

Question Paper

Financial Management - I (141) : January 2007

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

1. Which of the following statements is **true** with respect to the mobilization of funds by a finance manager? [< Answer >](#)
- (a) Analysis of variance between the targeted costs and actual costs incurred and reporting on the same
 - (b) Assessing the costs and benefits of a project under consideration
 - (c) Interacting with banking agencies for procuring funds
 - (d) Appraisal of investment proposals given by various departments
 - (e) Deciding the optimum quantity of raw materials to be ordered for procurement.
- (1 mark)
2. Which of the following functions of the financial system allows for the exchange of current income for future income and transformation of savings into investments? [< Answer >](#)
- (a) Savings function
 - (b) Liquidity function
 - (c) Payment function
 - (d) Risk function
 - (e) Policy function.
- (1 mark)
3. Which of the following entities **cannot** borrow but can only lend in the call money market? [< Answer >](#)
- (a) Reserve Bank of India
 - (b) Discount and Finance House of India
 - (c) Securities Trading Corporation of India
 - (d) Unit Trust of India
 - (e) State Bank of India.
- (1 mark)
4. Which of the following is **not** a feature of Certificate of Deposit (CDs)? [< Answer >](#)
- (a) CDs are issued at a discount to face value
 - (b) CDs are freely transferable by endorsement and delivery
 - (c) CDs cannot be issued in demat form
 - (d) CDs offer higher yields compared to conventional deposits
 - (e) CDs are maturity-dated obligations of banks forming a part of time liabilities and are subjected to usual reserve requirements.
- (1 mark)
5. The face value of a T-Bill is Rs.100. Mr.Arun made a bid for a 364-day T-Bill yielding 6.46% p.a. and maturing after 182 days. The price paid by Mr.Arun for this bill is (Assume 365 days a year) [< Answer >](#)
- (a) Rs.92.84
 - (b) Rs.94.56
 - (c) Rs.95.65
 - (d) Rs.96.88
 - (e) Rs.98.76.
- (1 mark)

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

[< Answer >](#)

- I. Effective rate of interest is always lower than the nominal interest rate.
- II. The effective rate of interest increases with increase in the frequency of compounding.
- III. The effective and nominal interest rates are equal if the frequency of compounding is one.

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

(1 mark)

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

[< Answer >](#)

- (a) Product of the PVIFA and the sinking fund factor is PVIF
- (b) Product of the sinking fund factor and the capital recovery factor is one
- (c) Product of the PVIF and the FVIFA is PVIFA
- (d) Product of the FVIF and PVIFA is FVIFA
- (e) Product of PV factor for perpetuity and interest rate is one.

(1 mark)

8. Mr.Sharma plans to save Rs.20,00,000 for his daughter's education and marriage in fifteen years. The State Bank of India pays 8% interest compounded annually. If Mr.Sharma is planning to make equal annual contributions at the end of every year for a period of fifteen years, how much should he put in the bank annually?

[< Answer >](#)

- (a) Rs. 73,333.30
- (b) Rs. 73,659.40
- (c) Rs.1,66,666.70
- (d) Rs.1,76,243.00
- (e) Rs.2,38,596.50.

(1 mark)

9. Suppose you plan to buy a Santro costing Rs.4,50,000 and go for a motor vehicle loan being offered by the ICICI bank. The rules of the bank require you to make a down payment of Rs.45,000. The remaining amount would be financed by them and the repayment can be done over five years. The interest rate offered by the bank is 12% compounded monthly. If you accept this proposal, the equated monthly payment and the effective annual interest rate respectively are

[< Answer >](#)

- (a) Rs. 6,750; 12.12%
- (b) Rs. 8,760; 12.68%
- (c) Rs. 9,008; 12.68%
- (d) Rs.10,008; 12.88%
- (e) Rs.10,567; 12.98%.

(2 marks)

10. Mrs.Kalpna requires Rs.50,000 at the end of five years and Rs.70,000 at the end of six years. Therefore she plans to deposit certain amount of money in her bank account today. If she withdraws the required amounts on the due dates, there would be a zero balance in her account after the last withdrawal. If the bank offers an interest rate of 9% p.a. on the deposits, how much should Mrs.Kalpna deposit in the account today?

[< Answer >](#)

- (a) Rs.32,488.63
- (b) Rs.35,778.18
- (c) Rs.65,589.40
- (d) Rs.68,272.61
- (e) Rs.76,366.81.

(2 marks)

11. Mr.Ali takes a loan of Rs.1,00,000 from Fortune Finance Company Pvt. Ltd. As per the loan agreement, Mr.Ali has to pay off the loan in thirty-six monthly installments of Rs.5,000 each. The effective annual rate of interest that the finance company is charging Mr.Ali is [< Answer >](#)

- (a) 36.20%
- (b) 43.44%
- (c) 53.22%
- (d) 60.20%
- (e) 64.45%.

(2 marks)

12. Excel Computers Ltd, is planning to accumulate Rs.10,00,000 in a sinking fund account to repay a debenture liability at the end of five years from now. The rate of interest paid by banks on their deposits is 8% per annum. How much should the company deposit in its sinking fund account every year? [< Answer >](#)

- (a) Rs.1,45,566.67
- (b) Rs.1,70,444.86
- (c) Rs.2,00,000.00
- (d) Rs.2,30,555.67
- (e) Rs.2,70,444.86.

(1 mark)

13. The fixed deposit scheme of Akshara Finance Corporation offers 12% p.a. interest for a three-year deposit. If the interest is compounded semi-annually, then the maturity value of a deposit of Rs.50,000 is approximately [< Answer >](#)

- (a) Rs.59,559
- (b) Rs.70,246
- (c) Rs.70,926
- (d) Rs.75,246
- (e) Rs.82,936.

(1 mark)

14. Which of the following is/are **not** diversifiable risk(s)? [< Answer >](#)

- I. Sector risk.
- II. Credit risk.
- III. Market risk.
- IV. Management risk.

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

(1 mark)

15. Which of the following statements is **true** if the correlation coefficient of return on stock X with market return is negative? [< Answer >](#)

- (a) The average risk of stock X is less than the market risk
- (b) The average return of stock X is more than the market return
- (c) Stock X has given an above normal return
- (d) Stock X has given a below normal return
- (e) On an average the returns from stock and market move in opposite directions.

(1 mark)

16. Which of the following statements with respect to the Security Market Line (SML) is **not true**?

[< Answer >](#)

- (a) The SML intersects the vertical axis at the risk-free rate of return
- (b) Slope of the SML is the market risk premium
- (c) The x-axis for the SML represents the expected returns of a particular security
- (d) It establishes a linear relationship between the required rate of return and its systematic risk
- (e) Alpha indicates the amount of return on a security or a portfolio when the market return is zero.

(1 mark)

17. Which of the following is **not** an application of ex-post SML?

[< Answer >](#)

- I. Testing of market efficiency.
 - II. Identifying undervalued securities.
 - III. Evaluating the performance of a portfolio manager.
 - IV. Testing of asset-pricing theories.
 - V. Determining the market price of risk for a particular security.
- (a) Both (I) and (II) above
 - (b) Both (II) and (III) above
 - (c) Both (III) and (IV) above
 - (d) Both (I) and (V) above
 - (e) Both (II) and (V) above.

(1 mark)

18. Which of the following statements with respect to beta of a security is **not true**?

[< Answer >](#)

- (a) It is directly related to the correlation coefficient between the security and market
- (b) It is inversely related to the standard deviation of the returns of the market
- (c) It is directly related to the standard deviation of security returns
- (d) It is directly related to the covariance of the security returns with the market returns
- (e) It is directly related to the variance of the market returns.

(1 mark)

19. Mr.Sathvik wants to invest in two stocks A and B in the proportion of 2:3. The variance of the returns on his portfolio is $121(\%)^2$. The variances of the returns on the stocks A and B are $169(\%)^2$ and $196(\%)^2$. The correlation coefficient between these two stocks is

[< Answer >](#)

- (a) -0.36
- (b) Zero
- (c) 0.27
- (d) 0.56
- (e) 1.00.

(2 marks)

20. Consider the following data:

[< Answer >](#)

Security	Beta	Expected return
Y	1.05	?
Z	1.20	13%

If the return on the market index is 12%, the expected return on the stock Y is

- (a) 11.65%
- (b) 12.25%
- (c) 13.62%
- (d) 14.25%
- (e) 15.61%.

(2 marks)

21. Consider the following information:

[< Answer >](#)

Standard deviation of security 'P'	13.5%
Standard deviation of the returns on the market index	12.0%
Return on the market	14.0%
Correlation coefficient between stock 'P' and the market	0.75
Risk-free rate of return	8.0%

Alpha of the stock 'P' is

- (a) -0.85%
- (b) -1.28%
- (c) Zero
- (d) 1.28%
- (e) 1.65%.

(2 marks)

22. Classic Constructions Ltd (CCL) paid a dividend of Rs.2.00 during the last year and the growth rate in the dividends is expected to be 8%. The current market price of the stock is Rs.25. The beta of the stock is 1.5 and the return on the market index is 13%. If the risk-free rate of return is 8%, by how much should the price of the stock be raised in percentage terms so that it is at equilibrium?

[< Answer >](#)

- (a) 9.6%
- (b) 11.5%
- (c) 13.8%
- (d) 15.2%
- (e) 16.7%.

(2 marks)

23. Consider the following information:

[< Answer >](#)

Condition	Probability	Excess return over expected return (%)	
		Security X	Market
Bad	0.4	-12	10
Good	0.3	14	12
Moderate	0.3	11	9

The beta of the stock X is

- (a) -0.9
- (b) Zero
- (c) 0.3
- (d) 0.8
- (e) 1.0.

(2 marks)

24. Consider the following data regarding the stocks of three companies A, B and C:

[< Answer >](#)

Stock	Proportion (%)	Beta	Expected Return (%)
A	30	0.9	12
B	50	1.1	14
C	20	1.2	10

The beta and the expected return of the portfolio consisting of stocks A, B and C respectively are

- (a) 0.85; 10.5%
- (b) 1.06; 11.6%
- (c) 1.06; 12.6%
- (d) 1.17; 13.5%
- (e) 1.20; 14.2%.

(2 marks)

25. Which of the following risks is the result of the variability of returns due to fluctuations in the securities market

[< Answer >](#)

- (a) Business risk
- (b) Financial risk
- (c) Liquidity risk
- (d) Systematic risk
- (e) Inflation risk.

(1 mark)

26. Mr. Indra purchased a bond with face value of Rs.1,000 for Rs.950. The coupon rate on the bond is 12%. If he sells the bond one year later for Rs.960, the holding period return for Mr. Indra is

[< Answer >](#)

- (a) 1.05%
- (b) 5.65%
- (c) 10.98%
- (d) 13.68%
- (e) 15.45%.

(1 mark)

27. The price of a bond (face value Rs.1,000) is Rs.975. The bond has a maturity of 7 years and would be redeemed at a premium of 10%. The current yield on the bond is 12.35%. The YTM on the bond is

[< Answer >](#)

- (a) 10.58%
- (b) 11.45%
- (c) 13.53%
- (d) 14.67%
- (e) 15.45%.

(2 marks)

28. Jyothi Laboratories paid a dividend of Rs.2.50 for the year 2005-2006. The beta of the company is 1.2 and the return on the market index is 13.5%. The risk-free rate of return is 7.5%. If the stock is currently trading at its intrinsic value of Rs.75, the growth rate in dividend is

[< Answer >](#)

- (a) 10.89%
- (b) 11.00%
- (c) 12.94%
- (d) 13.46%
- (e) 17.28%.

(2 marks)

29. Which of the following is **not true** with respect to valuation of bonds?

[< Answer >](#)

- (a) An increase in the redemption value of the bond, other things remaining the same, will increase the bond value
- (b) For a given difference between YTM and coupon rate, the longer the term to maturity of the bonds, the greater will be the change in price with a change in YTM
- (c) For a given maturity, the change in the bond's price will be lesser with a decrease in the bond's YTM than the change in bond price with an equal increase in the bond's YTM
- (d) For a given change in YTM, the percentage price change in case of bonds with high coupon rate will be smaller than in case of bonds with low coupon rate, other things remaining the same
- (e) An increase in the required rate of return, other things remaining the same, will decrease the bond value.

(1 mark)

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

[< Answer >](#)

- I. Current yield increases with an increase in the current market price.
 - II. When the required rate of return is greater than the coupon rate, the value of the bond is less than the par value.
 - III. When the required rate of return is lesser than the coupon rate, the premium on the bond increases as the maturity approaches.
- (a) Only (I) above
 - (b) Only (II) above
 - (c) Both (I) and (II) above
 - (d) Both (I) and (III) above
 - (e) Both (II) and (III) above.

(1 mark)

31. The dividends of Devi Labs Ltd, are expected to grow at 18% for next five years and thereafter stabilize at 8% forever. The current EPS of the company is Rs.12.00 and the payout ratio is 40%. If the investors' required rate of return is 9%, the P/E multiple for the company is

[< Answer >](#)

- (a) 35.67
- (b) 44.31
- (c) 48.67
- (d) 54.26
- (e) 66.80.

(2 marks)

32. Sagar Shoe Company is contemplating a debenture issue on the following terms:

[< Answer >](#)

Face value	Rs.1,000
Term to maturity	7 years
Coupon rate of interest:	
Years 1 – 2	10% p.a.
3 – 4	12% p.a.
5 – 7	15% p.a.

The current market rate of interest on similar debentures is 15% p.a. The company proposes to price the issue so as to yield a (compounded) return of 16% p.a. to the investors. The debentures would be redeemed at a premium of 12% at the end of seven years. The price of the debentures is

- (a) Rs.823.45
- (b) Rs.886.03
- (c) Rs.924.54
- (d) Rs.954.32
- (e) Rs.978.67.

(2 marks)

33. Nova Industries Ltd, has just paid a dividend of Rs.12 per share. As part of its major reorganization of its operations, [< Answer >](#) it is planning to pay dividend of Rs.8 at the end of third year. After that the dividend is expected to grow at 12% p.a. forever.

If the reorganization does not take place, the company is planning to continue the dividend payment as usual, which is expected to grow at 6% p.a. forever from the current level. The firm's cost of equity is 16% and is expected to remain unaffected by the reorganization.

If the reorganization is taken up, the share price would increase over the present situation by

- (a) Rs.11.32
- (b) Rs.16.31
- (c) Rs.18.76
- (d) Rs.21.43
- (e) Rs.25.54.

(2 marks)

34. Which of the following statements is **not true** with respect to the equity valuation models? [< Answer >](#)

- I. Dividend capitalization approach assumes that the first payment of dividend is made one year after the equity share is bought.
- II. Single period valuation model is used when an equity share is held for one year.
- III. Multi period valuation model cannot be used to value equity shares with variable growth in dividends.

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

(1 mark)

35. Which of the following will lead to a decrease in the expected Price-Earning ratio? [< Answer >](#)

- (a) Increase in the expected dividend payout ratio
- (b) Increase in the cost of equity capital
- (c) Increase in the growth rate
- (d) Increase in the PV per share
- (e) Decrease in the expected EPS.

(1 mark)

36. The Balance sheet of Chandu Electricals Ltd, for the year ended 2005-06 was as follows: [< Answer >](#)

Liabilities	Rs.	Assets	Rs.
Equity capital (Rs.10 per share)	60,00,000	Net fixed assets	1,50,00,000
10% long-term debt	80,00,000	Current Assets	50,00,000
Retained earnings	20,00,000		
Current liabilities	40,00,000		
Total	2,00,00,000	Total	2,00,00,000

The company's sales amount to Rs.6,00,00,000, the fixed operating costs amount to Rs.1,00,00,000 and its variable operating cost ratio is 45%. If the company's tax rate is 40%, the degree of financial leverage for the company is

- (a) 0.95
- (b) 1.00
- (c) 1.04
- (d) 1.12
- (e) 1.23.

(1 mark)

37. Consider the following data:

[< Answer >](#)

Quantity produced	5,000 units
DOL	1.18
DFL	1.05

If the quantity produced is increased by 15%, the percentage change in the EPS of the firm would be

- (a) 13.45%
- (b) 15.75%
- (c) 17.70%
- (d) 18.59%
- (e) 20.08%.

(2 marks)

38. The operating and cost data of Lalitha Industries is as follows:

[< Answer >](#)

Sales	Rs.20 lakh
Variable cost	Rs.14 lakh
Fixed cost (including interest of 15% on Rs.10 lakh)	Rs.4 lakh

The amount of additional sales required to double its EBIT is

- (a) Rs. 9,56,780
- (b) Rs.10,55,660
- (c) Rs.11,66,800
- (d) Rs.12,22,340
- (e) Rs.13,44,550.

(2 marks)

39. The degrees of combined leverage and operating leverage of a company are 2.5 and 1.25 respectively. Further the following details are provided:

[< Answer >](#)

Equity dividend per share	Rs.2.00
Interest payable per year	Rs.1,00,000
Total fixed cost	Rs.0.5 lakh
Sales	Rs.10 lakh

The degree of financial leverage and the EBIT of the company respectively are

- (a) 1.00; Rs.1,00,000
- (b) 1.05; Rs.1,40,000
- (c) 1.12; Rs.1,85,000
- (d) 2.00; Rs.2,00,000
- (e) 2.00; Rs.2,20,000.

(2 marks)

40. The contribution for Ruby Textiles Ltd, at 10,000 level of production is Rs.6,50,000. At the overall breakeven point, the quantity produced by the company is 4,000 units. If the fixed costs amount to Rs.2,00,000 per year, the degree of total leverage and the degree of financial leverage at 10,000 level of production is

[< Answer >](#)

- (a) 1.45; 1.09
- (b) 1.54; 1.12
- (c) 1.67; 1.16
- (d) 1.67; 1.23
- (e) 1.76; 1.24.

(2 marks)

41. Rohan Logistics Ltd, is planning to raise Rs.20 crore for its new plant to be opened shortly. It plans to raise 50% of the required amount through equity (face value of each share, Rs.10), 25% through loans and remaining 25% through preference shares. The interest on loans is 12% p.a. and preference dividend is 9% p.a. The company falls in the tax bracket of 40%. The expected EBIT is Rs.8 crore. The expected EPS of the company and the EBIT at the financial breakeven point respectively are [< Answer >](#)

- (a) Rs.2.44; Rs.0.87 crore
- (b) Rs.2.77; Rs.1.09 crore
- (c) Rs.3.44; Rs.1.24 crore
- (d) Rs.3.99; Rs.1.35 crore
- (e) Rs.3.99; Rs.1.54 crore.

(2 marks)

42. Other things remaining same, which of the following will increase the degree of total leverage? [< Answer >](#)

- I. Increase in contribution per unit.
- II. Decrease in the quantity produced.
- III. Increase in fixed cost per unit.
- IV. Decrease in tax rate.
- (a) Only (II) above
- (b) Both (I) and (II) above
- (c) Both (II) and (III) above
- (d) Both (I) and (III) above
- (e) (I), (III) and (IV) above.

(1 mark)

43. Other things remain the same, what will be the impact on the Degree of Operating Leverage (DOL) of a firm, if it issues equity shares in lieu of debentures? [< Answer >](#)

- (a) DOL will increase
- (b) DOL will decrease
- (c) DOL will remain the same
- (d) DOL will become zero
- (e) Cannot be predicted.

(1 mark)

44. If the contribution is increased by 20% and the taxable income is increased by 25%, the degree of total leverage changes by [< Answer >](#)

- (a) -1.5%
- (b) -4.0%
- (c) 0%
- (d) 2.5%
- (e) 4.0%.

(1 mark)

45. In which of the following conditions will the degree of total leverage of a firm be zero?

[< Answer >](#)

- I. The firm has no debt.
- II. The firm has redeemed all the preference shares issued by it.
- III. The sales revenues of the firm are just enough to meet the variable expenses.
- IV. The earnings of the firm are exempt from tax.

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

(1 mark)

46. Consider the following data:

[< Answer >](#)

	Rs. lakh
Closing balance of accounts receivables	50
Opening balance of accounts receivables	30
Average collection period (days)	50
Credit sales are 80% of sales	

Assuming 365 days in year, the total sales amount to

- (a) Rs.234 lakh
- (b) Rs.243 lakh
- (c) Rs.292 lakh
- (d) Rs.365 lakh
- (e) Rs.456 lakh.

(1 mark)

47. The current ratio and quick ratio of Kedar Industries Ltd, are 1.2 and 0.8 respectively. The net working capital of the firm is Rs.6,00,000. The firm has an inventory of

[< Answer >](#)

- (a) Rs. 7.50 lakh
- (b) Rs. 9.00 lakh
- (c) Rs.11.25 lakh
- (d) Rs.12.00 lakh
- (e) Rs.14.00 lakh.

(2 marks)

48. Charan Enterprises Ltd, has an equity capital (Rs.20 each) of Rs.10,00,000, and Rs.5,00,000 worth of 10% debentures. The EBIT of the firm is Rs.5,00,000. The corporate tax rate is 50%. If the dividend pay-out ratio is 40%, and the current market price of the company's share is Rs.45, the dividend yield on the company's share is

[< Answer >](#)

- (a) 1%
- (b) 2%
- (c) 4%
- (d) 5%
- (e) 7%.

(2 marks)

49. Kashyap Textiles Ltd has furnished the following data for the year 2005-06:

[< Answer >](#)

Asset Turnover	5 times
Debt to Assets ratio	0.4
Return on equity	24%
Earning per share	Rs.4.00
Number of shares outstanding	50,000

The sales for this company during the year were

- (a) Rs.56.78 lakh
- (b) Rs.69.68 lakh
- (c) Rs.74.56 lakh
- (d) Rs.79.87 lakh
- (e) Rs.84.45 lakh.

(2 marks)

50. Consider the following information:

[< Answer >](#)

Gross profit margin	20%
Stock turnover ratio	6
Fixed assets turnover	4
Debtors turnover	6
Assets turnover	1.5
Gross profit	Rs.60,000

If the closing stock of the firm is Rs.5,000 in excess of opening stock, the cash in hand for the company is

- (a) Rs.21,500
- (b) Rs.27,500
- (c) Rs.32,500
- (d) Rs.37,500
- (e) Rs.42,500.

(2 marks)

51. A firm has total assets of Rs.45 crore and a debt/equity ratio of 0.5. Its sales are Rs.20 crore, and it has total fixed costs of Rs.5 crore. If the firm's EBIT is Rs.4 crore, its tax rate is 40 percent, and the interest rate on debt is 12 percent, the firm's ROE is

[< Answer >](#)

- (a) 2.45%
- (b) 4.40%
- (c) 6.25%
- (d) 8.52%
- (e) 10.67%.

(2 marks)

52. Chetan Pharmaceuticals Ltd. furnished the following financial information:

[< Answer >](#)

EBIT	Rs.72 crore
12% debentures	Rs.70 crore
Depreciation	Rs.9.6 crore
Annual loan installment	Rs.5.6 crore
8% preference shares	Rs.30 crore
Tax rate	40%

The fixed charges coverage ratio of the company is

- (a) 2.35
- (b) 3.76
- (c) 4.25
- (d) 4.75
- (e) 5.15.

(1 mark)

53. Vijay Industries Ltd follows a strict residual dividend policy. The company has a capital budget of Rs.80,00,000. It has a target capital structure, which consists of 40 percent debt and 60 percent equity. The company forecasts that its net income will be Rs.60,00,000. What will be the company's expected dividend payout ratio this year?

[< Answer >](#)

- (a) 18%
- (b) 20%
- (c) 24%
- (d) 28%
- (e) 30%.

(2 marks)

54. Divya Enterprises Ltd has a debt-equity ratio of 5:4; total assets of Rs.9,000 crore and short-term debt of Rs.1,200 crore. If total debt consists of only of long-term debt and short-term debt, the long-term debt is equal to

[< Answer >](#)

- (a) Rs.1,900 crore
- (b) Rs.2,600 crore
- (c) Rs.3,200 crore
- (d) Rs.3,800 crore
- (e) Rs.4,200 crore.

(2 marks)

55. The balance sheet of Royal Shoe Company Pvt. Ltd. as on March 31, 2006 is given below:

[< Answer >](#)

Liabilities	(Rs. in lakh)	Assets	(Rs. in lakh)
Paid-up share capital	10	Net fixed assets	25
Reserves and surplus	15	Cash and bank	5
Long term loan	10	Inventory	15
Trade creditors	15	Receivables	10
Accrued expenses	3		
Provisions	2		
	55		55

The inventory on April 01, 2005 was Rs.10 lakh. The sales and purchases for the year were Rs.80 lakh and Rs.50 lakh respectively. The gross profit margin of the company is

- (a) 24.67%
- (b) 32.45%
- (c) 37.65%
- (d) 43.75%
- (e) 47.75%.

(2 marks)

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

[< Answer >](#)

- (a) Present value interest rate factor is the inverse of future value interest rate factor
- (b) Capital recovery factor can be used to ascertain the amount to be paid annually to liquidate a loan over a specified period at a given rate of interest
- (c) Present value of a perpetuity is equal to the constant annual payment divided by the interest rate
- (d) Sinking fund factor can be used to ascertain the amount that can be withdrawn periodically for a certain length of time, if a given amount is invested today
- (e) Sinking fund represents the amount that has to be invested at the end of every year for a specified period at a given rate of interest to accumulate Re.1 at the end of the period.

(1 mark)

57. Which of the following ratios give the relationship between the financial charges of a firm and its ability to service them?

[< Answer >](#)

- (a) Liquidity ratios
- (b) Profitability ratios
- (c) Leverage ratios
- (d) Turnover ratios
- (e) Coverage ratios.

(1 mark)

58. Which of the following statements is **true** with respect to the capitalization rate?

[< Answer >](#)

- I. It is a leverage ratio.
 - II. It is the reciprocal of P/E ratio.
 - III. A capitalization rate of 12% implies that the firm has to earn 12% on its fixed assets.
 - IV. If the investors' required rate of return is less than the capitalization rate, the stock is overvalued.
- (a) Only (II) above
 - (b) Both (I) and (II) above
 - (c) Both (I) and (III) above
 - (d) Both (II) and (IV) above
 - (e) Both (III) and (IV) above.

(1 mark)

59. Which of the following ratios measures the operating profitability of a firm?

[< Answer >](#)

- (a) Gross profit margin
- (b) Net Profit margin
- (c) Asset turnover
- (d) Return on equity
- (e) Earning power.

(1 mark)

60. Which of the following is **not** a use of funds that decreases cash for a firm?

[< Answer >](#)

- (a) Purchase of additional stock
- (b) Payment of cash dividends
- (c) Funds from operations
- (d) Net decrease in bills payable
- (e) Gross increase in plant and machinery.

(1 mark)

61. Which of the following statements is **true** with respect to funds flow statement drawn on working capital basis?

[< Answer >](#)

- I. An increase in bills receivables increases working capital.
 - II. A decrease in inventory increases working capital.
 - III. A decrease in creditors increases working capital.
 - IV. An increase in pre-paid expenses decreases working capital.
- (a) Only (I) above
 - (b) Only (III) above
 - (c) Both (I) and (IV) above
 - (d) Both (I) and (III) above
 - (e) Both (II) and (IV) above.

(1 mark)

62. Which of the following is a source of funds in a funds flow statement on total resources basis?

[< Answer >](#)

- (a) Dividend payment
- (b) Tax payment
- (c) Depreciation
- (d) Increase in fixed assets
- (e) Decrease in debt capital.

(1 mark)

63. Which of the following statements is **not true** with respect to a funds flow statement?

[< Answer >](#)

- (a) It is also called Statement of Changes in Financial Position
- (b) It captures movements in funds of an organization
- (c) It can be used for evaluating a firm's financing
- (d) It cannot be used to detect imbalances in managing funds
- (e) It can be used to appraise divisional performance.

(1 mark)

64. The following items are extracted from the Balance Sheet of M/s. PAL Ltd.

[< Answer >](#)

	2006 (Rs.)	2005 (Rs.)
Stock	5,80,000	4,40,000
Sundry Debtors	5,30,000	4,90,000
Sundry Creditors	5,64,000	3,80,000
Bills Payable	2,60,000	2,40,000
Cash in hand	1,70,000	1,20,000
Prepaid expenses	84,000	90,000

The net increase/decrease in the working capital for the year 2005 - 2006 is

- (a) A decrease of Rs.30,000
- (b) A decrease of Rs.20,000
- (c) An increase of Rs.20,000
- (d) An increase of Rs.30,000
- (e) An increase of Rs.40,000.

(2 marks)

65. Given below were the comparative Balance Sheets of Shiva Enterprises Ltd, for the years ended 2004-05 and 2005-06: [< Answer >](#)

Liabilities	31.03.06	31.03.05	Assets	31.03.06	31.03.05
Share capital	4,00,000	3,60,000	Fixed Assets	5,20,000	4,80,000
			Less: Depreciation	<u>1,40,000</u>	<u>1,08,000</u>
				<u>3,80,000</u>	<u>3,72,000</u>
General Reserve	60,000	1,10,000	Investments	50,000	1,00,000
Profit & Loss A/C	53,450	20,450	Debtors	1,67,800	1,18,300
Sundry creditors	1,75,350	1,83,650	Stock	90,500	55,600
Proposed dividend	15,000	28,800	Bank balance	47,500	49,800
Provision for tax	32,000	-	Preliminary expenses	-	7,200
Total	7,35,800	7,02,900	Total	7,35,800	7,02,900

Additional information:

The net profit for the year 2005-06 (after providing depreciation of Rs.40,000, writing off preliminary expenses of Rs.7,200 and making provision for tax Rs.32,000) amounted to Rs.58,000. The company sold during the year, an old machinery costing Rs.9,000 for Rs.3,000. The accumulated depreciation on the said machinery was Rs.8,000.

The funds from operations for the company were

- (a) Rs.1,25,400
- (b) Rs.1,35,200
- (c) Rs.1,42,000
- (d) Rs.1,46,700
- (e) Rs.1,52,300.

(2 marks)

66. GK Industries Ltd. has total assets worth Rs.1,600 lakh and spontaneous liabilities of Rs.500 lakh. Its sales, at present, are Rs.2,000 lakh. The net profit margin is 10% and the retention ratio is 60%. The sales are expected to grow and, the company plans to finance the consequent growth in the forthcoming period by an increase in its spontaneous liabilities and an increase in its retained earnings without resorting to any external financing in any form. The rate of growth that the company has to achieve is [< Answer >](#)

- (a) 9.75%
- (b) 11.15%
- (c) 12.25%
- (d) 12.75%
- (e) 13.45%.

(2 marks)

67. Varun Industries Ltd. has total assets worth Rs.800 lakh and spontaneous liabilities amounting to Rs.250 lakh. Presently, it has a sales level of Rs.1,000 lakh. The company has a net profit margin of 4% and has 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. If the company also plans to use some external financing, how much external financing will the company require if it wants to increase its sales by 15%? [< Answer >](#)

- (a) Rs.22.45 lakh
- (b) Rs.37.25 lakh
- (c) Rs.46.50 lakh
- (d) Rs.59.50 lakh
- (e) Rs.62.50 lakh.

(1 mark)

68. Which of the following is **not** an assumption made while computing the sustainable growth rate? [< Answer >](#)

- (a) Net profit margin remains constant
- (b) Assets will increase in proportion to sales
- (c) Dividend payout ratio remains constant
- (d) External issue of equity will not be resorted to
- (e) Debt-equity ratio will increase in proportion to sales.

(1 mark)

69. Which of the following is/are the objective method(s) of sales forecasting? [< Answer >](#)

- I. Jury of executive opinion.
- II. Regression analysis.
- III. Sales force estimate.
- IV. Trend analysis.
- (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) (I), (III) and (IV) above.

(1 mark)

70. In common size analysis the items in the income statement are expressed as percentage of [< Answer >](#)

- (a) Total assets
- (b) Net sales
- (c) Current assets
- (d) Current liabilities
- (e) Total expenses.

(1 mark)

Suggested Answers

Financial Management - I (141) : January 2007

1. Answer : (c) [< TOP >](#)
Reason : Alternative (a) is a part of the 'control' function of the finance manager. Alternative (b) involves partly the 'deployment' function. Alternative (d) is a part of the deployment of funds' function. Alternative (e) is also related with the 'deployment of funds' function. Alternative (c) is related to the 'mobilization of funds' function.
Hence (c) is the answer.

2. Answer : (e) [< TOP >](#)
Reason : The savings function provides the investors with the opportunity to liquidate the investments.
The payment function offers a very convenient mode of payment for goods and services.
The liquidity function ensures that the public savings reach the hands of those in production.
The risk function provides immense opportunities for the investors to hedge against the possible risks involved in various investments.
The policy function allows for the exchange of current income for future income and transformation of savings into investments.
Hence (e) is the answer.

3. Answer : (d) [< TOP >](#)
Reason : Participants in the call market are split into two categories. The first comprises those who can borrow and lend in this market, such as RBI, intermediaries like DFHI and STCI and commercial banks. The second category comprises of only lenders, like financial institutions and mutual funds (who cannot borrow from the market). Hence only United Trust of India can only lend in the call market but cannot borrow from the market. Hence (d) is the answer.

4. Answer : (c) [< TOP >](#)
Reason : They are issued at a discount to face value, they are freely transferable by endorsement and delivery, they offer higher yields compared to conventional deposits, they are maturity-dated obligations of banks forming a part of time liabilities and are subjected to usual reserve requirements, and they can be issued in demat form and can be transferred as per the procedure applicable to other demat securities. Hence (c) is the answer.

5. Answer : (d) [< TOP >](#)
Reason : In case of a T-Bill,

$$k = \frac{F-P}{P} \times \frac{365}{d}$$

$$0.0646 = \frac{100 - P}{P} \times \frac{365}{182}$$

$$0.0646P \times 182 = (100 - P)365$$

$$11.7572P = 36,500 - 365P$$

$$11.7572P + 365P = 36,500$$

$$P = \text{Rs.}96.88$$
Hence (d) is the answer.

6. Answer : (a)

[< TOP >](#)

$$r = \left(1 + \frac{k}{m}\right)^m - 1$$

Reason : Effective rate of interest,

Where, k = nominal rate of interest and

m = frequency of compounding

Effective interest rate is always higher than the nominal interest rate. The effective rate of interest increases with increase in the frequency of compounding. Both the effective rate of interest and the nominal rate of interest are equal if the frequency of compounding is one. Hence statements (II) and (III) are true and statement (I) is not true. Hence (a) is the answer.

7. Answer : (b)

[< TOP >](#)

Reason: Product of the PVIFA and the sinking fund factor:

$$\frac{(1+k)^n - 1}{k(1+k)^n} \times \frac{k}{(1+k)^n - 1} = \frac{1}{(1+k)^n} = \text{PVIF}.$$

Product of the sinking fund factor and the capital recovery factor:

$$\frac{(1+k)^n k}{(1+k)^n - 1} \times \frac{k}{(1+k)^n - 1} \neq 1.$$

Product of the PVIF and the FVIFA:

$$\frac{1}{(1+k)^n} \times \frac{(1+k)^n - 1}{k} = \text{PVIFA}.$$

Product of the FVIF and PVIFA:

$$(1+k)^n \times \frac{(1+k)^n - 1}{k(1+k)^n} = \text{FVIFA}.$$

Product of PV factor for perpetuity and interest rate:

$$\frac{1}{k} \times k = 1.$$

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

8. Answer : (b)

[< TOP >](#)

Reason: In order to accumulate Rs.20,00,000 after 15 years, Mr.Sharma has to deposit 'A' amount of rupees every year.

Therefore $20,00,000 = A \times \text{FVIFA}_{(8\%, 15)}$

$$A = \frac{20,00,000}{\text{FVIFA}_{(8\%, 15)}} = \frac{20,00,000}{27.152} = \text{Rs.} 73,659.40$$

Hence (b) is the answer.

9. Answer : (c)

[< TOP >](#)

Reason: Amount of loan = Rs.4,50,000 – 45,000 = Rs.4,05,000.

Interest rate per month = 12%/12 = 1%

Let the monthly payment be A.

Therefore, 4,05,000 = A x PVIFA_(1%, 60)

$$A = \frac{4,05,000}{\text{PVIFA}_{(1\%, 60)}} = \frac{4,05,000}{44.96} = \text{Rs.}9,008$$

$$\text{Effective annual rate} = \left(1 + \frac{0.12}{12}\right)^{12} - 1 = 12.68\%.$$

Hence (c) is the answer.

10. Answer : (d)

[< TOP >](#)

Reason : Here there are two different future values. Therefore we need to find out the present values of these two future values and add them to know the amount that has to be deposited today.

$$(i) 50,000 = A \times (1+0.09)^5$$

$$A = \text{Rs.}32,496.57.$$

$$(ii) 60,000 = A \times (1+0.09)^6$$

$$A = \text{Rs.}35,776.04$$

Therefore Mrs.Kalpana has to deposit Rs.68,272.61 (32,496.57 + 35,776.04) today.

This works like this:

The deposited amount Rs.68,272.61 will become Rs.1,05,045.87, i.e., (68,272.61 x (1.09)⁵) after 5 years. If she withdraws Rs.50,000, Rs.55,045.87 will remain and would become Rs.60,000 at the end of 6th year, i.e., (55,045.87 x (1.09)). Now after the last withdrawal there will be a zero balance left in the account.

Hence (d) is the answer.

11. Answer : (c)

[< TOP >](#)

Reason: PV = Rs.1,00,000

N = 36 months

Payment = Rs.5,000

$$1,00,000 = 5,000 \times \text{PVIFA}_{(r\%, 36)}$$

Solving for r,

For r = 3%, RHS = Rs.1,09,161.26

For r = 4%, RHS = Rs.94,541.41

By interpolation,

$$r = 3\% + \frac{1,09,161.26 - 1,00,000}{1,09,161.26 - 94,541.41} = 3.62\%$$

Effective annual rate of interest = (1+0.0362)¹² – 1 = 53.22%.

Hence (c) is the answer.

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

Reason: $FV = \text{Annuity amount} \times FVIFA_{(r,n)}$

$$\text{Annuity amount} = \frac{FV}{FVIFA_{(r,n)}} = \frac{10,00,000}{5.867} = \text{Rs. } 1,70,444.86$$

Therefore, the company has to deposit Rs.1,70,444.86 in the sinking fund account.

Hence (b) is the answer.

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

Reason: Effective interest rate = $\left(1 + \frac{0.12}{2}\right)^2 - 1 = 12.36\%$

Maturity value of the deposit is :

$$50,000 (1.1236)^3 = \text{Rs. } 70,926.$$

Hence (c) is the answer.

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

Reason : All risks i.e. sector risk, credit risk, management risk are diversifiable i.e. can be diversified away by holding of stocks of more than one company. However, market risk cannot be diversified away.

Hence (b) is the answer.

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

Reason : Negative correlation between a stock and market implies that the returns from the stock and the market return move in the opposite direction, i.e., when the market gives positive return the stock will give negative return.

Hence (e) is the answer.

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

Reason : The SML intersects the vertical axis at the risk-free rate of return

Slope of the SML is the market risk premium

The x-axis for the SML represents the beta of a particular security and the y-axis represents the expected returns of a particular security

It establishes a linear relationship between the required rate of return and its systematic risk

Alpha indicates the amount of return on a security or a portfolio when the market return is zero

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

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

Reason : The ex-post SML is used to evaluate the performance of portfolio manager; tests of asset pricing theories such as the CAPM and to conduct tests of market efficiency.

The ex-ante SML is used to identify under valued securities and determine the market price of risk for a particular security.

Hence statements (II) and (V) are not true and (e) is the answer.

18. Answer : (e)

[< TOP >](#)

Reason:

$$\beta = \frac{\text{Covariance}_{im}}{\sigma_m^2}$$

$$\beta = \frac{\rho_{im} \sigma_i}{\sigma_m}$$

Therefore,

It is directly related to the correlation coefficient between the security and market

It is inversely related to the standard deviation of the returns of the market

It is directly related to the standard deviation of security returns

It is directly related to the covariance of the security returns with the market returns

It is inversely related to the variance of the market returns.

Hence statement (e) is not true and is the answer.

19. Answer : (c)

[< TOP >](#)

Reason: Given the variance on the portfolio and the variances of individual stocks, the correlation coefficient can be found out from the following equation:

$$\sigma_p^2 = w_1^2 \sigma_1^2 + w_2^2 \sigma_2^2 + 2\rho w_1 w_2 \sigma_1 \sigma_2$$

Since the proportion of stocks in the portfolio is given as 2:3, 40% is invested in stock A and 60% is invested in stock B. Therefore $w_1 = 0.4$ and $w_2 = 0.6$.

$$121 = (0.4)^2 (169) + (0.6)^2 (196) + 2 \times \rho \times (0.4) \times (0.6) \times 13 \times 14$$

$$121 - 27.04 - 70.56 = 87.36 \rho$$

$$\rho = 0.27.$$

Hence (c) is the answer.

20. Answer : (b)

[< TOP >](#)

Reason: According to the CAPM, Expected return = $R_f + \beta(R_m - R_f)$

Therefore, For stock Z, $13\% = R_f + 1.20(12\% - R_f)$

$$R_f = 7\%.$$

Therefore expected return on stock Y = $7\% + 1.05(12\% - 7\%) = 12.25\%$

Hence (b) is the answer.

21. Answer : (d)

[< TOP >](#)

$$\frac{\rho_{im} \sigma_i}{\sigma_m} = \frac{0.75 \times 13.5}{12} = 0.84$$

Reason:

$$\text{Beta} = \frac{\rho_{im} \sigma_i}{\sigma_m}$$

Expected return = $R_f + \beta(R_m - R_f) = 8 + 0.84(14-8) = 13.04$.

Alpha = $k_i - \beta k_m = 13.04 - 0.84 \times 14 = 1.28\%$.

Hence (d) is the answer.

22. Answer : (d)

[< TOP >](#)

Reason: Required rate of return = $R_f + \beta(R_m - R_f) = 8 + 1.5(13 - 8) = 15.5\%$

$$\frac{D_0(1+g)}{P_0} + g = \frac{2.00(1.08)}{25} + 0.08 = 16.64\%$$

Expected rate of return =

At equilibrium, the required rate is equal to the expected rate of return.

$$0.155 = \frac{2.00(1.08)}{P_0} + 0.08$$

$$0.075 P_0 = 2.16$$

$$P_0 = \text{Rs.} 28.8.$$

Therefore the price should be increased by Rs.3.80 or 15.2% so that it is at equilibrium.

Hence (d) is the answer.

23. Answer : (c)

[< TOP >](#)

Reason: Beta = $\frac{\text{Cov}_{x,m}}{\sigma_m^2}$
(Covariance) $_{x,m} = \sum [R_x - E(R_x)] [R_m - E(R_m)] P_i$

$$\sigma_m^2 = \sum [R_m - E(R_m)]^2 \times P_i$$

P_i	$[R_x - E(R_x)]$	$[R_m - E(R_m)]$	$[R_x - E(R_x)] [R_m - E(R_m)] P_i$	$[R_m - E(R_m)]^2 P_i$
0.4	-12	10	-48	40.0
0.3	14	12	50.4	43.2
0.3	11	9	29.7	24.3
			32.1	107.5

$$\text{Beta} = \frac{\text{Cov}_{x,m}}{\sigma_m^2} = \frac{32.1}{107.5} = 0.3$$

Hence (c) is the answer.

24. Answer : (c)

[< TOP >](#)

Reason : Beta of portfolio is the weighted average of the beta of individual securities

$$\beta_p = 0.3 \times 0.9 + 0.5 \times 1.1 + 0.2 \times 1.2 = 1.06$$

Expected return of the portfolio is the weighted average of the expected returns of individual securities

$$E(R_p) = 12 \times 0.3 + 14 \times 0.5 + 10 \times .2 = 12.6\%.$$

Hence (c) is the answer.

25. Answer : (d)

[< TOP >](#)

Reason : Systematic risk refers to the variability of returns due to fluctuations in the securities market.

Business risk refers to the risk of doing business in a particular industry or environment.

Financial risk arises when companies resort to leverage or the use of debt financing.

Liquidity risk is associated with the secondary market in which the particular security is traded.

Inflation risk arises when there is a reduction in the purchasing power.

Hence (d) is the answer.

26. Answer : (d)

[< TOP >](#)

Reason: Holding period return for a bond =
$$\frac{(P_2 - P_1) + I}{P_1} = \frac{(960 - 950) + 120}{950} = 13.68\%$$

Hence (d) is the answer.

27. Answer : (c)

[< TOP >](#)

Reason:

Current yield = $\frac{\text{Coupon}}{\text{Market price}} \Rightarrow \text{Current yield} \times \text{Market price} = \text{coupon}$

Coupon = 0.1235 x 975 = Rs.120.

Now to find YTM:

$$975 = 120 \times \text{PVIFA}_{(r,7)} + 1,100 \times \text{PVIF}_{(r,7)}$$

By trial and error,

For r = 13%, RHS = Rs.998.28

For r = 14%, RHS = Rs.954.20

Therefore r lies between 13% and 14%.

By interpolation,

$$r = 13\% + \frac{998.28 - 975}{998.28 - 954.20} = 13.53\%$$

Hence YTM of the bond is 13.53% and (c) is the answer.

28. Answer : (b)

[< TOP >](#)

Reason: $k_e = 7.5 + 1.2(13.5 - 7.5) = 14.7\%$.

$$P_0 = \frac{D_0(1+g)}{k_e - g} = \frac{2.5(1+g)}{0.147 - g}$$

$$11.025 - 75g = 2.5 + 2.5g$$

$$8.525 = 77.5g$$

$$g = 11\%.$$

Hence growth rate in dividends is 11% and (b) is the answer.

29. Answer : (c)

[< TOP >](#)

Reason : For equal size increases and decreases in the YTM, price movements are not symmetrical. For a given maturity, the change in bond's price will be greater with a decrease in the bond's YTM than the change in bond price with an equal increase in the bond's YTM. Hence (c) is not true.

The intrinsic value of the bond is the present value of coupon payments and the redemption value. Hence, if there is an increase in the redemption value, the value of the bond will increase.

Hence, (a) is true.

In case of long maturity bonds, a change in YTM is applied to a series of coupon payments, which is longer than the shorter maturity bonds, and the principal payment is discounted at the new rate for a longer number of years compared to shorter maturity bonds. Hence, the longer the term, to maturity, the greater will be the change in price with a change in YTM. Hence (b) is also true. The percentage price change in case of high coupon bonds will be smaller than the price change in case of smaller coupon bonds with a change in YTM. Hence, (d) is true.

In the equation of the intrinsic value of the bonds, if the required rate of return, which is the discounting rate, is increased the value of the bond decreases. Hence, (e) is true.

Hence (c) is the answer.

30. Answer : (b)

[< TOP >](#)

Reason: Current yield decreases with an increase in the current market price. Statement (I) is not true.

When the required rate of return is greater than the coupon rate, the value of the bond is less than the par value. Statement (II) is true.

When the required rate of return is lesser than the coupon rate, the premium on the bond decreases as the maturity approaches. Statement (III) is not true.

Hence (b) is the answer.

31. Answer : (e)

[< TOP >](#)

Reason:

Year	EPS (Rs.)	DPS (Rs.)	PV of DPS @ 9% (Rs.)
1	14.16	5.664	5.196
2	16.71	6.684	5.626
3	19.72	7.888	6.091
4	23.27	9.308	6.594
5	27.46	10.984	7.139
PV of dividends			30.646

$$\frac{D_5(1+g)}{k_e - g} = \frac{10.984(1 + 0.08)}{0.09 - 0.08} = \text{Rs.1,186.272}$$

Terminal price of the share =

$$\frac{\text{Rs.1,186.272}}{(1.09)^5} = \text{Rs.770.995}$$

PV of terminal price =

Price of the share = Rs.30.646 + Rs.770.995 = Rs.801.64

P/E = Rs.801.64/Rs.12 = 66.80.

Hence (e) is the answer.

32. Answer : (b)

[< TOP >](#)

Reason:

Year	Coupon (Rs.)	PV of coupon @ 16% (Rs.)
1	100	86.21
2	100	74.32
3	120	76.88
4	120	66.27
5	150	71.42
6	150	61.57
7	150	53.07
PV of Coupons		489.74

Redemption value = Rs.1,000 (1.12) = Rs.1,120.

$$\frac{\text{Rs.1,120}}{(1.16)^7} = \text{Rs.396.29}$$

PV of redemption value =

Price of the bond = Rs.489.74 + Rs.396.29 = Rs.886.03.

Hence (b) is the answer.

33. Answer : (d)

[< TOP >](#)

Reason: Present position:

$$\frac{D_0(1+g)}{k_e - g} = \frac{12(1.06)}{0.16 - 0.06} = \text{Rs.}127.20$$

The share price =
Proposed position, i.e., if the reorganization takes place,
Share price at the end of year 3:

$$P_3 = \frac{D_3}{k_e - g} = \frac{8(1.12)}{0.16 - 0.12} = \text{Rs.}224$$

$$\text{PV of share} = (8 + 224) / (1.16)^3 = \text{Rs.}148.63$$

(or)

$$P_2 = \frac{D_2}{k_e - g} = \frac{8}{0.16 - 0.12} = \text{Rs.}200$$

$$\text{PV of share} = 200 / (1.16)^2 = \text{Rs.}148.63$$

Therefore if reorganization takes place, the price of the share would increase by Rs.21.43.

Hence (d) is the answer.

34. Answer : (b)

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Reason : Dividend capitalization approach assumes that the first payment of dividend is made one year after the equity share is bought.

Single period valuation model is used when an equity share is held for one year.

Multi period valuation model can be used to value equity shares with constant dividends, constant growth in dividends and variable growth in dividends as well. Therefore statement (III) is not true. Hence (b) is the answer.

35. Answer : (b)

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Reason:

$$E(P/E) = \frac{\text{PV per share}}{E(\text{EPS})} = \frac{D/E(\text{EPS})}{(k-g)}$$

E(P/E) will increase with an increase in the PV per share, a decrease in the E(EPS), increase in the growth rate and an increase in the dividend pay-out ratio. It will decrease with an increase in the cost of equity capital. Hence (b) is the answer.

36. Answer : (c)

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Reason:

Particulars	Rs.
Sales	6,00,00,000
Less: Variable cost (45%)	<u>2,70,00,000</u>
Contribution	3,30,00,000
Less: Fixed cost	<u>1,00,00,000</u>
EBIT	2,30,00,000
Less: Interest on long-term loans (10%)	<u>8,00,000</u>
EBT	2,22,00,000

$$\frac{Q(S-V)}{Q(S-V)-F-I-\frac{D_p}{1-T}} = \frac{\text{EBIT}}{\text{EBT}} = \frac{2,30,00,000}{2,22,00,000} = 1.04$$

Degree of financial leverage =

Hence (c) is the answer.

37. Answer : (d)

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Reason: Degree of total leverage gives the percentage change in EPS for a given percentage change in the quantity produced, i.e., $DTL = \% \text{ change in EPS} / \% \text{ change in quantity produced}$.

From the given data, $DTL = DOL \times DFL = 1.18 \times 1.05 = 1.239$.

Therefore, $1.239 = \% \text{ change in EPS} / 15\% \text{ increase in quantity produced}$.

$\% \text{ change in EPS} = 1.239 \times 15 = 18.585\% = 18.59\%$.

Hence (d) is the answer.

38. Answer : (c)

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Reason:

Particulars	Rs.
Sales	20,00,000
Less: Variable cost	<u>14,00,000</u>
Contribution	6,00,000
Less: Fixed cost (4,00,000 – 1,50,000)	<u>2,50,000</u>
EBIT	3,50,000

$$DOL = \frac{\% \text{ change in EBIT}}{\% \text{ change in sales}} = \frac{\text{Contribution}}{\text{EBIT}} = \frac{6,00,000}{3,50,000} = 1.714$$

Therefore a 1% change in sales would cause 1.714% change in EBIT. If EBIT has to double, it has to increase by 100%. This would happen when sales increase by 58.34%, i.e.,

$$\frac{100}{1.714} = 58.34\%$$

Therefore sales should increase by $\text{Rs.}20,00,000 \times 0.5834 = \text{Rs.}11,66,800$

Hence (c) is the answer.

39. Answer : (d)

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Reason: $DTL = DOL \times DFL$

$$DFL = DTL / DOL = 2.5 / 1.25 = 2.00$$

$$DFL = \frac{\text{EBIT}}{\text{EBT}} = \frac{2}{1}$$

But Interest = $\text{EBIT} - \text{EBT} = \text{Rs.}1,00,000$

$\text{EBIT} = 2\text{EBT}$ or $\text{EBT} = \frac{1}{2} \text{EBIT}$

Therefore $\frac{1}{2} \text{EBIT} = \text{Rs.}1,00,000$

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

Hence (d) is the answer.

40. Answer : (c)

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Reason:

$$DTL = \frac{Q(S-V)}{Q(S-V) - \left[F + I + \frac{D_p}{(1-T)} \right]}$$

$$\text{Quantity produced at the overall breakeven point} = \frac{F + I + \frac{D_p}{(1-T)}}{S-V} = 4,000 \text{ units}$$

$$\text{Therefore } F + I + \frac{D_p}{(1-T)} = 4,000(S-V) = 4,000 \times 65 = \text{Rs. } 2,60,000^*$$

*Given contribution at 10,000 units of production = Rs.6,50,000. Therefore contribution per unit = Rs.65, i.e., (S-V) = Rs.65.

$$\text{Therefore } DTL = \frac{6,50,000}{6,50,000 - 2,60,000} = 1.67.$$

$$DOL = \frac{Q(S-V)}{Q(S-V) - F} = \frac{6,50,000}{6,50,000 - 2,00,000} = 1.44$$

$$DFL = DTL/DOL = 1.67/1.44 = 1.16.$$

Hence (c) is the answer.

41. Answer : (d)

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Reason:

	Rs.(000's)
EBIT	80,000
Less: Interest (@ 12% on 5 crore)	<u>6,000</u>
EBT	74,000
Less: Tax @ 40%	<u>29,600</u>
EAT and before preference dividend	44,400
Less: Preference dividend (@ 9% on 5 crore)	<u>4,500</u>
Earnings for shareholders	39,900
Number of equity shares	10,000
EPS	3.99

$$\text{EBIT at financial breakeven point} = I + \frac{D_p}{1-T} = 6,000 + \frac{4,500}{0.6} = \text{Rs. } 13,500 \text{ thousand}$$

i.e., Rs.1,35,00,000 = Rs.1.35 crore.

Hence (d) is the answer.

42. Answer : (c)

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Reason:

$$DTL = \frac{Q(S-V)}{Q(S-V)-F-I-\frac{D_p}{1-T}}$$

Increase in contribution per unit will decrease the DTL. Statement (I) is not true.

Decrease in the quantity produced will increase the DTL. Statement (II) is true.

Increase in fixed cost per unit will decrease the denominator and hence will increase the DTL. Statement (III) is true.

Decrease in tax rate will decrease the DTL. Statement (IV) is not true.

Hence (c) is the answer.

43. Answer : (c)

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Reason: The DOL of a company depends on the contribution margin, sales quantity and the fixed costs. It is not at all related to the interest expenses of the company. Hence, the issue of equity shares in lieu of debentures will not affect the DOL of a company. Hence (c) is the answer.

44. Answer : (b)

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Reason:

$$DOL = \frac{\text{Contribution}}{EBIT}; DFL = \frac{EBIT}{EBT}; DTL = \frac{\text{Contribution}}{EBT}$$

If contribution increases by 20%, it can be written as 1.2 Contribution, and if EBT increases by 25%, it can be written as 1.25 EBT.

$$\text{New DTL} = \frac{1.2 \text{ Contribution}}{1.25 \text{ EBT}} = 0.96 \times \text{DTL}$$

Therefore,

Thus DTL decreases by 4%. Hence (b) is the answer.

45. Answer : (c)

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$$\text{Reason: Degree of Total Leverage (DTL)} = \frac{Q(S-V)}{Q(S-V)-F-I-\frac{D_p}{1-T}}$$

Hence, the sales revenue of the firm is Q.S while the total variable expenses is =Q.V

Now, if QS = QV, DTL will be zero. Hence only statement (III) is true and (c) is the answer.

46. Answer : (d)

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$$\begin{aligned} \text{Reason: Average collection period} &= \frac{\text{Re ceivables balance}}{\text{Average daily credit sales}} \\ \text{Average daily credit sales} &= \frac{\text{Sales}}{365} \\ \text{Average collection period} &= \frac{\text{Re ceivables balance}}{\text{Credit sales}} \times 365 \\ \text{Average collection period} &= 50 \text{ days (given)} \\ \text{Average Receivables balance} &= \frac{50 + 30}{2} = \text{Rs.40 lakhs} \\ \therefore 50 &= \frac{40}{\text{Credit sales}} \times 365 \\ \text{Credit sales} &= \frac{40 \times 365}{50} = \text{Rs.292 lakhs.} \\ \therefore \text{Total sales} &= \frac{292}{0.8} = \text{Rs.365 lakhs.} \\ \text{Hence (d) is the answer.} \end{aligned}$$

47. Answer : (d)

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$$\begin{aligned} \text{Reason: Given CA/CL} &= 1.2 \text{ and } (\text{CA} - \text{Inventory})/\text{CL} = 0.8 \\ \text{Net working capital} &= \text{CA} - \text{CL} = \text{Rs.6,00,000} \\ 1.2 \text{ CL} - \text{CL} &= 6,00,000 \\ \text{CL} &= \text{Rs.30,00,000} \\ \text{CA} &= 1.2 \times 30,00,000 = \text{Rs.36,00,000} \\ \text{Now, } (36,00,000 - \text{Inventory})/30,00,000 &= 0.8 \\ 36,00,000 - \text{Inventory} &= 0.8 \times 30,00,000 = 24,00,000 \\ \text{Inventory} &= \text{Rs.12,00,000.} \\ \text{Hence (d) is the answer.} \end{aligned}$$

48. Answer : (c)

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Reason:

Particulars	Rs.
EBIT	5,00,000
Less: Interest (10% on Rs.5,00,000)	<u>50,000</u>
EBT	4,50,000
Less: Tax @ 50%	<u>2,25,000</u>
PAT	2,25,000
EPS (PAT/No. of shares outstanding)	4.5
DPS (0.4 x EPS)	1.8

$$\text{Dividend yield} = \text{DPS/MPS} = 1.8/45 = 0.04 = 4\%.$$

Hence (c) is the answer.

49. Answer : (b)

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Reason: According to the DuPont equation,

ROE = Net profit margin x Average asset turnover x Average assets to equity

$$\text{ROE} = \text{Net profit margin} \times \text{Average asset turnover} \times \left(\frac{1}{1 - \text{Debt to assets ratio}} \right)$$

$$0.24 = \text{Net profit margin} \times 5 \times 1.67$$

$$\text{Net profit margin} = \text{Net profit} / \text{Sales} = 0.0287$$

$$\text{Net profit} = \text{EPS} \times \text{No. of shares} = 4.00 \times 50,000 = \text{Rs.}2,00,000$$

$$\text{Sales} = \text{Net profit} / \text{NPM} = 2,00,000 / 0.0287 = \text{Rs.}69,68,641.$$

Hence (b) is the answer.

50. Answer : (c)

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Reason: G/P margin = Gross profit/Sales = 0.2

$$\text{Sales} = 60,000 / 0.2 = \text{Rs.}3,00,000$$

$$\text{Cost of goods sold (COGS)} = \text{Sales} - \text{Gross profit} = \text{Rs.}2,40,000.$$

$$\text{Stock turnover} = 6 = \text{COGS} / \text{Average stock}$$

$$\text{Average stock} = \text{COGS} / 6 = 2,40,000 / 6 = 40,000$$

$$\text{Opening stock} + \text{closing stock} = 80,000$$

$$\text{Opening stock} + \text{opening stock} + 5,000 = 80,000$$

$$\text{Opening stock} = \text{Rs.}37,500$$

$$\text{Closing stock} = \underline{\text{Rs.}42,500}.$$

$$\text{Fixed Assets turnover} = 4 = \text{Sales} / \text{Fixed Assets}$$

$$\text{Fixed assets} = \text{Sales} / 4 = 3,00,000 / 4 = \underline{\text{Rs.}75,000}$$

$$\text{Debtors turnover ratio} = \text{Sales} / \text{debtors}$$

$$\text{Debtors} = \text{Sales} / 6 = 3,00,000 / 6 = \underline{\text{Rs.}50,000}$$

$$\text{Total assets turnover} = \text{Sales} / \text{Total assets}$$

$$\text{Total assets} = 3,00,000 / 1.5 = \underline{\text{Rs.}2,00,000}$$

$$\text{Cash in hand} = \text{Total assets} - \text{Fixed assets} - \text{Inventory} - \text{Debtors}$$

$$= 2,00,000 - 75,000 - 42,500 - 50,000$$

$$= \text{Rs.}32,500$$

Hence (c) is the answer.

51. Answer : (b)

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Reason: Rs.45,00,00,000 = Total equity + Total debt.

$$\text{Total debt} = 0.5 (\text{Total equity})$$

$$45,00,00,000 = \text{Total equity} + 0.5(\text{Total equity})$$

$$\text{Total equity} = 45,00,00,000 / 1.5 = \text{Rs.}30,00,00,000.$$

$$\text{Total debt} = \text{Rs.}45,00,00,000 - \text{Rs.}30,00,00,000 = \text{Rs.}15,00,00,000$$

$$\text{Debt interest} = 15,00,00,000 (0.12) = \text{Rs.}1,80,00,000$$

$$\text{Net income} = (\text{EBIT} - I)(1 - T)$$

$$= (4,00,00,000 - 1,80,00,000) 0.60 = \text{Rs.}1,32,00,000$$

$$\text{ROE} = \text{Net income} / \text{Total equity}$$

$$= 1,32,00,000 / 30,00,00,000 = 4.4\%.$$

Hence (b) is the answer.

52. Answer : (b)

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Reason:

$$\begin{aligned}\text{Fixed charges coverage ratio} &= \frac{\text{EBIT} + \text{Depreciation}}{I + \frac{\text{Annual loan repayment}}{(1-t)} + \frac{\text{Preference dividend}}{(1-t)}} \\ &= \frac{72 + 9.6}{8.4 + \frac{5.6}{1-0.4} + \frac{2.4}{1-0.4}} = \frac{81.6}{8.4 + 9.33 + 4} = \frac{81.6}{21.73} = 3.76.\end{aligned}$$

Hence (b) is the answer.

53. Answer : (b)

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Reason: Capital budget Rs.80,00,000
Percent of budget financed with equity 0.60
Equity Rs.48,00,000
Earnings Rs.60,00,000
Less equity retained Rs.48,00,000
Dividend Rs.12,00,000
Dividend payout ratio = Dividend/Earnings = Rs.12,00,000/Rs.60,00,000 = 0.2 = 20%
Hence (b) is the answer.

54. Answer : (d)

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Reason:

$$\begin{aligned}\frac{\text{Total debt}}{\text{Equity}} &= \frac{5}{4}, \text{ Adding one on both sides, } \frac{\text{Total debt}}{\text{Equity}} + 1 = \frac{5}{4} + 1 \\ \frac{\text{Total debt} + \text{Equity}}{\text{Equity}} &= \frac{9}{4} \Rightarrow \frac{\text{Total assets}}{\text{Equity}} = \frac{9}{4} \Rightarrow \text{Equity} = \frac{\text{Total assets} \times 4}{9} \\ \text{Equity} &= \frac{9,000 \times 4}{9} = 4,000 \text{ crore.}\end{aligned}$$

Total debt + equity = 9,000 crores $\Rightarrow$ Total debt = 5,000 crore.

Long-term debt + short-term debt = 5,000 crore

$\Rightarrow$ long term debt = 5,000 crore - 1,200 crore = Rs.3,800 crore.

Hence (d) is the answer.

55. Answer : (d)

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Reason: Gross profit margin = $\frac{\text{Sales} - \text{Cost of goods sold}}{\text{Sales}}$
Cost of goods sold = Opening stock + Purchases - Closing stock
= 10 + 50 - 15
= Rs.45 lakh
Given sales = Rs.80 lakh
 $\therefore$ Gross profit margin = $\frac{80 - 45}{80} = 0.4375$ i.e. 43.75%
Hence (d) is the answer.

56. Answer : (d) [< TOP >](#)
Reason: Present value interest rate factor is the inverse of future value interest rate factor.
Capital recovery factor can be used to ascertain the amount to be paid annually to liquidate a loan over a specified period at a given rate of interest, and also to ascertain the amount that can be withdrawn periodically for a certain length of time, if a given amount is invested today.
Present value of perpetuity is equal to the constant annual payment divided by the interest rate.
Sinking fund represents the amount that has to be invested at the end of every year for a specified period at a given rate of interest to accumulate Re.1 at the end of the period.
Statement (d) is not true and is the answer.
57. Answer : (e) [< TOP >](#)
Reason: Coverage ratios give the relationship between the financial charges of a firm and its ability to service them. Hence (e) is the answer.
58. Answer : (d) [< TOP >](#)
Reason: It is an ownership ratio.
It is the reciprocal of P/E ratio.
A capitalization rate of 12% implies that the firm has to earn 12% on its equity.
If the investors' required rate of return is less than the capitalization rate, they need to pay more for the stock.
Statements (I) and (III) are not true and statements (II) and (IV) are true.
Hence (d) is the answer.
59. Answer : (e) [< TOP >](#)
Reason: Earning power (EBIT/Average assets) measures the operating profitability of a firm. Hence (e) is the answer.
60. Answer : (c) [< TOP >](#)
Reason: Uses of funds which decrease cash include:
 - A net increase 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 funds from operations does not decrease cash but increases it. Hence (c) is the answer.
61. Answer : (d) [< TOP >](#)
Reason: An increase in current assets increases working capital.
A decrease in current assets decreases working capital.
An increase in current liabilities decreases working capital.
A decrease in current liabilities increases working capital.
Hence statements (I) and (III) are true and statements (II) and (IV) are not true. Hence (d) is the answer.
62. Answer : (c) [< TOP >](#)
Reason: Depreciation is a non-cash expense which is provided for from the profit. Since it is a provision created out of profit it is considered as a source of funds. All the other alternatives are uses of funds. Hence (c) is the answer.

63. Answer : (d)

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Reason: It is also called Statement of Changes in Financial Position
It captures movements in funds of an organization

Uses of a Funds Flow Statement:

Detection of imbalances and appropriate action

Divisional performance appraisal

Evaluation of the firm's financing

Planning for future.

Hence statement (d) is not true and is the answer.

64. Answer : (c)

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Reason:

	2005 (Rs.)	2006 (Rs.)	Increase in working capital (Rs.)	Decrease in working capital (Rs.)
Current Assets:				
Stock	4,40,000	5,80,000	1,40,000	-
Sundry Debtors	4,90,000	5,30,000	40,000	-
Cash in hand	1,20,000	1,70,000	50,000	-
Prepaid expenses	90,000	84,000	-	6,000
Current liabilities:				
Sundry Creditors	3,80,000	5,64,000	-	1,84,000
Bills Payable	2,40,000	2,60,000	-	20,000
			2,30,000	2,10,000
Net increase in working capital				20,000
			2,30,000	2,30,000

Hence (c) is the answer.

65. Answer : (b)

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Reason: Funds from operations:

		Rs.
Net profit for the year		58,000
Add: Provision for tax	32,000	
Preliminary expenses	7,200	
Depreciation	<u>40,000</u>	<u>79,200</u>
		1,37,200
Less: Profit on sale of machinery		<u>2,000</u>
Funds from operations		<u>1,35,200</u>

Hence (b) is the answer.

66. Answer : (c)

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Reason:

$$EFR = \frac{A}{S}(\Delta S) - \frac{L}{S}(\Delta S) - mS_1(1-d)$$

$$S_1 = S + \Delta S$$

$$EFR = \frac{A}{S}(\Delta S) - \frac{L}{S}(\Delta S) - m(S + \Delta S)(1-d)$$

Given :

Sales (S) = Rs.2,000 lakh

Total Assets (A) = Rs.1,600 lakh

Spontaneous liabilities (L) = Rs.500 lakh

Net profit margin (m) = 0.10

Retention ratio (1-d) = 0.60

EFR = 0 (by the problem)

$$0 = \frac{1,600}{2,000}(\Delta S) - \frac{500}{2,000}(\Delta S) - (0.10)(2,000 + \Delta S)(0.60)$$

$$\text{or } 0 = 0.80 \Delta S - 0.25 \Delta S - (0.10)(0.60)(2,000 + \Delta S)$$

$$\text{or } 0 = (0.80 - 0.25) \Delta S - 0.06(2,000 + \Delta S)$$

$$\text{or } 0 = 0.55 \Delta S - 0.06 \Delta S - 120$$

$$\text{or } 0.49 \Delta S = 120$$

$$\text{or } \Delta S = 120/0.49 = 244.90 \text{ i.e. Rs.244.90 lakh}$$

∴ Growth rate in sales that can be achieved without raising external funds = $244.90/2,000 = 0.12245 = 12.25\%$.

Hence (c) is the answer.

67. Answer : (d)

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Reason: $\Delta S = 1,000 \times 0.15 = 150$

$$EFR = \frac{800}{1,000}(150) - \frac{250}{1,000}(150) - (0.04)(1,000 + 150)(0.50)$$

$$= 0.8 \times 150 - 0.25 \times 150 - (0.04)(1,150)(0.5)$$

$$= 120 - 37.5 - 23$$

$$= \text{Rs.59.5 lakh.}$$

Hence (d) is the answer.

68. Answer : (e)

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Reason: In computing the sustainable growth rate, following assumptions are made:

- Assets of the firm will increase proportionately to sales.
- Net profit margin is constant.
- Dividend pay-out ratio and debt-equity ratio will remain constant.
- External issue of equity will not be resorted to

Alternatives (a), (b), (c) and (d) are the assumptions of the sustainable growth rate. Hence (e) is the answer.

69. Answer : (d)

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Reason: Trend analysis via extrapolation and regression analysis are objective methods of sales forecasting. Jury of executive and sales force estimate are subjective methods of sales forecasting. Hence (d) is the answer.

70. Answer: (b)

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Reason: In common size analysis the items in the income statement are expressed as percentage of net sales.
Hence (b) is the answer.

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