new project started by Aman Chemicals Ltd, is 0.4 and the NPV is Rs.45,000. The initial investment on this project is [< Answer >](#)

- (a) Rs.95,600
- (b) Rs.1,00,000
- (c) Rs.1,12,500
- (d) Rs.1,25,500
- (e) Rs.1,32,500.

(1 mark)

34. Navneet Motors Ltd, bought a machine 4 years ago at Rs.15,00,000, the life period of which is five years and is depreciated on a straight line basis. Its present resalable value is Rs.3,00,000. The company is keen on replacing this machine with a new machine worth of Rs.25,00,000, which would reduce annual operating costs from Rs.13,00,000 to Rs.3,00,000. The new machine has an economic life of three years and requires Rs.2,00,000 additionally for modification purpose, and would be depreciated on a straight line basis. If the corporate tax rate is 40% and the required rate of return is 12%, the NPV of the replacement decision is [< Answer >](#)

- (a) Rs.1,98,675
- (b) - Rs.2,01,385
- (c) Rs.2,45,385
- (d) - Rs.2,89,678
- (e) Rs.3,01,567.

(2 marks)

35. Jyothi Industries Ltd, is interested in the purchase of a machine that costs Rs.10,00,000. The machine has an economic life of 4 years, which can be depreciated on the WDV basis at the rate of 30%. However, the company expects to sell the machine after 3 years at a salvage value of Rs.4,00,000. The machine requires an increase in inventory by Rs.2,00,000 and Rs.70,000 for installation. The initial investment on the machine and the book value at the end of year 3 is [< Answer >](#)

- (a) Rs.10,00,000; Rs.2,40,100
- (b) Rs.10,00,000; Rs.3,43,000
- (c) Rs.12,00,000; Rs.4,90,000
- (d) Rs.12,70,000; Rs.3,67,010
- (e) Rs.12,70,000; Rs.2,40,100.

(2 marks)

36. Cyndrilla Machines Ltd, is considering an investment opportunity that requires an initial outlay equal to Rs.75,000. [< Answer >](#)
The company expects cash inflows of Rs.20,000, 28,000 and Rs.42,000 in years 1, 2 and 3 respectively from that investment. The internal rate of return (IRR) of the project is

- (a) 7.45%
- (b) 8.57%
- (c) 9.27%
- (d) 9.89%
- (e) 10.07%.

(1 mark)

37. Parkinson Heavy Machines Ltd, (PHML) has estimated that a proposed project's 10-year annual net cash benefit, to [< Answer >](#)
be received at the end of each year, will be Rs.2,500 with an additional terminal benefit of Rs.5,000 at the end of the tenth year. Assuming that these cash inflows satisfy exactly PHML's required rate of return of 8 percent, what is the initial cash outlay?

- (a) Rs.16,775
- (b) Rs.19,091
- (c) Rs.25,001
- (d) Rs.27,090
- (e) Rs.30,098.

(1 mark)

38. Aniruddh Textiles Ltd, is considering a new piece of equipment, which is expected to cost Rs.6,00,000 and will [< Answer >](#)
produce cash flows of Rs.1,00,000 every year for the next 12 years (the first cash flow will be exactly one year from today). If the company is able to invest in an upgrade, which would cost Rs.1,20,000 in year 5, it would increase the annual cash flows from 6th year onwards to Rs.2,00,000. If the discount rate appropriate for the company is 15%, the NPV of the investment approximately is

- (a) Rs.78,765
- (b) Rs.80,674
- (c) Rs.89,247
- (d) Rs.99,544
- (e) Rs.99,604.

(2 marks)

39. A corporation is considering purchasing a machine that has an expected eight-year life and will generate net operating [< Answer >](#)
income before taxes and depreciation of Rs.11,000 per year. The machine will be depreciated using the straight-line method to its anticipated salvage value of Rs.12,000. The firm is in the 40% tax bracket and the required return for this project is 12% p.a. What is the maximum price the firm would be willing to pay for the machine?

- (a) Rs.38,243.76
- (b) Rs.40,142.78
- (c) Rs.44,567.76
- (d) Rs.46,131.74
- (e) Rs.50,000.00.

(2 marks)

40. The following results are expected by Venus Textiles Ltd, during the four quarters of the year 2005-06.

[< Answer >](#)

Rs.000s				
Particulars	Q ₁	Q ₂	Q ₃	Q ₄
Sales	7,500	10,500	18,000	10,500
Cash payments :				
Production costs	7,000	10,000	8,000	8,500
Selling and administrative costs	1,000	2,000	2,900	1,600
Purchases of plant and other fixed assets	100	1,100	2,100	2,100

The debtors at the end of a quarter are one-third of sales for the quarter. The opening balance of debtors is Rs.30,00,000. Cash on hand at the beginning of the year is Rs.6,50,000. Borrowings are made at the beginning of quarters in which need will occur in multiples of Rs.10,000 repaid to the extent of the availability of cash at the end of every quarter. If the minimum cash balance to be maintained by the firm at the end of every quarter is Rs.5,00,000, the amount of loan outstanding at the end of the year is

- (a) Rs.2,50,000
- (b) Rs.5,50,000
- (c) Rs.13,00,000
- (d) Rs.30,00,000
- (e) Rs.30,50,000.

(2 marks)

41. Alcobex Metal Company (AMC) does business in three products P₁, P₂, and P₃. Products P₁, P₂ are manufactured in the company, while product P₃ is procured from outside and resold as a combination with either product P₁ or P₂. The sales volume budgeted for three products for the current year (April 2006-March 2007) are as under:

[< Answer >](#)

Product	Rs. in lakh		
P ₁	1,200		
P ₂	500		
P ₃	400	[Dec to March previous year]	Rs.20 lakh per month
		[April to July current year]	Rs.25 lakh per month
		[August to November current year]	Rs.30 lakh per month
		[Dec to March current year]	Rs.40 lakh per month

Sales realization is considered at:

- 50 percent current month
- 25 percent second month
- 25 percent third month

Assuming that there is a uniform sale per month of products P₁ and P₂, what would be the total collection from the customers from the month of June 2006 to November 2006?

- (a) Rs.170.42 lakh
- (b) Rs.171.67 lakh
- (c) Rs.1,016.27 lakh
- (d) Rs.1,216.67 lakh
- (e) Rs.1,345.54 lakh.

(2 marks)

42. A firm's inventory turnover is 5 times on a cost of goods sold (COGS) of Rs.8,00,000. If the inventory turnover is [< Answer >](#) improved to 8 times and the COGS remains the same, which of the following is **true**?

- (a) Rs.160,000 is released
- (b) Rs.100,000 is additionally invested
- (c) Rs.60,000 is additionally invested
- (d) Rs.60,000 is released
- (e) Neither additional inventory is invested nor inventory is released.

(1 mark)

43. A firm's inventory planning period is one year. Its inventory requirement for this period is 4,000 units. Its acquisition [< Answer >](#) cost is Rs.50 per order. The carrying costs are expected to be Re.1 per unit per year for an item. If the firm plans to procure inventory in the lot of 2,000 units, the total ordering cost and total carrying cost for the firm are

- (a) Rs.50; Rs.800
- (b) Rs.50; Rs.850
- (c) Rs.100; Rs.850
- (d) Rs.100; Rs.1,000
- (e) Rs.125; Rs.1,000.

(2 marks)

44. A manufacturer buys casting equipment from outside suppliers @ Rs.30 per unit. Total annual needs are 800 units. [< Answer >](#) The following further data is available:

Annual return on investment	10 percent
Rent, insurance and taxes per unit per year	Re.1
Cost of placing an order	Rs.100

How often will an order needs to be placed? (Assume 365 days in a year)

- (a) 65.50 days
- (b) 81.25 days
- (c) 91.25 days
- (d) 106.50 days
- (e) 124.25 days.

(2 marks)

45. M/S Sahiti Fertilizers Ltd, has five different items in its inventory. The following table shows the average number of [< Answer >](#) units and average cost per unit of the different items.

Item No.	Average No. of units	Average cost per unit (Rs.)
I	20,000	60.00
II	10,000	100.00
III	32,000	11.00
IV	28,000	10.00
V	60,000	3.40

The manager Mr.Kiran has decided to divide the items into A, B and C categories so that he can have a better control on the inventory. If he is selecting two items as 'A' category items, what percentage of total cost do these two items constitute?

- (a) 25.60%
- (b) 39.59%
- (c) 50.20%
- (d) 72.47%
- (e) 80.02%.

(2 marks)

46. Akhila Super Market uses inventory as one performance measure to evaluate its store manager. Currently, its [inventory turnover](#) is ten times per year compared with an industry average of four. Average sales are Rs.4,50,000 per year. Variable costs of inventory have consistently remained at 70% of sales with fixed costs of Rs.10,000. Carrying costs of inventory (excluding financing costs) are 5 percent annually. Sales force has complained that low inventory levels are resulting in lost sales due to stockouts. Therefore the sales manager has come up with a new policy where the inventory turnover would reduce to 8 but increase the sales to Rs.5,00,000. If the firm is in the tax bracket of 40% and adopts the new policy, the percentage of incremental profit to the incremental inventory is
- (a) 45.20%
 (b) 54.10%
 (c) 62.10%
 (d) 69.00%
 (e) 75.20%.

(2 marks)

47. Hardhik Chemicals Ltd, has at present annual sales level of Rs.10,000 units at Rs.300 per unit. The variable cost is [Rs.200 per unit](#) and fixed cost amounts to Rs.3,00,000 per year. The present credit period allowed by the company is 1 month. The company is considering a proposal to increase the credit period to 2 months and consequently sales are expected to increase by 15%. The bad debts are expected to increase from 1% to 3%. The increase in contribution and bad debt costs due to a change in the credit policy respectively are
- (a) Rs.90,000; Rs.53,000
 (b) Rs.1,50,000; Rs.73,500
 (c) Rs.1,50,000; Rs.85,000
 (d) Rs.2,00,000; Rs.92,000
 (e) Rs.2,02,267; Rs.97,500.

(2 marks)

48. A nationalized bank is analyzing the receivables of Wilson & Co. in order to identify acceptable collateral for a short-term loan. The company's credit policy is 2/10 net 30. The bank lends 80 percent on accounts where customers are not currently overdue and where the average period does not exceed 10 days past the net period. The following table shows the schedule of Wilson & Co's receivables.

Account	Amount (Rs.)	Days Outstanding	Average Payment Period historically (in days)
74	25,000	15	20
91	9,000	45	60
107	11,500	22	24
108	2,300	11	12
114	18,000	50	45
116	29,000	16	10
123	14,000	27	48

How much loan can the firm receive from the bank on a pledge of its receivables?

- (a) Rs.38,616
 (b) Rs.42,816
 (c) Rs.48,816
 (d) Rs.54,240
 (e) Rs.58,816.

(2 marks)

49. Eagle Seed Company has total sales of Rs.6,00,000 of which 90% are on credit basis. If its year-end receivables turnover is 5, the average collection period (based on a 365-day year) and the year-end receivables are, respectively [< Answer >](#)

- (a) 65 days and Rs.1,00,000
- (b) 73 days and Rs.1,20,000
- (c) 73 days and Rs.1,08,000
- (d) 81 days and Rs.1,08,000
- (e) 96 days and Rs.1,08,000.

(2 marks)

50. If credit terms of "2/10, net 40" are offered, the approximate cost of not taking the discount and paying at the end of the credit period would be closest to which of the following? (Assume a 365-day year.) [< Answer >](#)

- (a) 18.6%
- (b) 24.3%
- (c) 24.8%
- (d) 30.0%
- (e) 34.2%.

(1 mark)

51. Bata Motors Pvt Ltd, (BMPL) is a manufacturer of two-wheelers and four-wheelers. It normally grants credit to its dealers. One of its prospective dealer Abhi Motors Ltd, (AML) is likely to approach BMPL for a repeat order of newly released bike model. The company is considering whether to grant credit to AML in this situation. Considering the past payment profile of AML, BMPL decides that initially, the probability of payment is 85% and probability of default is 15%. If AML pays for the first order promptly, the probability of default for the repeat order would come down to 7% and the probability of payment increases to 93%. The company expects the revenue from each order to be Rs.100 lakh and the associated cost to be Rs.70 lakh, leaving a profit of Rs.30 lakh, if payment is made and a loss of Rs.70 lakh if AML defaults. The net weighted benefit/loss to the firm is [< Answer >](#)

- (a) Loss of Rs.34.55 lakh
- (b) Loss of Rs.37.65 lakh
- (c) Benefit of Rs.27.45 lakh
- (d) Benefit of Rs.30.23 lakh
- (e) Benefit of Rs.34.55 lakh.

(2 marks)

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

- (a) Rs.410.00 lakh and Rs.222.46 lakh
- (b) Rs.413.34 lakh and Rs.247.30 lakh
- (c) Rs.424.68 lakh and Rs.247.30 lakh
- (d) Rs.510.00 lakh and Rs.247.30 lakh
- (e) Rs.510.00 lakh and Rs.357.50 lakh.

(2 marks)

53. If the average stock of finished goods is Rs.165 lakh and the finished goods storage period is 30 days, the annual cost of sales (assuming 360 days in a year) is [< Answer >](#)

- (a) Rs.1,230 lakh
- (b) Rs.1,670 lakh
- (c) Rs.1,980 lakh
- (d) Rs.2,090 lakh
- (e) Rs.2,300 lakh.

(1 mark)

54. Following details are given about M/s. Komal Fashions Ltd,

[< Answer >](#)

Raw material storage period	97 days
Conversion period	78 days
Finished goods storage period	45 days
Average collection period	56 days
Annual credit purchases	Rs.75,000
Opening balance of accounts payable	Rs.32,000
Closing balance of accounts payable	Rs.44,000

Other things remaining the same, if the average collection period increases by 18 days, and average payment period decreases by 20 days in the next year, what is the change in the net operating cycle period for the company? (Assume 1 year = 360 days)

- (a) Increase of 2 days
- (b) Increase of 20 days
- (c) Increase of 38 days
- (d) Decrease of 2 days
- (e) Decrease of 38 days.

(2 marks)

55. On April 1 of the current year, the Board of Directors of Powell Breweries Ltd, has the following forecasts of its [operations for the current year:](#)

- Production during the previous year was 60,000 units, it is planned to maintain the same level of activity in the next year also.
- Cost prices: Raw material – Rs.3 per unit, direct wages and overheads – Rs.1.50 per unit
- Wages and overhead costs accrue evenly throughout the production cycle. Conversion costs will be 50% of wages and overheads.
- Raw materials are expected to remain in store for an average of two months before these are issued for production.
- Each unit of production is expected to be in process for one month.
- Finished goods will stay in warehouse for approximately three months.
- Credit allowed by creditors is 2 months from the date of delivery of raw materials.
- Credit allowed to debtors is 3 months from the date of dispatch.
- Selling price per unit is Rs.5

Forecasted net working capital for the next year is

- (a) Rs.1,29,750
- (b) Rs.1,45,650
- (c) Rs.1,53,750
- (d) Rs.1,61,250
- (e) Rs.1,76,450.

(2 marks)

56. The following information regarding material 'X' has been extracted from the stores ledger of Fabstyle Super Mall. [< Answer >](#)

Opening stock	400 units	@ Rs.20/unit
Purchases:		
July 5	200 units	@ Rs.24/unit
July 18	400 units	@ Rs.30/unit

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

- (a) Rs.4,000
- (b) Rs.4,800
- (c) Rs.4,960
- (d) Rs.5,600
- (e) Rs.6,000.

(1 mark)

57. Teja Associates Ltd, recently issued 1 right share for every 5 shares held. If the price of the stock at the time of the issue was Rs.65 per share and the price after the rights issue was Rs.60 per share, the subscription price of each right share was [< Answer >](#)

- (a) Rs.30
- (b) Rs.35
- (c) Rs.44
- (d) Rs.46
- (e) Rs.48.

(1 mark)

58. Lahiri Textiles Ltd 's preferred stock (face value Rs.100) just paid an annual dividend of Rs.10 per share. The preferred stock has a current market price of Rs.96 a share. The firm plans to maintain its current capital structure even in the future. If the cost of preferred stock of the company were 10.42%, the preferred stock would be redeemed approximately after [< Answer >](#)

- (a) 12 years
- (b) 15 years
- (c) 19 years
- (d) 21 years
- (e) 23 years.

(1 mark)

59. The value of Lalit Industries Ltd, is Rs.50 lakh. The company employs debt in its capital structure. The value of another company Sony Industries Ltd, employed no debt is Rs.47.8 lakh. If the corporate tax rate is 40%, the market value of debt employed in the company is [< Answer >](#)

- (a) Rs.1,40,000
- (b) Rs.2,20,000
- (c) Rs.3,60,000
- (d) Rs.5,50,000
- (e) Rs.6,40,000.

(1 mark)

60. The following information is provided for Venus Telefilms Ltd,

[< Answer >](#)

Equity capital (face value = Rs.10 per share)	Rs.40,00,000
Market value per share	Rs.45
Dividend per share	Rs.4.05
Debentures @ 12% (FV = Rs.1,000)	Rs.10,00,000
Retained earnings	Rs.3,00,000
Market value of debentures	Rs.992
Number of years to redemption	8
Term loans @ 11%	Rs.15,00,000
Tax rate	40%

If the dividend per share is assumed to remain constant forever, the weighted average cost of capital for the company is

- (a) 5.115%
- (b) 7.136%
- (c) 8.225%
- (d) 9.075%
- (e) 10.112%.

(2 marks)

61. The operating income of Aditya Technologies Ltd, is Rs.20,00,000. The firm pays an interest of Rs.2,00,000 @ 10% and the equity capitalization rate of the company is 16%. Assuming no taxes, the overall cost of capital for the firm according to the Net income approach is

[< Answer >](#)

- (a) 11.76%
- (b) 12.50%
- (c) 13.64%
- (d) 14.82%
- (e) 15.09%.

(2 marks)

62. Uday Computers Ltd, has entirely equity in its capital structure. The net income to the shareholders of the company is Rs.15,00,000. It is assumed that all the assumptions of MM hypothesis are met. If the equity capitalization rate is 12% and the corporate tax rate is 40% , the value of the firm is

[< Answer >](#)

- (a) Rs.35,00,000
- (b) Rs.42,00,000
- (c) Rs.49,00,000
- (d) Rs.58,00,000
- (e) Rs.75,00,000.

(1 mark)

63. Rajan Pharmaceuticals Ltd, (RPL) and Kiran Pharmaceuticals Ltd, (KPL) are two companies that are in the same risk class and are identical in every respect. Except that RPL uses debt while KPL does not. RPL has Rs.9,00,000 debentures, carrying 10% rate of interest. Both the firms earn 20% operating profit on their total assets of Rs.15,00,000. If the tax rate is 35% and the capitalization rate for an all-equity firm is 15%, the difference between the values of the two firms is

[< Answer >](#)

- (a) Rs.3,00,000
- (b) Rs.5,10,000
- (c) Rs.8,00,000
- (d) Rs.13,00,000
- (e) Rs.18,10,000.

(2 marks)

64. Consider the following information regarding Sahni & Co. Ltd.:

[< Answer >](#)

Net operating income	Rs.150 lakh
Overall capitalization rate	15%
Interest on debt	Rs.14 lakh
Equity capitalization rate	17%

According to the assumptions of capital structure theories, the debt-equity ratio of Sahni & Co. Ltd. is

- (a) 1:5
- (b) 1:4
- (c) 1:3
- (d) 1:2
- (e) 2:1.

(2 marks)

65. The following details are available regarding the long-term sources of finance of M/s. Bobby Textiles 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 expanding 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 capital of new financing in the range of Rs.50 crore – 55 crore is

- (a) 10.8%
- (b) 11.4%
- (c) 12.0%
- (d) 12.8%
- (e) 13.2%.

(2 marks)

66. The market values of debt and equity of Mahati Consumer Goods Ltd, are Rs.160 lakh and Rs.240 lakh respectively and the costs of equity and debt are 16% and 14% respectively. The net operating income for the firm as per the Net Operating Income approach is

[< Answer >](#)

- (a) Rs.54.4 lakh
- (b) Rs.56.8 lakh
- (c) Rs.60.8 lakh
- (d) Rs.63.2 lakh
- (e) Rs.64.8 lakh.

(1 mark)

67. The current market price per share of XYZ Co. Ltd. is Rs.40. The earnings during the current year were Rs.1,50,000. [< Answer >](#)
Total number of outstanding shares was 12,500 at Rs.20 each. Last year the company retained 75% of its profits and distributed the remaining as dividends. The company is keen on following the same dividend policy even in the future. The expected growth rate in dividends is 12% per annum. This year the company desires to raise new equity capital and wants to estimate the cost of raising external equity. If the cost of issuing external equity as a percentage of the existing market price is 6%, the cost of external equity to the company, according to the dividend capitalization model, is approximately

- (a) 17.24%
- (b) 18.04%
- (c) 19.45%
- (d) 20.94%
- (e) 21.74%.

(2 marks)

68. Express Industries Ltd, had 50,000 equity shares of Rs.10 each outstanding as on April 1 2006. The shares are [< Answer >](#)
currently being quoted at par in the market. The company now intends to pay a dividend of Rs.2 per share in the current financial year. It belongs to a risk class whose appropriate capitalization rate is 15%. Also if the company issues 20,000 new shares to meet its new investment needs of Rs.2 lakh partially, what are the earnings of the firm according the M-M approach to dividend policy?

- (a) Rs.50,000
- (b) Rs.77,000
- (c) Rs.1,10,000
- (d) Rs.1,25,000
- (e) Rs.1,40,000.

(2 marks)

69. The following information is furnished regarding Charan Technologies Ltd, [< Answer >](#)

Earnings of the company	Rs.5,00,000
Dividend pay-out ratio	60%
Number of shares outstanding	1,00,000
Price earning ratio	8
Rate of return on investment	15%

What is the current market value of the share of the company as per Walter's model? What would be the maximum value of the shares?

- (a) Rs.34.00; Rs.48.00
- (b) Rs.43.20; Rs.48.00
- (c) Rs.43.20; Rs.50.20
- (d) Rs.58.00; Rs.62.00
- (e) Rs.63.20; Rs.65.00.

(2 marks)

70. A company has total investment in assets, and 50,000 equity shares at Rs.10 per share. The growth rate in dividends is [< Answer >](#) 7.5% and the company has a policy of paying 50% of its earnings as dividends. The appropriate discount rate of the firm is 10 percent. If the market price of the share as per Gordon's model is Rs.30, the return on investment to the company is

- (a) 8%
- (b) 15%
- (c) 18%
- (d) 20%
- (e) 23%.

(2 marks)

71. Tapas Heavy Electricals Ltd, is considering the following five new systems for its turbine movement. The following [< Answer >](#) table shows the initial outlay and the operating costs associated with the five alternate systems:

	Rs.				
Year	A	B	C	D	E
0	8,00,000	10,00,000	18,00,000	12,00,000	20,00,000
1	75,000	1,00,000	1,45,000	1,00,000	1,00,000
2	80,000	1,15,000	1,60,000	1,10,000	1,40,000
3	1,00,000	1.25,000	2,00,000	1,20,000	1,60,000
4	1,10,000	1,30,000	2,25,000	1,30,000	2,00,000
5	1,15,000	1,35,000	2,45,000	1,40,000	2,40,000
6	1,20,000	1,40,000	2,40,000	1,50,000	2,80,000
7		1,45.000	2,00,000	1,70,000	2,20,000
8			2,50,000	1,50,000	2,60,000
9				1,60,000	2,00,000
10					2,20,000

Which of the above systems is preferred on the basis of Annual Capital charge, if the appropriate discount rate is 12%?

- (a) A
- (b) B
- (c) C
- (d) D
- (e) E.

(3 marks)

Suggested Answers

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1. Answer : (d)

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Reason : A debenture is a marketable legal contract. Hence (a) is not true.

Participating debentures are unsecured corporate debt securities. They appeal to investors willing to accept risk for higher returns. Statement (b) is not true.

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 (c) is not true.

A secured premium is a kind of NCD with an attached warrant. Hence, (e) is not true.

Mortgage backed security is a synthetic instrument for securitization of debt. Statement (d) is 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. The following are the advantages of privately placing the securities:

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

Therefore statements (I), (II) and (IV) are true and statement (III) is not true. Hence (d) is the answer.

3. Answer : (d)

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Reason : The cost of capital of a company is not the cost of a single specific source of finance used by the firm, nor is it measured in terms of the cash flow accruing to any specific source of finance. It is the weighted average cost of various long-term sources of finance used by the firm. Hence (d) is the answer.

4. Answer : (b)

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Reason : Dividend capitalization approach defines cost of equity as the rate at which the intrinsic value is equal to the market price of the share. Statement (a) is true.

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. Statement (b) is not true.

According to earnings price ratio approach, cost of equity is E_1/P , where E_1 is the EPS for the next year. It is based on the assumption that the EPS will remain constant from next year onwards. Statement (c) is true.

Realized yield approach assumes that the actual returns are in line with the expected return. Statement (d) is true.

According to CAPM approach, cost of equity is defined as risk free rate + beta of the stock (market return – risk-free rate). Statement (e) is true.

Hence (b) is the answer.

5. Answer : (d)

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Reason : The assumptions underlying the definition of cost of capital as a measure for appraising new investments are

- The risk characterizing the new project under consideration is not different from the risk characterizing the existing investments of the firm.
- The firm will continue to pursue the same financing policies i.e. there will be no deviation from the debt equity mix currently adopted by the firm.

Hence only statements (I) and (III) are true statement II is not an assumption of cost of capital. Hence (d) is the answer.

6. Answer : (d)

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Reason : One of the features of the capital structure is that it should involve minimum dilution of control and any company should make maximum use of leverage at a minimum cost

Other features of capital structure are flexibility and solvency. Statements (a) and (b) are true.

Given the net operating income to be constant, the cost of capital is the discount rate at which the present value of net operating income is equal to the market value of the firm. Statement (c) is true.

The capital structure that maximizes the market value of a company also minimizes the cost of capital of the company. Statement (d) is not true.

It is assumed that a firm can change its capital structure without incurring transaction costs. Statement (e) is true.

Hence (d) is the answer.

7. 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 true. Hence (e) is the answer.

8. Answer : (d)

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Reason : Agency/monitoring costs are certain restrictions on firm imposed by creditors in the form of some protective covenants in the loan contract. They entail legal and enforcement costs, which impair the operating efficiency of the firm. Statements (I) is not true and (II) is true.

Bankruptcy costs are certain restrictions imposed by creditors. Statements (III) is not true.

Hence (d) is the answer.

9. Answer : (d)

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Reason : When the return on investment is greater than the cost of capital, there is an inverse relationship between the value of the share and the pay-out ratio. Statement (I) is not true.

Retained earnings are the only source of finance available to the firm, with no outside debt or additional equity used. Statement (II) is true.

For a given value of the firm, the dividend per share and the earnings per share remain constant. Statement (III) is true.

When the return on investment is less than the cost of capital, firm's value will increase. Statement (IV) is not true.

Hence (d) is the answer.

10. Answer : (c)

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Reason : It explains the irrelevance of a firm's dividend policy. It emphasizes that only the firm's investment policy has an impact on the share value of the firm. The market value of the shares of the two firms having similar risk-return profile will be similar despite different payout ratios. The arbitrage process makes the investor indifferent to the dividend earnings and the capital gains. It is assumed that there are no taxes, implying that there are no differential tax rates for the dividend income and capital gains. Therefore only statement (c) is not true. Hence (c) is the answer.

11. Answer : (e)

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PV of cash inflows

Reason : $NPV = (PV \text{ of cash inflows} - PV \text{ of cash outflows})$ and $PI = \frac{PV \text{ of cash inflows}}{PV \text{ of cash outflows}}$

If the NPV of a project is greater than 0, its PI will be greater than 0. Statement (I) is not true.

If the IRR of a project is 0%, its NPV, using a discount rate, k , greater than 0, will be greater than 0 because at IRR, $NPV = 0$. Therefore for any other discount rate NPV cannot be zero. Statement (II) is not true.

If the PI of a project is less than 1, implies the PV of cash outflows is less than the PV of cash inflows. Therefore the NPV will be less than 0. Statement (III) is true.

If the IRR of a project is greater than the discount rate, k , its PI will be more than 1 and its NPV will be greater than 0. Statement (IV) is not true.

Hence (e) is the answer.

12. Answer : (d)

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Reason : The difference between the amounts of current assets and spontaneous liabilities can be financed by a combination of bank borrowings and long-term sources of capital like debentures and equity. An aggressive financing policy will tend to have a financing mix tilted in favour of bank borrowings and public deposits compared to a conservative policy tilted in favour of long-term sources like equity and to some extent debentures. A conservative policy having a high proportion of equity capital and to some extent debentures will have comparatively low debt servicing resulting in a lower degree of the risk of technical insolvency. Hence (d) is the answer.

13. Answer : (e)

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Reason : Shorter the duration of operating cycle period, faster the transformation of current assets into cash. Statement (I) is not true.

The operating cycle approach is useful for both controlling and forecasting working capital. Statement (II) is true.

Gross operating cycle period less average payment period is the net operating cycle period. Statement (III) is not true.

Hence (e) is the answer.

14. Answer : (c)

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Reason :

	Conservative policy	Aggressive policy
Liquidity	High	Low
Profitability	Lower	Greater
Degree of risk	Low	High
Investment in current assets for a given forecast of sales	High	Low
Turnover of current assets	Less	High
Operating profitability	Low	high

Therefore statement (c) is true and is the answer.

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

Reason : Purchases all accounts receivables of the seller for immediate cash.

Administers the sales ledger of the seller.

Assumes the losses, which may arise from bad debts.

Provides relevant advisory services to the seller.

Collects the accounts receivable.

Factoring is a continuous arrangement and not related to a specific transaction. Therefore a factor handles all the receivables arising out of the credit sales of the seller company and not just some specific bills or invoices.

Hence (d) is the answer.

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

Reason : Cost of trade credit is the implicit cost associated with not availing cash discount within the stipulated period. Statement (I) is true.

Smaller the discount rate offered, lower will be the cost of trade credit. Statement (II) is not true.

Larger the spread between credit and cash discount periods, the lower will be the cost of trade credit. Statement (III) is true.

Cash discount can be availed only when the cost of trade credit exceeds the opportunity cost of cash. Statement (IV) is not true.

Hence (b) is the answer.

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

Reason : Advantages of ABC Analysis:

- It ensures closer control on costly items in which a large amount of capital is invested
- It helps in developing a scientific method of controlling inventories
- It helps to reduce clerical costs while maintaining stock at optimum level
- It helps in achieving the main objective of inventory control at minimum cost

Limitations of ABC Analysis:

- It analyzes the items according to their value and not their importance

Hence (d) is the answer.

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

Reason : As inflation increases, interest rates increase causing an increase in the carrying costs and consequently decreasing the EOQ. Hence statement (c) is not true.

EOQ is the quantity, which minimizes both order costs and carrying costs.

The magnitude of safety stock depends upon the uncertainty surrounding the usage rate and lead time.

The EOQ model can be modified to include varying unit prices.

If delivery is not instantaneous, inclusion of a safety stock can modify EOQ model.

Hence (c) is the answer.

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

Reason : Storage lag is the time lapsed between the production of goods and their sale. It represents a cost to the firm. Statement (I) is true.

The time lapsed between the sale of goods and collection of cash is known as sale lag. Statement (II) is true.

Shelf stock refers to items that are stored by the firm and sold with little or no modification to customers. Statement (III) is true.

Inventories provide a buffer between purchasing, producing and marketing goods. Statement (IV) is true.

Inventories reduce order costs. Statement (V) is not true.

Hence (e) is the answer.

20. Answer : (b)

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Reason : Reorder level is one at which the total stock-out costs and the carrying costs are at their minimum. Statement (I) is not true.

Higher the quantity of safety stock, lower the stock-out cost and higher the incidence of carrying costs. Statements (II) and (III) are not true.

The magnitude of safety stock depends upon the degree of uncertainty surrounding the usage rate and lead-time. Statement (IV) is true.

Hence (b) is the answer.

21. Answer : (b)

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Reason : Costs of maintaining receivables:

Additional fund requirement for the company

Administrative costs

Collection costs

Defaulting costs

Therefore cash discount is not a cost of maintaining receivables. Hence (b) is the answer.

22. Answer : (c)

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Reason : Liberal cash discount policy involves increasing the discount percentage or lengthening the discount period. Such a policy tends to enhance sales, reduce the average collection period, and increase the cost of discount. On the other hand a rigorous discount policy reduces sales, increases average collection period and decrease the cost of discount. Statements (a) and (d) are true.

If credit standards are made more stringent, 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 also reduces. Hence statement (b) is true.

If credit period is shortened, sales are likely to decrease and reduce investment in receivables and reduce the incidence of bad debt loss. Statement (e) is true.

Rigorous collection policy will decrease sales but decrease the amount of money locked up in receivables and reduce the bad debt losses. Statement (c) is not true.

Hence (c) is the answer.

23. Answer : (c)

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Reason : Whether or not to avail of term loans and to what extent is related with the borrowing policy of a firm; it is not related with cash management. All other alternatives are factors useful for efficient cash management. Therefore (c) is the answer.

24. Answer : (b)

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Reason : When collections float is more than the payment float, the company is said to have negative net float. Hence statement I is not true.

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 II 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 III is not true.

Hence (b) is the answer.

25. Answer : (c)

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Reason : Objectives of internal audit are:

- Evaluation of internal controls
- Verification of documentation
- To assist management to obtain maximum utilization of resources
- To ensure that liabilities have been incurred for legitimate purposes
- To scrutinize policies and procedures of the management to improve operational efficiencies
- To facilitate the annual audit to be conducted by external auditors

To report on the financial position and operating capacity of the firm is the objective independent audit.

Hence (c) is not true and is the answer.

26. Answer : (e)

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Reason : The net cash flows are defined from the point of view of suppliers of long-term funds.

Net cash flows must be measured in incremental terms.

The effect of project on other product lines of the firm is to be quantified and considered while arriving at the net cash flows.

The share of existing overhead costs, which is to be borne by the end products of the proposed project, should be ignored.

Opportunity costs associated with the utilization of the resources available with the firm must be considered though such utilization does not entail explicit cash flows.

Therefore statements (a), (b), (c) and (d) are true and statement (e) is not true. Hence (e) is the answer.

27. Answer : (d)

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Reason : NPV is positive when IRR exceeds the cost of capital, because the present value increases as the discount rate/cost of capital decreases.

Maximizing NPV is congruent with the objective of investment decision-making, i.e., maximizing shareholders' wealth. Therefore accepting the project with a negative NPV may have an indeterminate effect on shareholders.

When the cash inflows and cash outflows are interspersed, a project will have multiple internal rates of return.

Benefit cost ratio (BCR) has two limitations: (i) it cannot be used when investment outlay is spread over more than one period, and (ii) it provides no means for aggregating several small projects into a package that can be compared with a large project.

Therefore statements (a), (b), (c) and (e) are true and statement (d) is not true. Hence (d) is the answer.

28. Answer : (e)

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Reason : Performance review of projects throws light on how realistic were the assumptions underlying the project. Statement (I) is not true.

Market appraisal of the projects will help in knowing the project's share in the total market. Statement (II) is true.

Economic appraisal verifies the contribution of the project towards socially desirable objectives. Statement (III) is true.

Hence (e) is the answer.

29. Answer : (d)

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Reason : IRR is a discounted cash flow technique; therefore it takes into account time value of money. Hence statement (a) is true.

Statement (b) is also true as IRR takes into account all the cash flows arising over the period of investment.

Under the IRR criterion, a project is accepted only if the $IRR > \text{the cost of capital}$ otherwise it is rejected. Hence statement (c) is true.

Internal rate of return is the rate at which the present value of inflows is equal to the present value of cash outflows. Statement (d) is not true because when a project has a cash flow stream that consists of one or more cash outflows interspersed with cash inflows, it will not have a unique IRR but will have multiple IRRs.

IRR is the return at which $NPV = 0$. Therefore statement (e) is true.

Hence option (d) is the answer.

30. Answer : (d)

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Reason : It is assumed that cost of equity capital is greater than the growth rate. Statement (I) is true.

Investors prefer current dividends and discount uncertain returns. Statement (II) is true

Firms, which have a rate of return less than the cost of capital, should have a lower retention ratio. Statement (III) is true

A firm's share value is positively correlated with the pay-out ratio when $r_e < k_e$. Statement (IV) is not true.

Investors prefer to pay a higher price for stocks, which pay them current income. Statement (V) is true.

Hence (d) is the answer.

31. Answer : (d)

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Reason : $PI = \frac{PV \text{ of cash inflows}}{PV \text{ of cash outflows}}$

Project I:

$$PI = \frac{\frac{400}{(1.14)} + \frac{450}{(1.14)^2} + \frac{475}{(1.14)^3} + \frac{500}{(1.14)^4} + \frac{575}{(1.14)^5}}{1,000} = \frac{1612.43}{1,000} = 1.61$$

Project II:

$$PI = \frac{600 \times PVIFA_{(14\%,5)}}{1,200} = \frac{2,059.8}{1,200} = 1.72$$

Project III:

$$PI = \frac{\frac{625}{(1.14)} + \frac{675}{(1.14)^2} + \frac{700}{(1.14)^3} + \frac{725}{(1.14)^4} + \frac{675}{(1.14)^5}}{1,250} = \frac{2,319.95}{1,250} = 1.86$$

Project IV:

$$PI = \frac{\frac{250}{(1.14)} + \frac{350}{(1.14)^2} + \frac{500}{(1.14)^3} + \frac{400}{(1.14)^4} + \frac{200}{(1.14)^5}}{800} = \frac{1,166.80}{800} = 1.46$$

Project V:

$$PI = \frac{200 \times PVIFA_{(14\%,5)}}{750} = \frac{686.6}{750} = 0.92$$

Projects in descending order: III, II, I, IV, and V. Hence (d) is the answer.

32. Answer : (c)

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Reason : According to Traditional Approach,

$$P = m \left(D + \frac{E}{3} \right)$$

Given E = Rs.5

D = (1-retention ratio) E

$$= 0.6 \times 5$$

$$= \text{Rs.}3$$

$$P = 12 \left(3 + \frac{5}{3} \right) = \text{Rs.}56$$

$$\therefore P/E = 56/5 = 11.2$$

Hence (c) is the answer.

33. Answer : (c)

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Reason : Net Benefit cost ratio (NBCR) = NPV/I

$$\begin{aligned}\therefore \text{Initial investment} &= \text{NPV}/\text{NBCR} \\ &= 45,000/0.4 \\ &= \text{Rs.}1,12,500\end{aligned}$$

Hence (c) is the answer.

34. Answer : (b)

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Reason : Cost of new machine = Actual cost + modification cost

$$= \text{Rs.}25,00,000 + 2,00,000$$

$$= \text{Rs.}27,00,000$$

Initial investment = Cost of new machine – salvage value of old machine

$$= 27,00,000 - 3,00,000$$

$$= \text{Rs.}24,00,000$$

Depreciation on old machine = Rs.15,00,000/5 = Rs.3,00,000

Depreciation on new machine = Rs.27,00,000/3 = Rs.9,00,000

Computation of cash flows:

	Year 0	Year 1	Year 2	Year 3
Initial investment	-24,00,000			
Saving in operating costs		10,00,000	10,00,000	10,00,000
Depreciation		6,00,000*	9,00,000	9,00,000
Profit before tax		4,00,000	1,00,000	1,00,000
Tax @ 40%		1,60,000	40,000	40,000
PAT		2,40,000	60,000	60,000
Net cash flow (PAT + Depreciation)		8,40,000	9,60,000	9,60,000

* Depreciation is incremental in year 1 as the economic life of old machine is 5 years and 4 years have already lapsed.

$$\begin{aligned}\text{NPV} &= -24,00,000 + 8,40,000/1.12 + 9,60,000/(1.12)^2 + 9,60,000/(1.12)^3 \\ &= -\text{Rs.}2,01,384.8 = -\text{Rs.}2,01,385 \text{ (app)}\end{aligned}$$

35. Answer : (d)

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Reason : Initial investment on the machine = Cost of the machine + installation charges + net working capital

$$= 10,00,000 + 70,000 + 2,00,000$$

$$= \text{Rs.}12,70,000$$

Depreciation:

Year	Depreciation @ 30% (Rs.)	Book value (Rs.)
1	0.3 x 10,70,000 = 3,21,000	7,49,000
2	0.3 x 7,49,000 = 2,24,700	5,24,300
3	0.3 x 5,24,300 = 1,57,290	3,67,010
4	0.3 x 3,67,010 = 1,10,103	2,56,907

Therefore the book value at the end of year 3 = Rs.3,67,010.

Hence (d) is the answer.

36. Answer : (b)

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Reason : IRR is that rate of return, which equates the present value of the cash inflows and the present value of cash outflows., or where NPV is zero. Let 'r' be the relevant IRR.

Present value of cash outflow = Rs.75,000

Present value of cash inflows = $20,000/(1+r) + 28,000/(1+r)^2 + 42,000/(1+r)^3$

$\therefore \text{Rs.}75,000 = 20,000/(1+r) + 28,000/(1+r)^2 + 42,000/(1+r)^3$

By trial and error,

When $r = 8\%$, Present value of cash inflows = Rs.75,864.96

When $r = 9\%$, Present value of cash inflows = Rs.74,347.37

Therefore r lies between 8% and 9%.

$r = 8\% + (75,864.96 - 75,000)/(75,864.96 - 74,347.37)$

$= 8\% + 0.57\%$

$= 8.57\%$

Hence (b) is the answer.

37. Answer : (b)

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Reason : We know that IRR is that rate of return, which equates the present value of the cash inflows and the present value of cash outflows. Therefore PV of cash inflows will be the initial cash outlay.

PV of cash inflows = $2,500 \times \text{PVIFA}_{(8\%, 10)} + 5,000 \times \text{PVIF}_{(8\%, 10)}$

$= 2,500 \times 6.7100 + 5,000 \times 0.4632$

$= \text{Rs.}19,091$

Hence the initial outlay is Rs.19,091. Hence (b) is the answer.

38. Answer : (c)

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Reason : In the scenario given, the cash flows would look like this:

Year Rs.('000s)												
0	1	2	3	4	5	6	7	8	9	10	11	12
-600	100	100	100	100	-20	200	200	200	200	200	200	200

$$= -600 + \frac{100}{1.15} + \frac{100}{(1.15)^2} + \frac{100}{(1.15)^3} + \frac{100}{(1.15)^4} - \frac{20}{(1.15)^5} + \frac{200}{(1.15)^6}$$

$$+ \frac{200}{(1.15)^7} + \frac{200}{(1.15)^8} + \frac{200}{(1.15)^9} + \frac{200}{(1.15)^{10}} + \frac{200}{(1.15)^{11}} + \frac{200}{(1.15)^{12}}$$

$$= -600 + 86.956 + 75.614 + 65.752 + 57.175 - 9.944 + 86.465 + 75.187 + 65.380 + 56.852 + 49.437 + 42.989 + 37.38$$

$$= -600 + 689.247$$

$$= \text{Rs.}89.247 \text{ thousands}$$

$$= \text{Rs.}89,247$$

Hence (c) is the answer.

39. Answer : (d)

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Reason : The maximum amount that we would be willing to pay for the machine is the price such that the NPV is equal to zero (at which point the company would be indifferent between purchasing and not purchasing the machine). Since the purchase price determines the depreciation, salvage value and tax expense, we have to derive an expression for the NPV of the machine in terms of the purchase price of the machine and solve for the price that sets NPV = 0.

The NPV of the machine may be expressed as follows:

$$\text{NPV} = -\text{Price} + \text{Cash flow} \times \text{PVIFA}_{(12\%,8)} + \text{Salvage value} \times \text{PVIF}_{(12\%,8)}$$

$$\text{But Cash flow} = \text{EBITDA} - 0.4(\text{EBITDA} - \text{Depreciation})$$

$$= 0.6 \times \text{EBITDA} + 0.4 \times \text{Depreciation}$$

$$= 0.6 \times 11,000 + 0.4 \times \text{Depreciation}$$

$$\text{Cash flow} = 6,600 + 0.4 \times \text{Depreciation}$$

$$\text{But again Depreciation} = \frac{\text{Price} - \text{Salvage value}}{\text{Life of the machine}} = \frac{P - 12,000}{8}$$

If NPV = 0,

$$\text{Cash flow} = 6,600 + \left[\frac{\text{Price} - 12,000}{8} \right] 0.4$$

$$\text{Cash flow} = 6,600 + 0.05P - 600$$

Now,

$$\text{NPV} = -P + \text{Cash flow} \times \text{PVIFA}_{(12\%,8)} + \text{Salvage value} \times \text{PVIF}_{(12\%,8)}$$

$$= -P + 6,600 \times \text{PVIFA}_{(12\%,8)} + 0.05 \times P \times \text{PVIFA}_{(12\%,8)} - 600 \times \text{PVIFA}_{(12\%,8)} + 12,000 \times \text{PVIF}_{(12\%,8)}$$

$$= -P + 6,600 \times 4.97 + 0.05 \times P \times 4.97 - 600 \times 4.97 + 12,000 \times 0.404$$

$$= -P + 32,802 + 0.2485P - 2,982 + 4,848$$

$$= -0.7515P + 34,668$$

$$0.7515$$

$$P = 34,668$$

$$P = \text{Rs.}46,131.74$$

Therefore the machine can be purchased at Rs.46,131.74. Hence (d) is the answer.

40. Answer : (a)

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Reason : Cash budget for the year 2005-06 (Quarter-wise)

Rs.000s					
Particulars	Q ₁	Q ₂	Q ₃	Q ₄	Total
Cash inflows:					
Collection from debtors					
From prior quarter (1/3 of sales)	3,000	2,500	3,500	6,000	15,000
From current quarter (2/3 of sales)	5,000	7,000	12,000	7,000	31,000
Total (A)	8,000	9,500	15,500	13,000	46,000
Cash outflows:					
Production costs	7,000	10,000	8,000	8,500	33,500
Selling and administrative costs	1,000	2,000	2,900	1,600	7,500
Purchases of plant and other fixed assets	100	1,100	2,100	2,100	5,400
Total (B)	8,100	13,100	13,000	12,200	46,400
Surplus/deficiency (A-B)	(100)	(3,600)	2,500	800	(400)
Opening balance	650	550	500	500	650
Ending balance	550	(3,050)	3,000	1,300	250
Borrowings required (deficiency + minimum cash required)		3,550			3,550
Repayments made (balance – minimum cash required)			(2,500)	(800)	(3,300)
Actual ending balance	550	500	500	500	500

Loan outstanding = Rs.35,50,000 – 33,00,000 = Rs.2,50,000.

Hence (a) is the answer.

41. Answer : (c)

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Reason : Collection from customers

Particulars	April	May	June	July	August	September	October	November
Credit sales:								
Product P ₁ (Rs.1,200/12)	100	100	100	100	100	100	100	100
Product P ₂ (Rs.500/12)	41.67	41.67	41.67	41.67	41.67	41.67	41.67	41.67
Product P ₃	25	25	25	25	30	30	30	30
	166.67	166.67	166.67	166.67	171.67	171.67	171.67	171.67
Collections:								
Current month (50%)			83.33	83.33	85.83	85.83	85.83	85.83
Second month (25%)			41.67	41.67	41.67	42.92	42.92	42.92
Third month (25%)			41.67	41.67	41.67	41.67	42.92	42.92
			166.67	166.67	169.17	170.42	171.67	171.67

Total cash collection from June to November 2006:

= 166.67 + 166.67 + 169.17 + 170.42 + 171.67 + 171.67

= Rs.1,016.27 lakh

Hence (c) is the answer.

42. Answer : (d)

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Reason :

$$\text{Inventory turnover} = \frac{\text{COGS}}{\text{Average Inventory}}$$

$$5 = \frac{8,00,000}{\text{Average Inventory}}$$

$$\text{Average Inventory} = \frac{8,00,000}{5} = \text{Rs.1,60,000}$$

Again,

$$8 = \frac{8,00,000}{\text{Average Inventory}}$$

$$\text{Average Inventory} = \frac{8,00,000}{8} = \text{Rs.1,00,000}$$

Average inventory has decreased from Rs.1,60,000 to Rs.1,00,000. Therefore Rs.60,000 has been released from the inventory. Hence (d) is the answer.

43. Answer : (d)

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Reason : Total ordering cost = Number of orders x cost per order

$$\begin{aligned} \text{Number of orders} &= \frac{\text{Total inventory requirement}}{\text{Order size}} \\ &= \frac{4,000}{2,000} \\ &= 2 \end{aligned}$$

$$\text{Total Ordering cost} = 2 \times 50 = \text{Rs.100}$$

Total carrying cost = Average inventory x carrying cost per unit

$$\begin{aligned} \text{Average inventory} &= \frac{\text{Order size}}{2} \\ &= \frac{2,000}{2} \\ &= 1,000 \text{ units} \end{aligned}$$

$$\text{Total Carrying cost} = 1,000 \times 1 = \text{Rs.1,000}$$

Therefore (d) is the answer.

44. Answer : (c)

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Reason :

$$EOQ = \sqrt{\frac{2UF}{C}} = \sqrt{\frac{2 \times 800 \times 100}{4*}} = \sqrt{40,000} = 200 \text{ units}$$

*Carrying cost = Interest cost per unit + (rent, insurance and taxes)

$$\text{Interest cost per unit} = \frac{\text{Total interest cost}}{\text{annual demand}}$$

$$\text{Total interest cost} = \frac{800 \times 30 \times 10}{100} = \text{Rs.}2,400$$

$$\text{Interest cost per unit} = \frac{2,400}{800} = \text{Rs.}3$$

$$\therefore \text{Carrying cost} = \text{Rs.}3 + \text{Rs.}1 = \text{Rs.}4$$

Time after which an order is to be placed is given by

$$\frac{365}{\text{Number of orders placed in a year*}} = \frac{365}{4} = 91.25$$

$$*\text{Number of orders placed in a year} = \frac{\text{Annual demand}}{\text{EOQ}} = \frac{800}{200} = 4$$

Therefore time between two orders needs to be 91.25 days.

Hence (c) is the answer.

45. Answer : (d)

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Reason : ABC classification of inventory:

Item No.	Units	% of Total	Unit cost (Rs.)	Total cost (Rs.)	% of total cost
I	20,000	13.3	60	12,00,000	39.53
II	10,000	6.7	100	10,00,000	32.94
III	32,000	21.3	11	3,52,000	11.59
IV	28,000	18.7	10	2,80,000	9.22
V	60,000	40	3.40	2,04,000	6.72
	1,50,000	100		30,36,000	100

From the table it can be seen that items I and II together constitute only 20% of the total items and are very valuable. They constitute 72.47% (39.53 + 32.94) of total cost. Therefore they can be categorized as 'A' category items. Hence (d) is the answer.

46. Answer : (d)

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Reason :

	Current Policy (Rs.)	New Policy (Rs.)
Sales level	4,50,000	5,00,000
- Variable cost @ 70%	3,15,000	3,50,000
- Fixed cost	<u>10,000</u>	<u>10,000</u>
Margin (A)	1,25,000	1,40,000
Total cost of goods sold	3,25,000	3,60,000
Inventory turnover	10	8
Average inventory	32,500	45,000
Carrying cost @ 5% (B)	1,625	2,250
Profit (A – B)	1,23,375	1,37,750
Less Tax @ 40%	<u>49,350</u>	<u>55,100</u>
PAT	74,025	82,650
Incremental profit (C)		8,625
Incremental inventory (D)		12,500
C/D		69%

Hence (d) is the answer.

47. Answer : (b)

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Reason : Change in profit due to liberalization of credit period:

Particulars	1 month	2 months
Sales (units)	10,000	11,500
Sales revenue (Rs.)	30,00,000	34,50,000
(-) variable costs	20,00,000	23,00,000
Total contribution	10,00,000	11,50,000
Bad debts	30,000	1,03,500

Increase in contribution = Rs.1,50,000

Increase in bad debt costs = Rs.73,500

Hence (b) is the answer.

48. Answer : (d)

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Reason : Statement showing loan amount on pledge of receivables:

Account No.	Amount (Rs.)	Loan amount @ 80% amount (Rs.)
(1)	(2)	80% of Col (2)
74	25,000	20,000
107	11,500	9,200
108	2,300	1,840
116	29,000	23,200
Total loan amount		54,240

Note:

- Account numbers 91 and 114 are currently overdue by 15 and 20 days respectively, credit policy being 2/10 net 30 days. Also these accounts have average payment period of more than 40 days, i.e., 10 more than the credit period allowed. Loan is not available on these accounts as per short-term loan policy of bank.
- Account number 123, though not currently overdue but has average payment period of more than 40 days. Hence this account is also not eligible for loan.

Hence (d) is the answer.

49. Answer : (c)

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Reason : Credit sales = $0.9 \times 6,00,000 = \text{Rs.}5,40,000$

$$\text{Receivables turnover} = \frac{\text{credit sales}}{\text{Receivables}} = 5$$

$$\text{Receivables} = \frac{\text{credit sales}}{5} = \frac{\text{Rs.}5,40,000}{5} = \text{Rs.}1,08,000$$

$$\text{Average collection period} = \frac{365}{\text{Receivables turnover}} = \frac{365}{5} = 73 \text{ days}$$

Hence (c) is the answer.

50. Answer : (c)

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Reason : When suppliers offer discount, the approximate cost of not taking the discount and paying at the end of the credit period is nothing but the cost of trade credit.

$$\begin{aligned} \text{Cost of trade credit} &= \frac{\text{Rate of discount}}{1 - \text{Rate of discount}} \times \frac{\text{Number of days in a year}}{(\text{Credit period} - \text{Discount period})} \\ &= \frac{0.02}{0.98} \times \frac{365}{(40-10)} \\ &= 24.8\% \end{aligned}$$

Hence (c) is the answer.

51. Answer : (e)

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Reason : The net weighted financial benefit in the problem can be solved in two steps.

Normally the expected profit for the single order = $p(\text{Revenue} - \text{cost}) - (1-p) \text{cost}$

Step 1: The net weighted financial benefit on the initial order is calculated in the same way as in the case of a single order (i.e.)

$$= 0.85 \times (100,00,000 - 70,00,000) - 0.15 (70,00,000)$$

$$= 0.85 \times 30,00,000 - 0.15 \times 70,00,000$$

$$= \text{Rs.}15,00,000$$

Step 2: Given that the first order is paid with a probability of 0.85, the net weighted benefit from the repeat order will be

$$= 0.85[0.93 \times 30,00,000 - 0.07 \times 70,00,000]$$

$$= \text{Rs.}19,55,000$$

$$\therefore \text{The net financial benefit} = \text{Rs.}15,00,000 + \text{Rs.}19,55,000$$

$$= \text{Rs.}34,55,000$$

Hence (e) is the answer.

52. Answer : (e)

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Reason : The MPBF as per the Method I of the Tandon committee:

$$0.75 (\text{Current assets} - \text{Current liabilities other than bank borrowings})$$

$$= 0.75 (1,290 - 610) = \text{Rs.}510 \text{ lakhs.}$$

MPBF under the Method-II of the Tandon committee:

$$(0.75 \times \text{Current assets}) - \text{Current liabilities}$$

$$= 0.75 \times 1,290 - 610 = \text{Rs.}357.5 \text{ lakhs.}$$

Hence option (e) is the correct answer.

53. Answer : (c)

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Reason : Finished goods storage period = Average stock of finished goods / Average daily cost of sales
Average daily cost of sales = $165/30 = \text{Rs.}5.5$
Annual cost of sales = $5.5 \times 360 = \text{Rs.}1,980$ lakhs
Hence (c) is the answer.

54. Answer : (c)

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Reason : Operating cycle period = Raw material storage period + Conversion period + Finished goods storage period + Average collection period + Average payment period
Average payment period = Average stock of accounts payable/Average daily purchases
 $= 38,000/208.33$
 $= 182$ days

Operating cycle period for the current year = $97 + 78 + 45 + 56 - 182 = 94$ days

If the average collection period increases by 18 days, and average payment period decreases by 20 days in the next year, operating cycle period = $97 + 78 + 45 + 74 - 162 = 132$ days.

Therefore operating cycle period increases by 38 days.

Hence (c) is the answer.

55. Answer : (d)

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Reason :

		Rs.
A. Current Assets:		
(i) Raw materials ($60,000 \times \text{Rs.}3 \times 2/12$)	30,000	
(ii) Work-in-process ($60,000 \times \text{Rs.}3.75 \times 1/12$)	18,750	
Cost = Rs.3 + conversion cost (50% of wages and overheads)		
(iii) Finished goods ($60,000 \times 4.5 \times 3/12$)	67,500	
(iv) Debtors ($60,000 \times 5 \times 3/12$)	75,000	
Total current assets		1,91,250
B. Current Liabilities:		
Creditors ($60,000 \times 3 \times 2/12$)	30,000	
Total current liabilities		30,000
Net working capital required (A-B)		1,61,250

Hence (d) is the answer.

56. Answer : (c)

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Reason : Weighted average price of the issue =

$$\frac{400 \times 20 + 200 \times 24 + 400 \times 30}{400 + 200 + 400} \times 200 = \text{Rs.}4,960$$

Hence (c) is the answer.

57. Answer : (b)

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$$\frac{NP_0 + S}{N+1}$$

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

Where N, P₀ and S have their usual meanings

Given: N = 5

P₀ = Rs.65 per share

Ex-rights price = Rs.60 per share

$$60 = \frac{5(65) + S}{5 + 1}$$

$$\text{or } S = 60 \times 5 - 65 \times 5$$

$$= 360 - 325$$

$$= \text{Rs.35 per share.}$$

Hence (b) is the answer.

58. Answer : (c)

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$$\frac{D + \frac{(F - P)}{n}}{\frac{(F + P)}{2}} = \frac{10 + \frac{(100 - 96)}{n}}{\frac{(100 + 96)}{2}}$$

Reason : Cost of preference share, k_p =

$$\therefore 0.1042 = \frac{10 + \frac{(100 - 96)}{n}}{\frac{(100 + 96)}{2}}$$

$$0.1042 = \frac{10 + \frac{4}{n}}{98}$$

$$\text{or, } \frac{4}{n} = 98 \times 0.1042 - 10$$

$$n = \frac{4}{0.2116} = 18.9 = 19 \text{ years (app)}$$

Hence (c) is the answer.

59. Answer : (d)

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Reason : When corporate taxes are considered, the value of a levered firm would be equal to the value of the unlevered firm increased by the tax-shield associated with the debt, i.e

$$V_L = V_U + t_c B$$

Where,

V_L = value of levered firm

V_U = value of unlevered firm

B = market value of debt

t_c = corporate tax rate

$$50,00,000 = 47,80,000 + 0.4 \times B$$

$$B = 2,20,000/0.4 = \text{Rs.}5,50,000$$

Hence (d) is the answer.

60. Answer : (c)

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Reason : First let us calculate the costs of different sources of finance.

$$k_e = \frac{D_t}{P_0} = \frac{4.05}{45} = 9.00\%$$

$$k_d = \frac{I(1-t) + \frac{(F - P)}{n}}{(F + P)} = \frac{120(0.6) + \frac{(1,000 - 992)}{8}}{(1,000 + 992)} = 7.33\%$$

$$k_r = k_e = 9.00\%$$

$$k_T = I(1-t) = 0.11(0.6) = 6.6\%$$

Now,

Particulars	Amount (Rs.)	Cost (Rs.)	Total cost (Rs.)
Equity	40,00,000	9.00%	3,60,000
Debentures	10,00,000	7.33%	73,300
Retained Earnings	3,00,000	9.00%	27,000
Term Loans	15,00,000	6.6%	99,000
Total	68,00,000		5,59,300

Weighted average cost of capital = Rs.5,59,300/Rs.68,00,000 = 8.225%

Hence (c) is the answer.

61. Answer : (e)

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Reason :

EBIT	Rs.20,00,000
(-) Interest @ 10%	2,00,000
Net income for equity holders (A)	18,00,000
Equity capitalization rate (k_e)	0.16
Market value of equity – S (A/k_e)	1,12,50,000
Market value of debt – B (Interest/0.10)	20,00,000
Total value of the firm (V)	1,32,50,000
K_0 (EBIT/V)	15.09%

Hence (e) is the answer.

62. Answer : (e)

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Reason : According to the MM hypothesis,

$$\text{Value of unlevered firm (V)} = \frac{O(1 - t_c)}{k_e}$$

Where,

O – EBIT of the firm

t_c – corporate tax rate

k_e – equity capitalization rate

For the given firm as there is no debt, net income to shareholders is equal to the EBIT.

$$\frac{15,00,000(1 - 0.4)}{0.12} = \text{Rs.}75,00,000$$

Hence (e) is the answer.

63. Answer : (b)

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Reason :

Rs.		
Particulars	RPL	KPL
EBIT	3,00,000	3,00,000
(-) Interest @ 10%	<u>90,000</u>	=
Taxable income	2,10,000	3,00,000
(-) Taxes	<u>73,500</u>	<u>1,05,000</u>
Net income for equity holders (A)	1,36,500	1,95,000
Equity capitalization rate (k_e)	0.15	0.15
Market value of equity – S (A/k_e)	9,10,000	13,00,000
Market value of debt – B	9,00,000	-
Total value of the firm (V)	18,10,000	13,00,000

Therefore difference between the values of the two firms = Rs.5,10,000.

Hence (b) is the answer.

64. Answer : (b)

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Reason : As per the assumptions of capital structure theories,

$$\text{Total market value of the firm (V)} = \frac{\text{Net operating income}}{\text{overall cost of capital}} = \frac{150}{0.15} = \text{Rs.}1,000 \text{ lakh}$$

Market value of equity (S) =

$$\frac{\text{Equity income}}{\text{equity cost of capital}}$$

$$\frac{\text{Net Operating income} - \text{Interest on debt}}{\text{equity cost of capital}} = \frac{150 - 14}{0.17} = \text{Rs.}800 \text{ lakh}$$

$$\begin{aligned} \text{Market value of debt (B)} &= \text{Total market value of the firm} - \text{Market value of equity} \\ &= \text{Rs.}1,000 - \text{Rs.}800 \text{ lakh} \\ &= \text{Rs.}200 \text{ lakh} \end{aligned}$$

$$\text{Debt-equity ratio} = 200/800 = 1:4$$

Hence (b) is the answer.

65. Answer : (e)

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Reason : Computation of breaking points:

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

If the new financing is in the range of Rs.50 – 55 crore,

Cost of equity = 16%

Cost of preference = 14%

Cost of debt = 10%

Weighted marginal cost of capital in the above range

$$= 0.16 \times 0.4 + 0.14 \times 0.2 + 0.10 \times 0.4 = 13.2\%$$

Hence (e) is the answer.

66. Answer : (c)

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Reason : According to the Net Operating Income Approach,

$$k_o = \frac{\text{Net Operating Income}}{\text{Market Value of the firm}}$$

But

$$\begin{aligned} k_o &= k_d \times \frac{B}{B+S} + k_e \times \frac{S}{B+S} \\ &= 14\% \times \frac{160}{160 + 240} + 16\% \times \frac{240}{160 + 240} \\ &= 15.2\% \end{aligned}$$

Now,

$$15.2\% = 0.152 = \frac{\text{Net Operating Income}}{400}$$

$$\text{Net Operating Income} = 0.152 \times 400 = \text{Rs.60.8 lakhs.}$$

Hence (c) is the answer.

67. Answer : (d)

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Reason :

Cost of external equity:

$$k_e = \frac{D_1}{P_0 (1-f)} + g$$

$$k_e = \frac{D_0 (1+g)}{P_0 (1-f)} + g$$

D_0 = EPS in the last year x D/P ratio

EPS = Earnings/Number of shares

$$= \text{Rs.} 1,50,000 / 12,500$$

$$= \text{Rs.} 12$$

Since the retention ratio is 75%, the D/P ratio is 25%.

$$D_0 = \text{Rs.} 12 \times 0.25 = \text{Rs.} 3$$

Given $f = 0.06$

$$k_e = \frac{3 (1.12)}{40(1-0.06)} + 0.12$$

$$= 0.2094$$

$$= 20.94\%$$

Hence (d) is the answer.

68. Answer : (c)

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Reason : According to the MM model,

$$P_0 = \frac{D_1 + P_1}{(1+k_e)} = \frac{\text{Rs.} 2 + P_1}{1.15} = 10$$

Price of the share when dividends are paid, $P_1 = \text{Rs.} 9.5$

Number of new shares to be issued

$$n = \frac{I - (E - nD_1)}{P_1}$$

$$20,000 = \frac{2,00,000 - (E - 50,000 \times 2)}{9.5}$$

$$E = 2,00,000 - 20,000 \times 9.5 + 50,000 \times 2$$

$$= \text{Rs.} 1,10,000$$

Therefore the earnings of the company are Rs.1,10,000.

Hence (c) is the answer.

69. Answer : (b)

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Reason : According to Walter's model,

$$P = \frac{D + \frac{r}{k_e}(E - D)}{k_e} = \frac{Rs.3 + \left[\frac{0.15}{0.125} \right] (Rs.5 - Rs.3)}{0.125}$$
$$= Rs.43.20$$

Workings:

k_e = Reciprocal of P/E ratio = $1/8 = 0.125 = 12.5\%$

E = EPS = Total earnings / Number of outstanding shares

= Rs.5,00,000/1,00,000

= Rs.5

D = DPS = 0.6 x EPS

= 0.6 x 5

= Rs.3

The share price will be maximum when the dividend pay-out ratio is 0%, because $r > k_e$

Therefore,

$$P_{\max} = \frac{D + \frac{r}{k_e}(E - D)}{k_e} = \frac{Rs.0 + \left[\frac{0.15}{0.125} \right] (Rs.5 - Rs.0)}{0.125}$$
$$= Rs.48$$

Hence (b) is the answer.

70. Answer : (b)

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Reason : As per Gordon's model,

$$P = \frac{E(1 - b)}{k_e - br}$$

Price of the share,

Where

E = EPS

b = retention ratio = (1-D/P ratio)

$$30 = \frac{E \times 0.5}{0.10 - 0.5 \times 0.15}$$

$$0.5E = 30 \times 0.025$$

$$E = \text{Rs.}1.5$$

EPS

EPS = Rs.1.5 = Total earnings/Number of outstanding shares

Total earnings = EPS x Number of outstanding shares

$$= 1.5 \times 50,000$$

$$= \text{Rs.}75,000$$

Return on total assets = Total earnings / Total assets

$$= \text{Rs.}75,000 / \text{Rs.}5,00,000$$

$$= 0.15 = 15\%$$

Hence (b) is the answer.

71. Answer : (a)

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Reason : Annual capital charge is used to evaluate mutually exclusive projects, which provide similar service but have differing patterns of costs and unequal lives.

$$\begin{aligned} \text{Annual capital charge} &= \frac{\text{PV of initial costs and operating costs}}{\text{PVIFA}_{(r\%,n)}} \\ \text{System A:} \\ \text{PV of initial costs and operating costs:} \\ &= \frac{8,00,000 + \frac{75,000}{1.12} + \frac{80,000}{(1.12)^2} + \frac{1,00,000}{(1.12)^3} + \frac{1,10,000}{(1.12)^4} + \frac{1,15,000}{(1.12)^5} + \frac{1,20,000}{(1.12)^6}}{\text{PVIFA}_{(12\%,6)}} \\ &= \frac{11,97,874.632}{4.111} = \text{Rs. } 2,91,382.79 \end{aligned}$$

Similarly

System B:

$$\frac{15,65,674.51}{\text{PVIFA}_{(12\%,7)}} = \frac{15,65,674.51}{4.564} = \text{Rs. } 3,43,048.75$$

System C:

$$\frac{27,94,414.622}{\text{PVIFA}_{(12\%,8)}} = \frac{27,94,414.622}{4.968} = \text{Rs. } 5,62,482.81$$

System D:

$$\frac{18,95,621.903}{\text{PVIFA}_{(12\%,9)}} = \frac{18,95,621.903}{5.328} = \text{Rs. } 3,55,784.89$$

System E:

$$\frac{30,67,403.055}{\text{PVIFA}_{(12\%,10)}} = \frac{30,67,403.055}{5.650} = \text{Rs. } 5,42,903.195$$

System with lowest Annual capital charge should be selected. Therefore A should be selected.

Hence (a) is the answer.

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