

Question Paper

Financial Management - I (141): October 2006

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

1. Which of the following statements is/are **true** regarding the functions performed by a financial system? [< Answer >](#)

- I. The savings function provides the investors with the opportunity to liquidate the investments.
- II. The payment function offers a very convenient mode of payment for goods and services.
- III. The liquidity function ensures that the public savings reach the hands of those in production.
- IV. The policy function allows for the exchange of current income for future income and transformation of savings into investments.

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

(1 mark)

2. Which of the following is **not true** regarding Bought-out deals (BOD)? [< Answer >](#)

- (a) The promoters are assured of immediate funds
- (b) Companies can avoid the time consuming and costly public issue
- (c) Cheapest and quickest source of finance for small and medium-sized companies
- (d) The shares are routed only through the Over the Counter Exchange of India
- (e) There is scope for misuse by the sponsor.

(1 mark)

3. Which of the following is related to the control function of the financial manager? [< Answer >](#)

- (a) Comparing the costs and benefits of different sources of finance
- (b) Assessing the costs and benefits of a project under consideration
- (c) Deciding the optimum quantity of raw materials to be ordered for procurement
- (d) Interacting with the bankers for arranging a long-term loan
- (e) Appraising the top management about the performance of individual departments.

(1 mark)

4. Which of the following is **not true** about Commercial Papers (CPs)? [< Answer >](#)

- (a) CPs are negotiable by endorsement and delivery
- (b) The minimum maturity period of CPs is 15 days
- (c) CPs are unsecured in nature
- (d) CPs cannot be issued at a discount to face value
- (e) Prior approval of RBI is not needed for CP issues.

(1 mark)

5. Assume that the interest rate is greater than zero. Which of the following cash-inflow streams should you prefer?

[< Answer >](#)

	Year1	Year 2	Year 3	Year 4
a.	Rs.25,000	Rs.25,000	Rs.25,000	Rs.25,000
b.	Rs.10,000	Rs.20,000	Rs.30,000	Rs.40,000
c.	Rs.40,000	Rs.30,000	Rs.20,000	Rs.10,000
d.	Rs.40,000	Rs.10,000	Rs.30,000	Rs.20,000
e.	Rs.20,000	Rs.40,000	Rs.30,000	Rs.10,000

- (a) Only (a) above
- (b) Only (b) above
- (c) Only (c) above
- (d) Only (d) above
- (e) Only (e) above.

(1 mark)

6. The face value of a T-Bill is Rs.100. Mr. Aravind made a bid for the bill at Rs.96.50 and it was accepted by the RBI. If the yield earned on the bill is 14.76% p.a., the maturity period of the bill is (Assume 365 days a year)

[< Answer >](#)

- (a) 14 days
- (b) 28 days
- (c) 90 days
- (d) 182 days
- (e) 364 days.

(1 mark)

7. Which of the following statements is **true** regarding the Capital Recovery Factor?

[< Answer >](#)

- (a) It is the inverse of FVIFA
- (b) It increases with a decrease in the interest rate
- (c) It represents the amount that has to be invested at the end of every year for a period of “n” years at the rate of interest “k” for accumulating Re.1. at the end of the period
- (d) It does not tell how much can be withdrawn periodically for a certain length of time, if certain amount is invested today
- (e) It can be used to know the amount to be paid annually to liquidate a loan over a specified period at a specified rate of interest.

(1 mark)

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

[< Answer >](#)

- (a) Sinking fund factor is the product of inverse of PVIFA and PVIF
- (b) Capital recovery factor is the product of inverse of FVIFA and FVIF
- (c) Product of FVIF and PVIFA factors is FVIFA
- (d) PVIFA is the product of inverse of FVIFA and PVIF
- (e) Nominal rate of interest = Real rate + risk premium + inflation.

(1 mark)

9. Which of the following are **not true** with regard to the multiperiod valuation model of equity shares?

[< Answer >](#)

- I. There is a pre-specified maturity period.
- II. The value of an equity share is equal to the present value of the dividends over an infinite duration.
- III. The model can be applied to the instances of constant dividends and constant growth in dividends.
- IV. The model cannot be applied in case of changing growth in dividends.

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

(1 mark)

10. Which of the following is **true** regarding the bond price theorems?

[< Answer >](#)

- (a) A change in YTM affects bonds with a lower YTM more than bonds with a higher YTM
- (b) When the required rate of return is greater than the coupon rate, the value of the bond is more than its par value
- (c) Bond's price is directly proportional to its YTM
- (d) When the required rate of return is more than the coupon rate, the premium on the bond declines as maturity approaches
- (e) Given the maturity, for equal sized increases or decreases in the YTM, price movements are not symmetrical.

(1 mark)

11. Which of the following statements is **not true** regarding warrants?

[< Answer >](#)

- (a) A warrant entitles the holder to buy a fixed number of shares at a predetermined price during some specified period of time
- (b) Detachable warrants can be traded as independent securities
- (c) The premium associated with a warrant increases as the expiry date approaches
- (d) Warrant holders have no voting rights
- (e) When a warrant is issued, the exercise price is always greater than the current market price.

(1 mark)

12. The dividend payout ratio for Surabhi Technologies Ltd., is 0.40. The capitalization rate is 12.5 percent. What is the dividend yield for the investors?

[< Answer >](#)

- (a) 4%
- (b) 5%
- (c) 6%
- (d) 7%
- (e) 8%.

(2 marks)

13. Gururaj Computers Ltd, has furnished the following details:

[< Answer >](#)

Asset turnover ratio	0.85
Net profit margin	12.50%
Return on net worth	24%

What is the total debt to asset ratio for the company?

- (a) 0.37
- (b) 0.44
- (c) 0.56
- (d) 0.63
- (e) 0.97.

(2 marks)

14. Which of the following statements regarding beta is **not true**?

[< Answer >](#)

- (a) An aggressive security would have a beta greater than one
- (b) Beta of a security is measured as the ratio of covariance of that security with the market and the market variance
- (c) Beta is the slope of the security market line
- (d) The risk-free security has the beta of zero and the market portfolio's beta is equal to one
- (e) Greater the beta, greater the unavoidable risk involved.

(1 mark)

15. Which of the following statements regarding the Capital Asset Pricing Model (CAPM) is **not true**?

[< Answer >](#)

- (a) The greater the perceived risk of a portfolio, the higher is the return expected by a risk-averse investor
- (b) All individuals agree on the nature of return and risk associated with each investment
- (c) Investors make their decisions based on a multi-period horizon
- (d) The choice of buying assets is not affected by taxes
- (e) The CAPM provides an explicit measure of the risk premium.

(1 mark)

16. Which of the following statements is **true** regarding the Security Market Line (SML)?

[< Answer >](#)

- (a) The SML intersects the horizontal axis at the risk-free return R_f
- (b) Market risk premium is the slope of the SML
- (c) Aggressive securities are plotted on the lower part of the SML
- (d) The ex-ante SML is used to evaluate the performance of portfolio managers
- (e) When the expected rate of return is more than the required rate of return, the security is overvalued.

(1 mark)

17. Which of the following is **not true** regarding the Degree of Operating Leverage (DOL)?

[< Answer >](#)

- (a) DOL is undefined at the operating break-even point
- (b) If the quantity produced is less than the operating break-even-point, DOL will be negative
- (c) At the operating break-even point, the quantity produced is computed as the ratio of fixed costs and contribution per unit
- (d) If the quantity produced is greater than the operating break even point, DOL will be positive and increases as quantity produced increases
- (e) Everything else remaining same, a higher DOL means higher business risk and vice-versa.

(1 mark)

18. The fixed operating costs of Laxmi Electric Works Ltd., have increased from Rs.4,00,000 to Rs.6,00,000. Which of the following is likely to happen owing to this increase in the fixed costs? [< Answer >](#)

- (a) The operating breakeven point decreases
- (b) The financial breakeven point increases
- (c) The overall breakeven point increases
- (d) The degree of total leverage decreases
- (e) The degree of financial leverage increases.

(1 mark)

19. The degree of operating leverage and the degree of financial leverage of Naveen Pharmaceuticals Ltd. are 4 and 2 [< Answer >](#) respectively. Which of the following statements is **true**?

- (a) 1% change in EPS will be caused by 6% change in sales
- (b) 1% change in EBIT will result in 4% change in EPS
- (c) 1% change in EPS will be caused by 8% change in EBIT
- (d) 1% change in sales will result in 2% change in EPS
- (e) 1% change in sales will result in 4 percent change in EBIT and 8% change in EPS.

(1 mark)

20. Other things remaining the same, which of the following will increase the quantity produced at the overall break-even point? [< Answer >](#)

- I. Increase in the contribution per unit.
 - II. Increase in the fixed costs of the firm.
 - III. Decrease in the interest paid to the debt holders.
 - IV. Increase in the preference dividend paid to the preference shareholders.
- (a) Only (I) above
 - (b) Only (II) above
 - (c) Both (I) and (II) above
 - (d) Both (II) and (IV) above
 - (e) (I), (III) and (IV) above.

(1 mark)

21. Which of the following results in a decrease in net working capital in the funds flow statement drawn on working capital basis? [< Answer >](#)

- (a) Increase in cash
- (b) Decrease in accrued taxes
- (c) Increase in pre-paid expenses
- (d) Decrease in inventory
- (e) Decrease in accounts payable.

(1 mark)

22. Which of the following items are sources of funds that increase cash for a firm?

[< Answer >](#)

- I. Proceeds from the sale of equity.
- II. Retirement of stock.
- III. Cash dividends.
- IV. Net decrease in sundry creditors.
- V. A gross decrease in Plant and Machinery.

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

(1 mark)

23. Which of the following is **not** a benefit of funds flow analysis to an organization?

[< Answer >](#)

- (a) Detection of imbalances and appropriate action
- (b) Divisional performance appraisal
- (c) Evaluation of the quality of the top management of the organization
- (d) Evaluation of firm's financing options
- (e) Planning for future financing.

(1 mark)

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

[< Answer >](#)

- (a) ROE reflects the productivity of capital employed in the firm
- (b) P/E reveals how earnings affect the market price of a firm's stock
- (c) The earning power is affected by the interest charges and tax payments
- (d) P/E ratio helps in determining the expected market price of a stock
- (e) Inverse of the P/E ratio is the capitalization rate.

(1 mark)

25. Which of the following statements is/are **true** about the debt-equity ratio?

[< Answer >](#)

- I. It is a leverage ratio.
- II. It measures the extent to which borrowed funds support the firm's assets.
- III. It indicates the relative proportions of capital contributions by creditors and shareholders.
- IV. Lower the debt-equity ratio, lower the degree of protection felt by the lenders.

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

(1 mark)

26. If net profit margin, total asset turnover, and total debt to equity ratio of Sriram Electricals Ltd., are 7%, 3.5 times and 1.5 respectively, the return on equity for the company is

[< Answer >](#)

- (a) 31.45%
- (b) 42.65%
- (c) 56.60%
- (d) 61.25%
- (e) 68.65%.

(1 mark)

27. According to Du-Pont equation for Return On Equity (ROE), other things remaining constant, which of the following statements is/are **not true**? [< Answer >](#)

- I. An increase in the net profit margin will increase the ROE.
- II. A decrease in debt to assets ratio will increase the ROE.
- III. A decrease in return on assets will decrease the ROE.
- IV. An increase in the average asset turnover will increase the ROE.

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

(1 mark)

28. A type of analysis in which the items of the balance sheet are expressed as percentages of total assets and the items of the income statement are expressed as percentages of the net sales, is known as [< Answer >](#)

- (a) Cross-sectional analysis
- (b) Time series analysis
- (c) Common size analysis
- (d) Du Pont analysis
- (e) Financial ratio analysis.

(1 mark)

29. Other things remaining constant, which of the following will decrease the growth rate sustainable with internal equity? [< Answer >](#)

- (a) Increase in debt-equity ratio
- (b) Increase in the earning per share
- (c) Increase in net profit margin
- (d) Decrease in assets to sales ratio
- (e) Increase in dividend payout ratio.

(1 mark)

30. Which of the following statements is/are **true**? [< Answer >](#)

- I. The amount of external financing depends on projected growth in sales.
- II. At low growth rates, a firm's requirement for external finance may be negative.
- III. A firm with a high volume of retained earnings relative to its assets needs to raise new capital.

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

(1 mark)

31. Mrs. Lalitha, who just completed 65 years of her age has currently Rs.85,000 in her savings bank account on which she earns an interest of 7% p.a. She is planning to join an old age home, immediately after she completes 80 years of her age. Before joining old age home, she wants to utilize all her savings, by withdrawing a constant amount each year. If her first withdrawal is after one year from today, the constant amount, she can withdraw each year is [< Answer >](#)

- (a) Rs.9,332.46
- (b) Rs.9,539.44
- (c) Rs.9,619.74
- (d) Rs.9,719.84
- (e) Rs.9,929.64.

(1 mark)

32. Mr. Ram received Rs.50,000 as a gift from his grand father. He immediately placed Rs.10,000 in a mutual fund earning 12% per annum, compounded quarterly. He plans to use the remaining Rs.40,000 to start a new business. After 2 years he has Rs.1,00,000 in his business. He again takes Rs.20,000 of Rs.1,00,000 and places it in the same mutual fund earning the same return. After 10 years from the second investment, he lost all his money in the business. However, that day he receives a statement from the mutual fund. How much are his deposits now worth? [< Answer >](#)

- (a) Rs.41,322.52
- (b) Rs.65,240.76
- (c) Rs.82,645.04
- (d) Rs.1,06,563.28
- (e) Rs.1,30,481.52.

(2 marks)

33. The par value of a bond of M/s Softech Solutions Ltd. is Rs.1,000. The coupon rate on the bond is 14% and the required rate of return on the bond is 10%. If X is the value of bond when 6 years are left to maturity, Y is the value of the bond when 3 years are left to maturity and Z is the value of the bond at maturity, which of the following statements is/are **true**? [< Answer >](#)

- I. $X < Y$.
- II. $Y < Z$.
- III. $X > Y$.
- IV. $Z = \text{Rs.1,000}$.

- (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)

34. Mr. Suresh deposited Rs.4,000 at the beginning of every month for five years in a scheme in which interest is compounded monthly. If he received Rs.3,29,946 at the end of five years, the nominal rate of interest per annum on the scheme is [< Answer >](#)

- (a) 10%
- (b) 12%
- (c) 14%
- (d) 16%
- (e) 18%.

(1 mark)

35. Mr. Shyam plans to send his son abroad for higher education 15 years hence. Presently the expenditure on the same is Rs.10,00,000 and this is growing at a rate of 3 percent per annum. If the rate of interest is 8 percent per annum then, how much should Mr. Shyam invest at the end of each year for the next 15 years in order to finance the expenditure on his son's higher education after 15 years? [< Answer >](#)

- (a) Rs.28,690
- (b) Rs.37,853
- (c) Rs.49,215
- (d) Rs.57,379
- (e) Rs.60,647.

(1 mark)

36. Consider the following information: [< Answer >](#)

Expected return on market	12%
Beta of Stock B	1.5
Required rate of return on stock B	15%

Which of the following statement(s) is (are) **true** about stock B according to the single-index model?

- I. It will earn a positive return of 3%, when the market return is zero.
- II. It is an aggressive stock as its beta is more than 1.
- III. If return on market decreases by 10%, return on stock B decreases by 15%.

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

(1 mark)

37. Magnum Ltd. issued 10% perpetual preference shares which are presently selling at 25 percent premium to the face value. If the current yield increases by one percent, at what premium or discount to the face value will the preference shares be traded? [< Answer >](#)

- (a) Premium of 3.33 percent
- (b) Premium of 5.11 percent
- (c) Premium of 11.11 percent
- (d) Discount of 5.11 percent
- (e) Discount of 11.11 percent.

(1 mark)

38. Mr.Phaneesh, Finance Manager of M/S Ruby Industries Ltd, needs Rs.20,00,000 for the expansion of one of his plants. One of the vendors offers him the following proposal: make a down payment of 20% and borrow the remaining amount from their banker @ 8% interest rate p.a. The terms of the bank are such that the loan has to be repaid in 8 equal annual installments starting four years from now. If Mr.Phaneesh accepts this proposal, what is the amount of annual installment that he has to pay to the bank? [< Answer >](#)

- (a) Rs.2,45,612
- (b) Rs.3,05,127
- (c) Rs.3,50,712
- (d) Rs.4,20,942
- (e) Rs.4,89,645.

(2 marks)

39. Novelty Industries is establishing a sinking fund to redeem Rs.50 lakh bond issue, which matures in 15 years. How much do they have to put into the fund at the end of each year to accumulate the Rs.50 lakh, assuming the funds are compounded at 6.82% quarterly? [< Answer >](#)

- (a) Rs.1,76,875
- (b) Rs.1,87,987
- (c) Rs.1,98,973
- (d) Rs.2,09,873
- (e) Rs.2,13,456.

(2 marks)

40. Mr. Varma is considering investing in a bond currently selling for Rs.8,785.07. The bond has a face value of Rs.10,000 with a maturity of 4 years and a coupon rate of 8.5 percent. The next annual interest payment is due one year from today. The approximate discount factor for investments of similar risk is 12 percent. The intrinsic value of the bond is _____ and the bond is _____. [< Answer >](#)

- (a) Rs.8,636; Overpriced
- (b) Rs.8,636; Under priced
- (c) Rs.8,785; Correctly priced
- (d) Rs.8,937; Under priced
- (e) Rs. 8,937; Overpriced.

(1 mark)

41. Indian Fertilizers Ltd. had issued a 6 year bond at a price of Rs.904.67. It has an yield to maturity of 7% (Face value Rs.1,000). The coupon rate on this bond is [< Answer >](#)

- (a) 3.5%
- (b) 4.5%
- (c) 5.0%
- (d) 5.5%
- (e) 6.0%.

(1 mark)

42. You have just purchased a stock that currently pays no dividends. However, you expect that after 5 years, the company will begin to pay dividends on their stock of Rs.2.00 per share, and that this amount will grow at a constant rate of 5% per year thereafter. Assuming that stocks with similar risks require a rate of return of 20%, what is the fair price you have paid for this security? [< Answer >](#)

- (a) Rs.2.36
- (b) Rs.3.46
- (c) Rs.4.76
- (d) Rs.5.63
- (e) Rs.6.96.

(2 marks)

43. Mr. Raj has invested in Arch Chemicals Ltd. The capitalization rate of the company is 15 percent and the current dividend is Rs.2.00 per share. What is the value of the company's share if the company's dividends are sinking at an annual rate of 5%? [< Answer >](#)

- (a) Rs.7.35
- (b) Rs.8.55
- (c) Rs.9.50
- (d) Rs.10.05
- (e) Rs.10.50.

(1 mark)

44. Vani Home Foods Ltd, currently pays a dividend of Rs.2.00 per share and this dividend is expected to grow at 15% annually for 3 years, and 12% for the next three years, after which it is expected to grow at a rate of 5 percent forever. What is the value of the stock if the shareholders' required rate of return is 9%? [< Answer >](#)

(a) Rs.14.12
(b) Rs.66.78
(c) Rs.80.90
(d) Rs.89.90
(e) Rs.98.80.

(2 marks)

45. The stock of Amit Industries Ltd, is currently trading at Rs.36, and its last dividend paid was Rs.2.40. In view of company's strong financial position and consequent low risk, its required rate of return is only 12%. Its dividends are expected to grow at a constant rate, 'g', in the future, and if 'k_e' is expected to remain at 12 percent, what is the company's expected stock price 5 years from now? [< Answer >](#)

(a) Rs.25.85
(b) Rs.36.95
(c) Rs.40.95
(d) Rs.45.95
(e) Rs.52.75.

(2 marks)

46. Security 'X' has an expected return of 25% and a variance of returns of 25(%)². Security Y has an expected return of 18% and a variance of 16(%)². If the two securities are perfectly negatively correlated, what should be the proportions of investment in each security to have a zero risk portfolio and what is the return expected from that portfolio? [< Answer >](#)

(a) 24%, 76%, 19.68%
(b) 35%, 65%, 20.45%
(c) 44%, 56%, 21.08%
(d) 52%, 48%, 21.64%
(e) 65%, 35%, 22.55%.

(2 marks)

47. Students Fast Food, a reputable firm, is considering expanding its food-franchising operation by opening another store to sell its smash hit food products. Already operating 150 stores nationwide, the firm knows that the covariance of their previous projects with the market is 25(%)² and the historical market variance is 20(%)². With risk-free interest rates at 12%, and assuming the standard market risk premium of 8.9%, what should be the required rate of return applied to the new store project? [< Answer >](#)

(a) 20.38%
(b) 21.78%
(c) 22.00%
(d) 22.68%
(e) 23.13%.

(2 marks)

48. The beta of the stock of Aman Pharma Ltd. is 0.64. If the ratio of standard deviation of market returns to standard deviation of stock returns is 0.75, the correlation coefficient of return on stock ABC with market return is [< Answer >](#)

(a) 0.23
(b) 0.31
(c) 0.36
(d) 0.48
(e) 0.85.

(2 marks)

49. The beta of stock of Akhil Computers Ltd. is 2.0 and is currently in equilibrium. The required return on the stock is 15% and the expected return on the market is 10%. Suddenly due to a change in economic conditions, the expected return on the market increases to 15%. Other things remaining the same what would be new required rate of return on the stock? [< Answer >](#)

- (a) 17.5%
- (b) 20.0%
- (c) 22.5%
- (d) 25.0%
- (e) 28.5%.

(2 marks)

50. Consider the following information: [< Answer >](#)

Probability	Returns on	
	Market (M)	Investment (S)
1/3	9%	6%
1/3	12%	30%
1/3	18%	18%

What is the beta factor associated with the investment?

- (a) 0.54
- (b) 0.75
- (c) 0.86
- (d) 1.00
- (e) 1.25.

(2 marks)

51. Mr.Amit is seeking to know whether the security of SAT Industries Ltd, is correctly priced or not. The following details are available about the stock: The standard deviation of the stock is 24 percent. The correlation coefficient for the security with the market is 0.8 and the market standard deviation is 16 percent. The return from the Government Securities is 6.5 percent and that from the market portfolio is 10.5 percent. If the expected return on the stock is 12.5%, the required return on the security is _____ and it is _____. [< Answer >](#)

- (a) 9.6%, Undervalued
- (b) 11.3%, Undervalued
- (c) 11.3%, Overvalued
- (d) 13.2%, Overvalued
- (e) 13.2%, Undervalued.

(2 marks)

52. Given below is the Balance Sheet of M/S Techno Industries Ltd., for the year ended March 2005-06:

[< Answer >](#)

Liabilities	Rs.	Assets	Rs.
Equity share capital	1,20,000	Fixed Assets	4,00,000
Retained Earnings	40,000	Current Assets	1,00,000
10% Long Term Debt	1,60,000		
8% Preference shares	1,00,000		
Current Liabilities	80,000		
Total	5,00,000	Total	5,00,000

The company's Total Assets Turnover ratio is 3, its fixed operating costs are Rs.2,00,000 and its variable operating cost ratio is 40%. The income-tax rate is 40%. DOL and DFL for the firm are

- (a) 1.05; 0.98
- (b) 1.06; 1.18
- (c) 1.25; 1.36
- (d) 1.29; 1.04
- (e) 1.46; 1.13.

(2 marks)

53. The capital structure of Mercury industries Ltd., consists of ordinary share capital of Rs.15,00,000 (shares of Rs.100 each) and 9% debentures of Rs.10,00,000. The selling price of its product is Rs.12 per unit; variable costs amount to Rs.8 per unit and fixed expenses amount to Rs.2,00,000. The income tax rate is assumed to be 40%. The sales level is expected to increase from 1,20,000 to 1,50,000 during the next year. The percentage change in the EPS due to the increase in the level of sales and the degree of total leverage are

[< Answer >](#)

- (a) 45.46%; 1.40
- (b) 54.78%; 1.87
- (c) 63.16%; 2.53
- (d) 63.16%; 2.78
- (e) 72.23%; 2.78.

(2 marks)

54. If the degree of operating leverage is decreased by 40% and the degree of financial leverage is increased by 25%, then the degree of total leverage will

[< Answer >](#)

- (a) Decrease by 17%
- (b) Decrease by 25%
- (c) Remain unchanged
- (d) Increase by 25%
- (e) Increase by 40%.

(1 mark)

55. The following data is furnished for Lily Industries Ltd.

[< Answer >](#)

Sales	Rs.4,00,000
Variable cost	30%
Fixed cost	Rs.2,00,000
Interest	Rs.10,000

If sales increase by 6%, the taxable income changes by

- (a) 16.25%
- (b) 18.60%
- (c) 20.60%
- (d) 24.00%
- (e) 30.00%.

(2 marks)

56. The income statement of Rohan Laminations Ltd. is given below:

[< Answer >](#)

	(Rs. in crores)
Net sales	4,140
Cost of goods sold	2,200
Selling and administrative expenses	1,230
Interest	150
Taxes	168
Net profit	392

The following information is also provided:

- 40% of the selling and administrative expenses and 25% of cost of goods sold are fixed costs.
- The paid up equity share capital of the company consists of 100 lakh equity shares of Rs.10 each.
- The company has employed preference share capital, which has a book value of Rs.150 crores and the dividend rate on the same is 12%.
- It is expected that there will be no change in its capital structure in the near future.

If the company plans to increase its EBIT by 25%, then by what percentage should it increase its net sales? (Assume that the unit selling price, the unit variable cost, the fixed costs, the interest and the preference dividend will remain constant in the forthcoming year.)

- 5.26%
- 6.89%
- 7.45%
- 8.98%
- 10.13%.

(2 marks)

57. Consider the following information:

[< Answer >](#)

Quantity produced	2,000 units
Variable cost per unit	Rs.475
Selling price per unit	Rs.600
Fixed cost	Rs.10.00 crores
10% Debentures	Rs.40.00 crores
8% Preference shares	Rs.31.25 crores
Tax rate	40%

The financial break-even point is reached when the EBIT is at a level of

- Rs.4.08 crores
- Rs.6.00 crores
- Rs.8.17 crores
- Rs.9.23 crores
- Rs.10.45 crores.

(1 mark)

58. If, at a specific level of operations, the percentage change in EPS that may occur if the EBIT changes, is four times the percentage change in EBIT, and the percentage change in EPS that may occur if the sales changes, is six times the percentage change in sales, then the percentage change in EBIT that may occur for a 6 percent change in sales is

[< Answer >](#)

- 2%
- 4%
- 6%
- 8%
- 9%.

(2 marks)

59. Northern shipping Company Ltd. has total assets worth Rs.1,800 lakh and spontaneous liabilities amounting to Rs.600 lakh. Presently, it has a sales level of Rs.2,400 lakh. The company has made a net profit of Rs.96 lakh and has a dividend payout ratio of 50%. It is anticipating a growth in sales. The growth in its assets will be financed by an increase in its spontaneous liabilities and retained earnings. It may also use external financing if required. How much increase in sales can the company achieve without using any external financing? [< Answer >](#)

- (a) Rs.60 lakh
- (b) Rs.75 lakh
- (c) Rs.100 lakh
- (d) Rs.120 lakh
- (e) Rs.140 lakh.

(2 marks)

60. Consider the following information regarding Kashyap Electronics Ltd. [< Answer >](#)

Net profit	Rs.1,26,000
Net current Sales	Rs.48,02,968
Dividend paid	Rs.4.50
Number of shares	7,000
Total Liabilities	Rs.1,00,49,432
Equity share capital	Rs.20,00,000
Reserves and surplus	Rs.32,57,738
Depreciation	Rs.2,55,104

What is the sustainable growth rate of the company?

- (a) 1.27%
- (b) 1.83%
- (c) 2.08%
- (d) 2.39%
- (e) 2.97%.

(2 marks)

61. The earnings per share of Ram and Co., in the year 2005-06 were Rs.25. and the company paid out Rs.17.5 as dividends for the year. Its sales during the year were Rs.200 lakh and it is expecting the sales to grow by 45% in the next year. Total liabilities of the company were Rs.50 lakh and the spontaneous liabilities were Rs.24 lakh. The company expects that its external funds requirement for the next year is Rs.5 lakh. Assuming that its dividend pay-out ratio remains same in the next year also, what is the projected net profit of the company? [< Answer >](#)

- (a) Rs.8.67 lakhs
- (b) Rs.10.76 lakhs
- (c) Rs.14.57 lakhs
- (d) Rs.18.22 lakhs
- (e) Rs.22.33 lakhs.

(1 mark)

62. Jyothi Laboratories reported a profit of Rs.1,40,000 in the current year after incorporating the following:

[< Answer >](#)

Particulars	Rs.	Particulars	Rs.
Loss on sale of equipment	18,000	Gain from sale of assets	80,000
Premium on redemption of debentures	3,000	Provision for tax	44,000
Discount on issue of debentures	4,000	Dividend income	8,000
Depreciation on machinery	40,000	Transfer to general reserve	10,000
Depletion of natural resources	20,000	Preliminary expenses	2,000
Interim dividend	50,000	Profit on revaluation	5,000
Goodwill written off	60,000	Loss on sale of investment	2,000

The Funds from Operation for the company is

- (a) Rs.1,80,000
- (b) Rs.2,25,000
- (c) Rs.2,70,000
- (d) Rs.3,00,000
- (e) Rs.3,40,000.

(2 marks)

63. Current liabilities and current assets of Domestic Industries Ltd., during the year 2005-06 were Rs.40,000 and Rs.60,000 respectively. In the current year the amount of debtors realized is Rs.12,000, goods worth Rs.20,000 were sold on credit, raw materials purchased on credit amounted to Rs.6,000, and Rs.12,000 worth of preference shares were converted into equity. The net working capital (NWC) will

[< Answer >](#)

- (a) Increase by Rs.28,000
- (b) Increase by Rs.16,000
- (c) No change in the NWC
- (d) Decrease by Rs.28,000
- (e) Decrease by Rs.16,000.

(2 marks)

64. Given below is the Balance Sheet of Sri Industries Ltd., for the years ended 31.03.05 and 31.03.06:

[< Answer >](#)

Liabilities	31.03.05 Rs.	31.03.06 Rs.	Assets	31.03.05 Rs.	31.03.06 Rs.
Capital	4,00,000	4,00,000	Machinery	1,20,000	1,40,000
Creditors for goods	80,000	70,000	Furniture	20,000	30,000
Expenses for goods	8,000	10,000	Stock	95,000	70,000
			Debtors	1,75,000	2,00,000
			Cash	20,000	10,000
			Bank	58,000	30,000
Total	4,88,000	4,80,000	Total	4,88,000	4,80,000

Net increase/decrease in the working capital for the year 2005-06 is

- (a) Increase of Rs.16,000
- (b) Increase of Rs.20,000
- (c) No change in Working capital
- (d) Decrease of Rs.20,000
- (e) Decrease of Rs.22,000.

(2 marks)

65. Which of the following is/are (a) use(s) of funds in the Funds Flow Statement?

[< Answer >](#)

- I. Rs.5,005 decrease in accounts receivable.
- II. Rs.7,000 decrease in cash.
- III. Rs.12,012 decrease in accounts payable.
- IV. Rs.13,001 increase in accounts payable.
- V. Rs.15,009 increase in debtors.

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

(1 mark)

66. The net profit margin and the return on investment of Raman Chemicals Ltd., is 5 percent and 8 percent respectively, [< Answer >](#) and its total assets are Rs.8 crore. The Total Assets Turnover ratio of the company is

- (a) 0.6
- (b) 1.2
- (c) 1.4
- (d) 1.6
- (e) 1.8.

(1 mark)

67. Karunya Textiles Ltd., has estimated that next year it would employ total assets worth Rs.16,00,000, out of which 50% of the assets would be financed by borrowed capital at an interest of 14% per annum and would have Rs.4,00,000 as current liabilities. The direct costs are estimated at Rs.9,60,000 and all other operating expenses at Rs.1,60,000. The goods will be sold to the customers at 150% of the direct costs. The company is in the tax bracket of 40%. The expected Net Profit Margin and the Return on Equity for the company in the next year are respectively [< Answer >](#)

- (a) 6.77%; 24.56%
- (b) 7.47%; 25.60%
- (c) 8.67%; 31.20%
- (d) 8.67%; 37.60%
- (e) 9.67%; 38.26%.

(2 marks)

68. The capital of Kiran Pharmaceuticals Ltd., comprises the following:

[< Answer >](#)

9% Preference shares of Rs.10 each	Rs.30,00,000
11% Debentures	Rs.25,00,000
Equity Shares of Rs.10 each	Rs.80,00,000
The following further information is available:	
a) Operating Profit	Rs.45,00,000
b) Operating expenses	Rs.2,00,000
c) Dividend payout ratio	20%
d) Market price of equity shares	Rs.40 each

The dividend yield on the equity shares and the price-earning ratio of the firm are respectively

- (a) 0.48%; 10.48
- (b) 1.26%; 11.87
- (c) 1.35%; 13.47
- (d) 1.42%; 14.13
- (e) 1.42%; 14.57.

(2 marks)

69. Selected figures of Tilak and Co. for the years 2005-06 and 2006-07 are given below:

[< Answer >](#)

	2005-06	2006-07
Gross Profit ratio	30%	25%
Stock turnover	20 times	25 times
Opening stock (Rs.)	30,000	27,000
Closing stock (Rs.)	40,000	37,800
Income tax rate	40%	40%

If the administrative expenses were 10% and 12% of sales in the year 2005-06 and 2006-07 respectively what is the change in the net profit margins in the year 2006-07?

- (a) – 3.6%
- (b) – 4.2%
- (c) – 5.3%
- (d) 4.2%
- (e) 6.0%.

(2 marks)

70. Ruchi Foods Pvt. Ltd. furnished the following details as on 31.03.06.

[< Answer >](#)

Share capital	Rs.2,00,000
General reserve	Rs.1,00,000
Sundry creditors	Rs.1,00,000
Ratio of Long-term loan to Net worth	1:2
Assets turnover	2 times
Average collection period	36 days
Receivables Turnover	10 times
Inventory turnover	10 times
Gross Profit	10% on cost of goods sold
Credit sales	50%

Number of days in a year = 360 days.

The Fixed Assets Turnover ratio is

- (a) 1.14
- (b) 2.45
- (c) 2.78
- (d) 3.14
- (e) 3.76.

(2 marks)

71. The Balance Sheet of Pioneer Traders Pvt. Ltd. as on March 31, 2006 is given below:

[< Answer >](#)

Liabilities	(Rs. in lakhs)	Assets	(Rs. in lakhs)
Paid-up share capital	20	Net fixed assets	50
Reserves and surplus	30	Cash and bank	10
Long term loan	20	Inventory	30
Trade creditors	30	Receivables	20
Accrued expenses	6		
Provisions	4		
Total	110	Total	110

The inventory on April 01, 2005 was Rs.20 lakh. The sales and purchases for the year were Rs.160 lakh and Rs.100 lakh respectively.

The Gross Profit Margin and the Total Debt-Equity ratio for the company are

- (a) 23.85%; 0.75
- (b) 34.75%; 1.00
- (c) 43.75%; 1.12
- (d) 43.75%; 1.20
- (e) 48.75%; 1.20.

(2 marks)

Suggested Answers

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1. Answer : (d) [≤](#)

Reason : The liquidity function provides the investors with the opportunity to liquidate the investments. Statement (I) is not true.

The payment function offers a very convenient mode of payment for goods and services. Statement (II) is true.

The savings function ensures that the public savings reach the hands of those in production. Statement (III) is not true

The policy function allows for the exchange of current income for future income and transformation of savings into investments. Statement (IV) is true.

Thus statements (II) and (IV) are true and (d) is the answer.

2. Answer : (d) [≤](#)

Reason : Alternatives (a), (b), and (c) are advantages of Bought-out deals. Alternative (e) is a disadvantage of Bought-out deals. Alternative (d) is not true because, in a BOD, the shares can be routed through the Over the Counter Exchange of India or any recognized stock exchange. Hence (d) is the answer.

3. Answer : (e) ≤
Reason : Alternative (a) involves partly the 'funds mobilization function and partly the 'risk return

Trade-off' function. Alternative (b) is a part of the 'deployment of funds' function. Alternative (c) is also related with the 'deployment of funds' function. Alternative (d) is a part of the 'mobilization of funds' / 'financing' function of the finance manager. Alternative (e) is the control function. Hence (e) is the answer.

4. Answer : (d) ≤
Reason : Commercial papers are short-term promissory notes issued at a discount to face value by well-known companies that are financially strong and carry a high-credit rating. Hence statement (d) is not correct.

CPs are negotiable by endorsement and delivery. Hence statement (a) is correct.

The maturity of CPs varies from 15 days to one year. Hence statement (b) is correct.

CPs are purely unsecured as they are not backed by any assets of the issuing company. Hence statement (c) is correct.

No prior approval of RBI is needed for CP issues and underwriting of the issue is not mandatory. Hence statement (e) is correct.

Hence (d) is the answer.

5. Answer : (c) ≤
Reason : A cash-inflow stream whose present value is highest should be preferred. Assume that the interest rate is 1%. Then,

a. $PV = 25,000 \times PVIFA_{(1\%, 4)} = 25,000 \times 3.902 = \text{Rs.}97,550$

b. $PV = 10,000 \times PVIF_{(1\%, 1)} + 20,000 \times PVIF_{(1\%, 2)} + 30,000 \times PVIF_{(1\%, 3)} + 40,000 \times PVIF_{(1\%, 4)} = \text{Rs.}97,064$

c. $PV = 40,000 \times PVIF_{(1\%, 1)} + 30,000 \times PVIF_{(1\%, 2)} + 20,000 \times PVIF_{(1\%, 3)} + 10,000 \times PVIF_{(1\%, 4)} = \text{Rs.}98,034$

d. $PV = 40,000 \times PVIF_{(1\%, 1)} + 10,000 \times PVIF_{(1\%, 2)} + 30,000 \times PVIF_{(1\%, 3)} + 20,000 \times PVIF_{(1\%, 4)} = \text{Rs.}97,744.23$

e. $PV = 20,000 \times PVIF_{(1\%, 1)} + 40,000 \times PVIF_{(1\%, 2)} + 30,000 \times PVIF_{(1\%, 3)} + 10,000 \times PVIF_{(1\%, 4)} = \text{Rs.}97,741.33$

Since the present value is highest for alternative c, it should be preferred. Hence (c) is the answer.

6. Answer : (c) ≤
Reason : The yield on a T-Bill, $(k) = (F-P)/P \times 365/d$

Where,

'd' is the maturity period

'F' is the face value

'P' is the price

$$0.1476 = (100 - 96.50)/96.50 \times 365/d$$

$$14.2434/3.5 = 365/d$$

$$d = 365/4.07$$

$$= 89.68$$

$$= 90 \text{ days (app)}$$

Hence (c) is the answer.

7. Answer : (e) ≤
- Reason : Capital recovery factor is the inverse of PVIFA. As PVIFA decreases with an increase in interest rate, Capital Recovery Factor increases with an increase in the interest rate. Statements (a) and (b) are wrong. Sinking fund represents the amount that has to be invested at the end of every year for a period of “n” years at the rate of interest “k” for accumulating Re.1. at the end of the period. Statement (c) is wrong. Capital Recovery Factor can be used to know how much can be withdrawn periodically for a certain length of time, if certain amount is invested today, and it can also be used to know the amount to be paid annually to liquidate a loan over a specified period at a specified rate of interest. Statement (d) is wrong and statement (e) is true. Hence (e) is the answer.
8. Answer : (d) ≤
- Reason : PVIFA is the product of FVIFA and PVIF.
Hence (d) is the answer.
9. Answer : (c) ≤
- Reason : There is no pre-specified maturity period in the multi-period valuation model of equity shares; cash flows over an infinite duration are considered. Statement (I) is not true.
A generalized multiperiod valuation model formula can be used for raising, declining, constant, or randomly fluctuating dividend stream. It can be used to value equity shares with constant dividends, constant growth in dividends, and changing growth rate of dividends. Statements (II) and (III) are true and statement (IV) is not true.
Hence (c) is the answer.
- 10 Answer : (e) ≤
- Reason : Given the maturity, the change in the bond price will be greater with a decrease in the bond's YTM than the change in the bond price with an equal increase in the bond's YTM. In other words, for equal sized increases and decreases in the YTM, price movements are not symmetrical. Hence option (e) is correct.
Option (a) is incorrect as a change in YTM affects bonds with higher YTM more than it does bonds with a lower YTM.
Option (b) is incorrect because when the required rate of return is greater than the coupon rate, the value of the bond is less than its par value.
Option (c) is incorrect as bond's price moves inversely to its YTM.
Option (d) is incorrect because when the required rate of return is less than the coupon rate, the bond is said to be trading at discount and not premium.
Hence (e) is the answer.

11 Answer : (c)

≤

Reason : A warrant is a call option to buy a stated number of shares. They are like calls to the extent that they entitle the holder to buy a fixed number of shares at a predetermined price during some specified period of time. Statement (a) is true.

Most warrants are detachable from the bond or preferred stock to which they were attached at the time of issue. If detached, warrants can be traded as independent securities. Statement (b) is true.

The premium associated with a warrant will shrink as the expiry date approaches. Statement (c) is not true.

Warrant holders have no rights unlike shareholders. Warrant holders neither receives dividend nor holds voting rights. Statement (d) is true.

When a warrant is issued, the exercise price is always greater than the current market price. Statement (e) is true.

Hence (c) is the answer.

12 Answer : (b)

≤

Reason : Dividend Pay-out ratio = Dividend per share / Earning per share (i)
= 0.4

Investors' rate of return is the capitalization rate. The inverse of the capitalization rate is the P/E multiple.

$P/E = 1/0.125 = 8$

= Market price per share / Earning per share (ii)

From (i) and (ii),

Dividend per share = $0.4 \times$ Earning per share

Market price per share = $8 \times$ Earning per share

Dividend yield = Dividend per share / Market price per share

= $0.4 / 8$

= $0.05 = 5\%$

Hence (b) is the answer.

13 Answer : (c)

≤

Reason : Return on Net worth = NPM x Asset turnover x Assets/equity

$0.24 = 0.125 \times 0.85 \times (\text{Assets/equity})$

$\text{Assets/equity} = 0.24 / (0.125 \times 0.85)$

= 2.26

$\text{Equity/Assets} = 1/2.26 = 0.443$

$\text{Debt/Assets} = (\text{Assets} - \text{Equity})/\text{Assets}$

= $1 - \text{Equity/Assets}$

= $1 - 0.443$

= 0.56

Hence (c) is the answer.

- 14 Answer : (c) ≤
- Reason : An aggressive security would have a beta greater than one, a defensive security would have a beta lesser than one, a risk-free security would have beta of zero, and the market portfolio would have a beta of one. Statements (a) and (d) are true.
- Beta of a security is measured as the ratio of covariance of that security with the market and the market variance ($\text{Cov}_{(i,m)}/\sigma_m^2$). Statement (b) is true.
- Beta is the slope of the characteristic line (not security market line). Statement (c) is not true.
- Greater the beta, greater the unavoidable risk involved. Statement (e) is true.
- Hence (c) is the answer.
- 15 Answer : (c) ≤
- Reason : The CAPM provides an explicit measure of risk premium. It is the product of the beta for the particular security j and the market risk premium $k_m - R_f$
- The assumptions of CAPM are (i) investors are risk-averse i.e. the greater the perceived risk of a portfolio, the risk-averse investor expects a higher return to compensate the risk. (ii) Investors make their investment decisions based on a single-period horizon. (iii) All individuals assume that they can buy assets at the going market price and they all agree on the nature of the return and risk associated with each investment and (iv) taxes do not affect the choice of buying securities.
- Therefore (c) is the answer.
- 16 Answer : (b) ≤
- Reason : The SML intersects the vertical axis at the risk-free return R_f . Statement (a) is not true.
- Market risk premium ($k_m - R_f$) is the slope of the SML. Statement (b) is true.
- Aggressive securities are plotted on the upper part of the SML. Statement (c) is not true.
- The ex-post SML is used to evaluate the performance of portfolio managers. Statement (d) is not true.
- When the expected rate of return is more than the required rate of return, the security is undervalued. Statement (e) is not true.
- Hence (b) is the answer.
- 17 Answer : (d) ≤
- Reason : At the operating break even point DOL is undefined. At this level the quantity produced is computed as the ratio of fixed cost and contribution cost per unit. If the quantity produced is less than the operating break-even-point, DOL will be negative. If the quantity produced is greater than the operating break-even point, DOL will be positive and it decreases as the quantity produced increases. Everything else remaining same, a higher DOL means higher business risk and vice-versa. Hence option (d) is incorrect and it the answer.
- 18 Answer : (c) ≤
- Reason : If the fixed costs increase, The DOL and the operating breakeven point will increase. The DFL and financial breakeven point are not affected by an increase in the fixed operating costs. The DTL and the overall breakeven point will increase. Therefore (c) is the answer.

19 Answer : (e) ≤

Reason : DOL of 4 implies that 1% change in sales will result in 4% change in EBIT and DFL of 2 implies that 1% change in EBIT will result in 2% change in EPS. DTL is the product of DOL and DFL and DTL in the given case is 8, which implies that 1% change in sales will result in 8% change in EPS. Hence (e) is the answer.

20 Answer : (d) ≤

Reason : Other things remaining the same, increase in fixed costs will increase the quantity produced at overall break-even point.

Other things remaining the same, increase in the contribution per unit will increase the denominator, hence it will decrease the quantity produced at overall break-even point.

Other things remaining the same, increase in the preference dividend paid to the preference shareholders will increase the numerator; hence it will increase the quantity produced at overall break-even point.

Other things remaining the same, decrease in the interest paid to the debt holders will decrease the quantity produced at overall break-even point.

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

21 Answer : (d) ≤

Reason : According to the funds flow statement drawn on working capital basis, an increase in current assets and a decrease in current liabilities will increase the working capital and a decrease in current assets and an increase in current liabilities will decrease the working capital. Further, a use of funds in the funds flow statement drawn on working capital basis causes a decrease in the working capital, and decrease in inventory is one such use; Accordingly, decrease in accounts payable (a current liability), decrease in accrued taxes (a current liability) and increase in prepaid expenses and cash (current assets) will increase the working capital. Hence (d) is the answer.

22 Answer : (d) ≤

Reason : Sources of funds that increase cash are:

- A net decrease in any asset other than cash or fixed assets
- A gross decrease in fixed assets
- A net decrease in any liability
- Proceeds from the sale of equity or preference stock
- Funds from Operations.

Uses of funds that decrease cash are:

- A net decrease in any asset other than cash or fixed assets
- A gross increase in fixed assets
- A net decrease in any liability
- A retirement or purchase of stock
- Cash dividends.

Therefore alternatives (I) and (V) are sources of funds that increase cash. Hence (d) is the answer.

23 Answer : (c) ≤

Reason : A funds flow statement explains the various sources from which funds are raised and the uses to which these funds are put. Analysis of the same over a period of time will enable the management to detect the imbalances and take appropriate action, to appraise the performance of divisions, to evaluate the pattern of firm's financing and to plan for the future financing. The analysis of the funds flow statement will in no way help to evaluate the quality of firm's top management. Hence (c) is the answer.

24 Answer : (c) ≤

Reason : The ROE measures the profitability of equity funds invested in the firm. It is regarded as very important measure because it reflects the productivity of capital employed in the firm.

P/E ratio gives the relationship between the market price of the stock and its earnings by revealing how earnings affect the market price of a firm's stock. The main use of P/E ratio is that it helps in determining the expected market value of a stock. Inverse of the P/E ratio is the capitalization rate.

The earning power is a measure of the operating business performance, which is not affected by the interest charges and tax payments.

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

25 Answer : (b) ≤

Reason : It is a capital structure ratio, which is a part of the leverage ratios. It does not measure the extent to which borrowed funds support the firm's assets, but indicates the relative proportions of capital contributions by creditors and shareholders.

Lower the debt-equity ratio, higher the degree of protection felt by the lenders. Hence statements (I) and (III) are true and statement (IV) is not true. Statement (II) is about the debt-asset ratio. Hence (b) is the answer.

26 Answer : (d) ≤

Reason : Return on equity = Net profit margin (NPM) x Total Asset Turnover (TAT) x Total Assets to equity ratio (T/E)

$$= \text{NPM} \times \text{TAT} \times [(\text{Equity} + \text{Debt}) / \text{Equity}]$$

$$= \text{NPM} \times \text{TAT} \times [1 + \text{Debt/equity}]$$

$$= 7 \times 3.5 \times (1 + 1.5)$$

$$= 7 \times 3.5 \times 2.5$$

$$= 61.25\%$$

Hence (d) is the answer.

- 27 Answer : (b) ≤
- Reason : According to Du-Pont equation:
 Return On Equity (ROE) = Net Profit Margin x Average Asset Turnover x Equity Multiplier
 Where equity multiplier = $1/(1-\text{debt to assets ratio})$
 Hence ROE will decrease when the equity multiplier decreases or in other words when the debt to assets ratio decreases. Hence, statement II is not true.
 When net profit margin and /or average asset turnover ratio increases ROE will increase.
 Hence, Statements (I) and (IV) are true.
 ROE can also be written as Return On Equity (ROE) = Return on assets x Equity Multiplier. Hence, Decrease in Return On Assets decreases the ROE. So Statement (III) is true.
 Hence (b) is the answer.
- 28 Answer : (c) ≤
- Reason : In the cross-sectional analysis, financial ratios of a firm are compared with the industry averages or with a good player.
 In the Time-series analysis, financial statements are compared over two to three years by computing the year-to-year change in absolute terms and in terms of percentages.
 In the common size analysis, the items of the balance sheet are expressed as percentages of total assets and the items of the income statement are expressed as percentages of the net sales.
 In the Dupont analysis, return ratios are analyzed in terms of profit margin and turnover ratios.
 Financial ratio analysis mainly helps in valuing the firm in quantitative terms.
 Hence (c) is the answer.
- 29 Answer : (e) ≤
- Reason : Growth with internal equity (g) = $[m(1-d)A/E] / [A/S - m(1-d)A/E]$
 It can be observed from the formula that
 As debt-equity ratio increases the assets to equity ratio (A/E) increases and 'g' increases.
 As profit margin (m) increases 'g' increases.
 As assets to sales ratio (A/S) decreases 'g' increases.
 As dividend payout ratio (d) increases, 'g' decreases.
 As EPS increases, Dividend Payout ratio (d) decreases, which implies 'g' increases.
 Hence (e) is the answer.
- 30 Answer : (c) ≤
- Reason : The external financing requirement (EFR) = $A/S(\Delta S) - L/S(\Delta S) - mS_1(1-d)$
 The equation highlights that the amount of external financing depends on projected growth in sales. At high growth rates, the firm needs to invest more and therefore it needs to raise more capital. At low growth rates, a firm's requirement for external finance is negative. A firm with a high volume of retained earnings relative to its assets need not have to raise new capital. Therefore statements (I) and (II) are true and statement (III) is not true.
 Hence (c) is the answer.

31 Answer : (a) ≤

Reason : The value of a loan today is given, and you are required to find out the amount of payments.

In a PV problem,

$$PV = \text{Cash flow} \times PVIFA_{(i,n)}$$

$$\begin{aligned}\text{Cash flow} = \text{Payment} &= PV \text{ of loan} / PVIFA_{(i,n)} \\ &= 85,000 / PVIFA_{(7\%,15)} \\ &= 85,000 / 9.108 = \text{Rs.}9,332.46\end{aligned}$$

Hence (a) is the answer.

32 Answer : (d) ≤

Reason : Return on mutual fund = 12% per annum.

$$\therefore \text{Quarterly return} = 12/4 = 3\%$$

Since the time units of time are in quarters, Mr. Ram places eth Rs.20,000 in the account 2 years or 8 quarters from today. Therefore his mutual fund statement must be examined 12 years or 48 quarters from the time he deposited Rs.10,000.

$$\begin{aligned}\text{(i) FV of Rs.10,000} &= PV \times (1 + r)^t \\ &= 10,000 \times (1 + 0.03)^{48} \\ &= \text{Rs.}41,322.52\end{aligned}$$

$$\begin{aligned}\text{(ii) FV of Rs.20,000} &= PV \times (1 + r)^t \\ &= 20,000 \times (1 + 0.03)^{40} \\ &= \text{Rs.}65,240.76\end{aligned}$$

$$\begin{aligned}\text{Total value} &= \text{Rs.}41,322.52 + \text{Rs.}65,240.76 \\ &= \text{Rs.}1,06,563.28\end{aligned}$$

Hence (d) is the answer.

33 Answer : (e) ≤

Reason : When the required rate of return is less than the coupon rate, the value of the bond is greater than the par value and the premium on the bond will decline as the maturity approaches. It reaches the par value at maturity.

Therefore in the above question, $X > Y > Z$ and Z will be equal to the par value i.e. Rs 1,000.

Hence, options (III) and (IV) are correct; Options (I) and (II) are wrong.

Therefore option (e) is the answer.

Hence (e) is the answer.

34 Answer : (b) ≤

Reason : Interest rate per month is ' k_m ' in the following:

$$4000 FVIFA_{k_m, 60} (1 + k_m) = 3,29,946$$

$$FVIFA_{k_m, 60} (1 + k_m) = 82.487$$

Looking at interest tables.

$$k_m = 1\%$$

$$\therefore \text{Nominal interest rate per annum} = 1 \times 12 = 12\%.$$

Hence (b) is the answer.

35 Answer : (d)

≤

Reason : At the end of 15 years, the amount of expenditure will be:

$$= \text{Rs.} 10,00,000 \times (1.03)^{15}$$

$$= \text{Rs.} 15,57,967.41$$

So the required amount of annual installment will be

$$\frac{15,57,967.41}{\text{FVIFA}(8\%, 15 \text{ years})} = \frac{15,57,967.41}{27.152}$$

$$= \text{Rs.} 57,379.47 \Rightarrow \text{Rs.} 57,379 \text{ (app)}$$

Hence (d) is the answer.

36 Answer : (d)

≤

Reason : According to single index model,

$$\text{Required rate of return on a stock} = \alpha_j + \beta_j k_m;$$

where α_j is the intercept of the regression line,

β_j is the beta of the stock

k_m is the market return,

In the given case,

$$0.15 = \alpha_j + 1.5 \times 0.12$$

$$\alpha_j = -0.03$$

α_j indicates the rate of return the stock will earn when the market return is zero. In the given case, α of -0.03 indicates that the stock will earn a negative return of 3%, when the market return is zero. Hence, statement (I) is not true.

If beta of a stock is more than the market beta i.e., 1, the stock is referred to as aggressive stock and if the beta of the stock is less than 1, it is referred to as defensive stock. As the beta of the given stock is 1.5, the given stock is an aggressive stock. Hence, (II) is true.

Beta of 1.5 implies that when the market return increases/decreases by 10%, return on the stock increases/decreases by 15%. Hence, statement III is true and (d) is the correct answer.

37 Answer : (c)

≤

Reason : Let the face value be Rs.100 and the amount of dividend per annum = $100 \times 10\% = \text{Rs.} 10$

$$\text{So, the current yield} = \frac{\text{Rs.} 10}{\text{Rs.} 125} \times 100 = 8 \text{ percent}$$

Now, if the current yield increases by one percent, the market value will be =

$$\frac{\text{Rs.} 100}{0.09} = \text{Rs.} 111.11$$

So, the premium on the price of the preference shares will be = 11.11 percent.

Hence (c) is the answer.

38 Answer : (c)

≤

Reason : The firm borrows Rs.16,00,000 (80%). Compound interest occurs over the entire 11 years of the life of the loan. In order to obtain the required annual loan payment, first compute the amount owed at the end of year 3 (one year before the first payment), i.e.,

$$\begin{aligned}FV &= PV (1 + r)^n \\&= \text{Rs.}16,00,000 (1 + 0.08)^3 \\&= \text{Rs.}20,15,539.\end{aligned}$$

Now this value becomes the present value of the 8-year annuity discounted at 8% at the end of 3rd year. So,

$$\begin{aligned}PV &= \text{Annuity amount} \times PVIFA_{(r,n)} \\&= A \times PVIFA_{(8\%,8)} \\20,15,539 &= A \times 5.747 \\A &= \text{Rs.}3,50,712.\end{aligned}$$

Therefore Mr.Phaneesh has to make a down payment of Rs.4,00,000 and eight equated annual installments of Rs.3,50,712 starting from the end of year 4. Hence (c) is the answer.

39 Answer : (c)

≤

Reason : First find out the effective annual rate (EAR)

$$EAR = r_e = (1 + r_n/m)^m - 1$$

Where,

r_n – nominal rate of interest, i.e., 6.82%

m – number of times compounding done = 4

$$\therefore r_e = (1 + 0.0682/4)^4 - 1 = 0.06996 \text{ or } 0.07 = 7\%$$

Now, let the sinking fund payment be A.

$$\begin{aligned}\therefore \text{Rs.}50,00,000 &= A \times FVIFA_{(7\%,15)} \\A &= 50,00,000 / 25.129 = \text{Rs.}1,98,973.\end{aligned}$$

Rs.1,98,973 has to be paid into the sinking fund at the end of each year. Hence (c) is the answer.

40 Answer : (d)

≤

$$\begin{aligned}\text{Reason : Intrinsic value of the bond} &= 850 \times PVIFA_{(12\%,4)} + 10,000 \times PVIF_{(12\%,4)} \\&= 2,581.75 + 6,355.18 \\&= \text{Rs.}8,936.93 \approx 8937\end{aligned}$$

Since the intrinsic value of the bond is lesser than the current market price, the bond is under priced. Hence (d) is the answer.

41 Answer : (c)

≤

$$\begin{aligned}\text{Reason : } 904.67 &= c \times PVIFA_{7\%,6} + 1,000 \times PVIF_{7\%,6} \\c &= (904.67 - 666.342) / 4.767 = \text{Rs.}49.995 = \text{Rs.}50 \Rightarrow \text{Coupon rate is } 5\%. \\&\text{Hence (c) is the answer.}\end{aligned}$$

42 Answer : (d)

≤

Reason : Once the dividends begin, this is a growing perpetuity. We can value the growing stream of dividends using the Gordon's dividend growth model.

$$P_5 = D_6 / (r - g) = 2.00(1.05) / (0.20 - 0.05) = \text{Rs.}14$$

The stock will have a value of Rs.14 at $t = 5$. Therefore the present value of this cash flow at $t = 0$ is

$$V_0 = \text{Rs.}14 / (1.20)^5 = \text{Rs.}5.63$$

Hence (d) is the answer.

43 Answer : (c)

≤

Reason : Value of the stock (V) $= D_1 / (k - g)$

$$= [2.00 (1 - 0.05)] / [0.15 - (-0.05)]$$
$$= 1.90 / 0.20$$
$$= \text{Rs.}9.50$$

Hence (c) is the answer.

44 Answer : (c)

≤

Reason :

Year	Dividend	PVIF @ 9%	PV of dividend (Rs.)
1	$2.00 (1.15) = 2.3$	0.9174	2.11
2	$2.00 (1.15)^2 = 2.64$	0.8417	2.22
3	$2.00 (1.15)^3 = 3.04$	0.7722	2.35
4	$3.04 (1.12) = 3.40$	0.7084	2.41
5	$3.04 (1.12)^2 = 3.81$	0.6499	2.48
6	$3.04 (1.12)^3 = 4.27$	0.5963	2.55
			14.12

$$\text{Year 7 dividend} = \text{Rs.}4.27 (1.05) = \text{Rs.}4.48$$

$$\text{Market value at the end of year 6} = 4.48 / (0.09 - 0.05) = \text{Rs.}112$$

$$\text{PV of Rs.}112 @ 9\% = 112 \times 0.5963 = \text{Rs.}66.78$$

$$\text{Value of the stock} = \text{Rs.}14.12 + \text{Rs.}66.78 = \text{Rs.}80.90$$

Hence (c) is the answer.

45 Answer : (d)

≤

Reason : The first step is to solve for 'g', the unknown variable in constant growth equation. Since D_1 is not known, but D_0 is known, substitute $D_0(1+g)$ as follows:

$$P_0 = D_1 / (k_e - g) = [D_0(1+g)] / (k_e - g)$$

$$36 = [2.40(1+g)] / (0.12 - g)$$

Solving for g,

$$4.32 - 36g = 2.40 + 2.40g$$

$$38.4g = 1.92$$

$$g = 0.05 = 5\%$$

$$P_5 = [D_0 (1 + g)^6] / (k_e - g)$$

$$= [2.40 (1 + 0.05)^6] / (0.12 - 0.05)$$

$$= \text{Rs.}45.95$$

Hence (d) is the answer.

46 Answer : (c)

≤

Reason : Zero-risk portfolio implies $\sigma_p = 0$

Negatively correlated securities implies $\rho_{xy} = -1$

$$\sigma_p^2 = \sigma_x^2 w_x^2 + \sigma_y^2 w_y^2 + 2\rho_{xy} \sigma_x \sigma_y w_x w_y$$

Let $w_x = x$

$$w_y = (1 - x)$$

$$0 = 25(x^2) + 16(1-x)^2 + 2(-1)(5)(4)x(1-x)$$

$$0 = 25x^2 + 16(1-2x+x^2) - 40x + 40x^2$$

$$0 = 25x^2 + 16 - 32x + 16x^2 - 40x + 40x^2$$

$$0 = 81x^2 - 72x + 16$$

Solving this equation,

$$81x^2 - 36x - 36x + 16 = 0$$

$$9x(9x - 4) - 4(9x - 4) = 0$$

$$(9x - 4)(9x - 4) = 0$$

$$x = 4/9 = 0.44$$

$$\therefore w_x = 44\% \text{ and}$$

$$w_y = (1 - 0.44) = 0.56 = 56\%$$

Therefore to have a risk less portfolio, 44% of the money should be invested in security X and 56% of money should be invested in security Y.

Expected return on this portfolio = $0.25 \times 0.44 + 0.18 \times 0.56 = 21.08\%$

Hence (c) is the answer.

47 Answer : (e)

≤

Reason : Required rate of return $R_e = R_f + \beta(R_m - R_f)$

Where, $(R_m - R_f)$ is the risk premium.

$$\therefore R_e = 12\% + 1.25 \times 8.9\% = 23.125\% = 23.13\% \text{ (app)}$$

* β is computed as follows:

$$\beta = \text{Cov}_{i,m} / \sigma_m^2 = 25/20 = 1.25$$

Hence (e) is the answer.

48 Answer : (d)

≤

Reason : $\beta = 0.64$

$$\sigma_m / \sigma_i = 0.75$$

$$\rho_{im} = ?$$

$$\beta = \text{Cov}_{i,m} / \sigma_m^2 \text{ and } \rho_{im} = \text{Cov}_{i,m} / \sigma_i \sigma_m$$

$$\Rightarrow \text{Cov}_{i,m} = \beta \times \sigma_m^2$$

Substituting this in ρ_{im} equation,

$$\rho_{im} = (\beta \times \sigma_m^2) / \sigma_i \sigma_m = \beta \times \sigma_m / \sigma_i = 0.64 \times 0.75 = 0.48$$

Hence (d) is the answer.

49 Answer : (d)

≤

Reason : $\beta = 2$

$$R_e = 15\%$$

$$R_m = 10\%$$

$$R_f = ?$$

Substituting the values in the CAPM equation,

$$15\% = R_f + 2(10\% - R_f)$$

$$R_f = 5\%$$

Now, if the R_m is increased to 15%,

$$\begin{aligned} R_e &= 5\% + 2(15\% - 5\%) \\ &= 25\%. \end{aligned}$$

Therefore the new required return on the stock would be 25%.

Hence (d) is the answer.

50 Answer : (c)

≤

Reason : $\text{Beta } (\beta) = \text{Cov}_{i,m} / \sigma_m^2$

Calculation of σ_m^2 and $\text{Cov}_{i,m}$:

Probability	$R_m - E(R_m)$	$R_i - E(R_i)$	$P[R_m - E(R_m)]^2$	$P[R_m - E(R_m)][R_i - E(R_i)]$
1/3	-4	-12	5.33	16
1/3	-1	+12	0.33	-4
1/3	+5	0	8.33	0
			$\sigma_m^2 = 13.99$	$\text{Cov}_{i,m} = 12$

$$\begin{aligned} E(R_i) &= 6 \times 1/3 + 30 \times 1/3 + 18 \times 1/3 \\ &= 18\% \end{aligned}$$

$$\begin{aligned} E(R_m) &= 9 \times 1/3 + 12 \times 1/3 + 18 \times 1/3 \\ &= 13\% \end{aligned}$$

$$\text{Beta } (\beta) = \text{Cov}_{i,m} / \sigma_m^2 = 12 / 13.99 = 0.857 = 0.86 \text{ (app)}$$

Hence (c) is the answer.

51 Answer : (b)

≤

Reason : In order to calculate the required rate of return on the security, i.e., R_s , its beta factor should be calculated as follows:

$$\begin{aligned} \beta &= (\sigma_i \sigma_m \rho_{im}) / \sigma_m^2 \\ &= (24 \times 16 \times 0.8) / (16)^2 \\ &= 1.2 \end{aligned}$$

Now, the required rate of return, R_s is:

$$\begin{aligned} R_s &= R_f + \beta(R_m - R_f) \\ &= 6.5 + 1.2(10.5 - 6.5) = 11.3\% \end{aligned}$$

As the required rate of return of 11.3% is less than the expected rate of return of 12%, the stock is undervalued giving a return, which is higher than what is required, based on the level of risk.

Hence (b) is the answer.

52 Answer : (d)

Reason : Total Assets Turnover ratio = Sales/total assets

$$3 = \text{Sales} / 5,00,000$$

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

	Rs.
Sales (S)	15,00,000
Variable operating costs (V) – 40% of sales	<u>6,00,000</u>
Contribution (S-V)	9,00,000
(-) Fixed operating costs (F)	<u>2,00,000</u>
EBIT [(S-V)-F]	7,00,000

$$\text{Interest(I)} = 0.1 \times 1,60,000 = \text{Rs.} 16,000$$

$$\text{Preference Dividend (D}_p\text{)} = 0.08 \times 1,00,000 = \text{Rs.} 8,000$$

$$\text{DOL} = Q(S-V)/(S-V)-F = \text{Contribution} / \text{EBIT} = 9,00,000 / 7,00,000 = 1.29$$

$$\text{DFL} = \text{EBIT} / [\text{EBIT} - \text{I} - \text{D}_p / 1 - T] = 7,00,000 / [7,00,000 - 16,000 - 8,000 / 0.6]$$

$$= 1.043 = 1.04 \text{ (app)}$$

Hence (d) is the answer.

53 Answer : (c)

Reason :

	1,20,000 units	1,50,000 units
	Rs.	Rs.
Sales @ Rs.12 per unit	14,40,000	18,00,000
Variable operating costs @ Rs.8 per unit	<u>9,60,000</u>	<u>12,00,000</u>
Contribution	4,80,000	6,00,000
(-) Fixed expenses	<u>2,00,000</u>	<u>2,00,000</u>
EBIT	2,80,000	4,00,000
(-) Interest on debentures	<u>90,000</u>	<u>90,000</u>
Profit before tax	1,90,000	3,10,000
(-) Tax @ 40%	<u>76,000</u>	<u>1,24,000</u>
Profit after tax (PAT)	1,14,000	1,86,000
No. of shares	15,000	15,000
EPS = PAT/No. of shares	Rs.7.6	Rs.12.4

$$\% \text{ Change in EPS} = (12.4 - 7.6) / 7.6 = 0.6316 = 63.16\%$$

$$\% \text{ Change in output} = (1,50,000 - 1,20,000) / 1,20,000 = 0.25 = 25\%$$

$$\text{DTL} = \% \text{ change in EPS} / \% \text{ change in output}$$

$$= 0.6316 / 0.25 = 2.53$$

Hence (c) is the answer.

54 Answer : (b)

Reason : DTL = DOL x DFL

If DOL is decreased by 40%, it can be written as (0.6 DOL)

Similarly, if DFL is increased by 25%, it can be written as (1.25 DFL)

$$\therefore \text{DTL} = 0.6 \text{ DOL} \times 1.25 \text{ DFL} = 0.75 \text{ DTI}$$

Thus DTL will reduce by 25%.

Hence (b) is the answer.

55 Answer : (d)

≤

Reason :

	Rs.
Sales	4,00,000
Variable operating costs @ 30% of sales	<u>1,20,000</u>
Contribution	2,80,000
(-) Fixed expenses	<u>2,00,000</u>
EBIT	80,000
(-) Interest	<u>10,000</u>
Profit before tax	70,000

$$DTL = \text{Contribution} / \text{PBT} = 2,80,000/70,000 = 4$$

If sales increase by 6%, the taxable income will increase by $4 \times 6 = 24\%$.

Hence (d) is the answer.

56 Answer : (e)

≤

Reason : $\text{DOL} = \% \text{ change in EBIT} / \% \text{ change in sales}$

$$\Rightarrow \% \text{ Change in sales} = \% \text{ change in EBIT} / \text{DOL}$$

$$\text{Also, } \text{DOL} = \text{Contribution} / \text{EBIT} = (\text{S}-\text{V})/[(\text{S}-\text{V})-\text{F}]$$

	Rs.(Cr.)
Variable Costs:	
Cost of goods sold (75%)	1,650
Selling and administrative expenses (60%)	738
Total variable costs	2,388
Fixed Costs:	
Cost of goods sold (25%)	550
Selling and administrative expenses (40%)	492
Total fixed costs	1,042

Sales = Rs.4,140 crores

$$\therefore \text{DOL} = (4,140 - 2,388)/(4,140 - 2,388 - 1,042) = 1,752/710 = 2.468$$

Now, desired increase in EBIT = 25%

$$\therefore \text{Required increase in sales} = 25/2.468 = 10.13\%$$

Therefore the net sales should increase by 10.13% in order to increase the EBIT by 25%. Hence (e) is the answer.

57 Answer : (c)

≤

Reason : Financial break-even point occurs when $\text{EBIT} = \text{I} + \text{D}_p/(1-\text{T})$

$$\text{I} = 0.1 \times 40 = \text{Rs.4 crores}$$

$$\text{D}_p = 0.08 \times 31.25 = \text{Rs.2.5 crores}$$

$$\therefore \text{EBIT} = 4 + 2.5/1-0.4 = 4 + 4.17 = \text{Rs.8.17 crores}$$

Hence (c) is the answer.

58 Answer : (e)

≤

Reason : Given: % change in EPS / % change in EBIT = 4 = DFL

$$\% \text{ change in EPS} / \% \text{ change in Sales} = 6 = \text{DTL}$$

$$\% \text{ change in EBIT} / \% \text{ change in Sales} = ? = \text{DOL}$$

$$\text{But DTL} = \text{DOL} \times \text{DFL}$$

$$\text{DOL} = \text{DTL} / \text{DFL} = 6 / 4 = 1.5$$

This is for 1% change in sales. For 6% change in sales, 1.5 = % change in EBIT/6

$$\therefore \% \text{ change in EBIT} = 9\%$$

Hence (e) is the answer.

59 Answer : (c)

≤

$$\text{Reason : } \text{EFR} = A/S(\Delta S) - L/S(\Delta S) - mS_1(1-d)$$

$$S_1 = \text{Projected sales} = S + \Delta S$$

$$\text{EFR} = 0$$

Given: Net Profit = Rs.96 lakh; Sales = Rs.2,400 lakh

$$\text{Net Profit margin} = \text{PAT} / \text{Sales} = 96 / 2,400 = 0.04 = 4\%$$

$$\therefore 0 = 1,800 / 2,400(\Delta S) - 600 / 2,400(\Delta S) - 0.04(S + \Delta S)(1 - 0.50)$$

$$\text{or, } 0 = 3/4(\Delta S) - 1/4(\Delta S) - (0.04)(0.50)(2,400 + \Delta S)$$

$$0 = 1/2(\Delta S) - 0.02(2,400 + \Delta S)$$

$$0.02(2,400 + (\Delta S)) = 0.5(\Delta S)$$

$$0.48 + 0.02(\Delta S) = 0.5(\Delta S)$$

$$0.48(\Delta S) = 48$$

$$(\Delta S) = \text{Rs.100 lakh}$$

$\therefore$ The company can increase its sales by Rs.100 lakh without using any external financing. Hence (c) is the answer.

60 Answer : (b)

≤

$$\text{Reason : Sustainable growth rate (g)} = [m(1-d)A/E] / [A/S - m(1-d)A/E]$$

$$m = \text{Net profit margin} = \text{Net profit} / \text{Net sales} = 1,26,000 / 48,02,968 = 0.0262$$

$$\text{EPS} = \text{Net Profit} / \text{No. of shares} = 1,26,000 / 7,000 = \text{Rs.18}$$

$$\text{Dividend pay-out} = \text{Dividend paid} / \text{EPS} = 4.50 / 18 = 25\%$$

$$\text{Total Assets} = \text{Rs.1,00,49,432}$$

$$E = \text{Net worth} = \text{Equity capital} + \text{Reserves \& Surplus}$$

$$= 52,57,738$$

$$S_0 = \text{Current sales} = \text{Rs.48,02,968}$$

Substituting the values,

$$(g) = [0.0262 \times 0.75 \times 1,00,49,432 / 52,57,738] / [1,00,49,432 / 48,02,968 - 0.0262 \times 0.75 \times 1,00,49,432 / 52,57,738]$$

$$g = 0.03756 / (2.09234 - 0.03756)$$

$$= 0.0183$$

$$= 1.83\%$$

Hence (b) is the answer.

61 Answer : (e)

≤

Reason : Projected sales = $S_1 = 200 \times 1.45 = \text{Rs.}290 \text{ lakh}$

$$\text{EFR} = [\text{TA/NS} - \text{SCL/NS}] \Delta S - m S_1 (1-d)$$

$$\text{TA} = \text{TL} = \text{Rs.}50 \text{ lakh}$$

$$\text{TA/NS} = 50/200 = 0.25$$

$$\text{SCL/NS} = 24/200 = 0.12$$

$$D = 17.5/25 = 0.7$$

$$\text{EFR} = 5 \text{ lakh}$$

$$5 = [0.25 - 0.12]90 - m \times 290 \times 0.3$$

$$5 = 11.7 - 87m$$

$$87m = 6.7$$

$$\Rightarrow m = 0.077$$

$$m = 7.7\%$$

Therefore net profit for the next year = $.077 \times 290 = \text{Rs.}22.33 \text{ lakhs}$

Hence (e) is the answer.

62 Answer : (d)

≤

Reason : Calculation of funds from operations:

	Rs.	Rs.
Current year reported profit		1,40,000
+ Loss of sale of equipment	18,000	
+ Premium on redemption of debentures	3,000	
+ Discount on issue of debentures	4,000	
+ Depreciation on machinery	40,000	
+ Depletion of natural resources	20,000	
+ Interim dividend	50,000	
+ Provision for tax	44,000	
+ Transfer to general reserve	10,000	
+ Preliminary expenses	2,000	
+ Loss on sale of investment	2,000	
+ Goodwill written off	60,000	<u>2,53,000</u>
		3,93,000
- Profit on revaluation	5,000	
- Gain from sale of assets	80,000	
- Dividend income	8,000	<u>93,000</u>
		3,00,000

Therefore (d) is the answer.

63 Answer : (c)

≤

Reason : Realization of debtors involves conversion of receivables to cash. To that extent the current assets remain constant. When goods are sold on credit, debtors will increase but inventory will decrease to that extent. Again there is no change in the current assets. Raw materials purchased on credit causes an equal increase in current assets (inventory) and current liabilities (Sundry creditors). Conversion of preference shares in to equity involves the conversion of one form of long-term finance to another form of long-term finance and does not affect current assets or liabilities. Considering the above we can say that there is no change in the NWC.

Hence (c) is the answer.

64 Answer : (d)

≤

Reason : Schedule of change in working capital

	31.03.05	31.03.06	Increase in WC	Decrease in WC
Current Assets:				
Stock	95,000	70,000	-	15,000
Debtors	1,75,000	2,00,000	25,000	-
Cash	20,000	10,000	-	10,000
Bank	58,000	30,000	-	28,000
Current Liabilities:				
Creditors for goods	80,000	70,000	10,000	-
Expenses for goods	8,000	10,000	-	2,000
			35,000	55,000
Net decrease In WC				20,000

Therefore (d) is the answer.

65 Answer : (e)

≤

Reason :

- Decrease in a current asset is a source of funds.
- Increase in a current asset is a use of funds
- Decrease in a current liability is a use of funds
- Increase in a current liability is a source of funds

Therefore, Rs.5,005 decrease in accounts receivable, Rs.7,000 decrease in cash, and Rs.13,001 increase in accounts payable are sources of funds. Rs.12,012 decrease in accounts payable and Rs.15,009 increase in debtors are uses of funds. Therefore (III) and (V) are correct and (e) is the answer.

66 Answer : (d)

≤

Reason : Given: Net Profit Margin = 5%

Return on investment = 8%

According to the DuPont equation:

Return on Investment = Net Profit Margin x Total Assets Turnover

Total Assets Turnover = Return on Investment / Net Profit Margin = $0.08/0.05 = 1.6$

Hence (d) is the answer.

67 Answer : (c)

Reason : Net Profit margin = PAT/Net Sales x 100

Net sales = 150% of direct costs

= 1.5 x 9,60,000 = Rs.14,40,000

Calculation of PAT:

	Rs.
Net Sales	14,40,000
(-) Direct costs	<u>9,60,000</u>
Gross Profit	4,80,000
(-) Operating expenses	<u>1,60,000</u>
EBIT	3,20,000
(-) Interest (14% of Rs.8,00,000)	<u>1,12,000</u>
PBT	2,08,000
Tax @ 40%	<u>83,200</u>
PAT	1,24,800

Net Profit Margin = PAT/Net Sales x 100

= 1,24,800/14,40,000 x 100

= 8.67%.

Return on equity = PAT/Equity x 100

= 1,24,800/4,00,000

= 31.2%

Hence (c) is the answer.

68 Answer : (d)

Reason :

	Rs.
Operating profit	45,00,000
(-) Interest (11% on Rs.25,00,000)	<u>2,75,000</u>
Profit before Preference dividend and tax	42,25,000
(-) tax @ 40%	<u>16,90,000</u>
Profit Before Preference dividend	25,35,000
(-) Preference dividend (9% of Rs.30,00,000)	<u>2,70,000</u>
PAT	22,65,000

EPS = PAT / No. of shares = 22,65,000/ 8,00,000 = Rs.2.83

Dividend yield = Dividend per share / Market price per share

= (20% of 2.83)/40

= 0.01416

= 1.416% = 1.42% (app)

Price-earning ratio = Market price per share / EPS

= 40/2.83

= 14.13 times.

Hence (d) is the answer.

69 Answer : (b)

≤

Reason :

	2004-2005	2005-2006
Stock turnover = COGS/Average inventory	20	25
Cost of goods sold (COGS)	$20 \times (30,000 + 40,000)/2 =$ Rs.7,00,000	$25 \times (27,000 + 37,800)/2 =$ Rs.8,10,000
Gross Profit = Net sales - COGS --- (i)		
Gross Profit Ratio	0.3	0.25
=Gross profit/net sales (ii)		
	From (ii), Gross Profit = 0.3 Net Sales	From (ii), Gross Profit = 0.25 Net Sales
	Substituting in (i)	Substituting in (i)
	$0.3 \times \text{Net Sales} = \text{Net sales} - \text{COGS}$	$0.25 \times \text{Net Sales} = \text{Net sales} - \text{COGS}$
	$\text{COGS} = 0.7 \times \text{Net Sales}$ $\text{Net Sales} = 7,00,000/0.7$	$\text{COGS} = 0.75 \times \text{Net Sales}$ $\text{Net sales} = 8,10,000/0.75$
Net Sales	= Rs.10,00,000	= Rs.10,80,000
Gross Profit	$0.3 \times 10,00,000$ Rs.3,00,000	$0.25 \times 10,80,000$ Rs.2,70,000
Administrative Expenses	$0.1 \times 10,00,000$ Rs.1,00,000	$0.12 \times 10,80,000$ Rs.1,29,600
PAT:		
Gross Profit	Rs.3,00,000	Rs.2,70,000
(-) Administrative expenses		
EBIT	<u>1,00,000</u> 2,00,000	<u>1,29,600</u> 1,40,400
PBT	2,00,000	1,40,400
Tax @ 40%	<u>80,000</u>	<u>56,160</u>
PAT	1,20,000	84,240
N/P ratio = PAT/Net Sales	$1,20,000/10,00,000 = 12\%$	$84,240/10,80,000 = 7.8\%$

Therefore net profit margin decreased by 4.2% in 2006-07 over 2005-06. Hence (b) is the answer.

70 Answer : (c)

≤

Reason :

Ratio of Long-term loan to Net worth = 1:2

Net worth = Share capital + General Reserve
= 2,00,000 + 1,00,000
= 3,00,000

Long-term loan/3,00,000 = $\frac{1}{2}$ $\Rightarrow$ Long-term loan = Rs.1,50,000

$\therefore$ Total liabilities = Share capital + General Reserve + Long-term loan + sundry creditors

= 2,00,000 + 1,00,000 + 1,50,000 + 1,00,000
= Rs.5,50,000

Assets turnover = Net Sales / Total Assets = 2 times

Total liabilities = Total assets = Rs.5,50,000

Net Sales / 5,50,000 = 2 $\Rightarrow$ Net Sales = Rs.11,00,000

$\therefore$ Credit sales = 50% of sales = Rs.5,50,000

Average collection period = 360/Receivables Turnover ratio = 36 days

But Receivables turnover ratio = Credit sales / Receivables = 10
= 5,50,000/Receivables = 10

Receivables = 5,50,000/10 = Rs.55,000

Gross profit = 10% on COGS

Gross profit = Net Sales – COGS = 0.1 COGS
= 11,00,000 – COGS = 0.1 COGS

COGS = 11,00,000/1.1 = Rs.10,00,000

Inventory turnover = COGS/Inventory = 10 times
= 10,00,000 / Inventory = 10

Inventory = Rs.1,00,000

Total Assets = Rs.5,50,000

Current Assets = Inventory + Receivables = 1,00,000 + 55,000 = 1,55,000

$\therefore$ Fixed Assets = Total assets – current assets = 5,50,000 – 1,55,000 = 3,95,000

Fixed Assets Turnover = Net Sales / Fixed Assets = 11,00,000/3,95,000 = 2.78 times

Hence (c) is the answer.

71 Answer : (d)

≤

Reason : Gross Profit margin = (Sales – COGS)/Sales x 100

COGS = Opening stock + Purchases – Closing stock
= 20 + 100 – 30
= Rs.90 lakh.

Sales = Rs.160 lakh

G/P margin = (160 – 90)/160 x 100
= 43.75%

Debt-equity ratio = Total debt / equity

Debt = Long-term loan + Trade creditors + Accrued expenses + provisions
= 20 + 30 + 6 + 4
= Rs.60 lakh

Equity = Paid-up share capital + Reserves and Surplus
= 20 + 30
= Rs.50 lakh

Debt-equity ratio = 60/50 = 1.2

Hence (d) is the answer.

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