

Question Paper

Financial Management - I (141) – July 2004

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

1. Which of the following statements represents the financing decision of a company? [< Answer >](#)
- (a) Procuring new machineries for the R & D activities
 - (b) Spending heavily for the advertisement of the product of the company
 - (c) Adopting state of the art technology to reduce the cost of production
 - (d) Purchasing a new building at Delhi to open a regional office
 - (e) Designing an optimal capital structure by using suitable financial instruments.
- (1 mark)
2. If a huge amount of Rs.50 crore is borrowed in the call money market, then the interest rate is decided by [< Answer >](#)
- (a) The lender
 - (b) The borrower
 - (c) The Reserve Bank of India as the amount involved is huge
 - (d) Both (a) and (b) above
 - (e) Both (a) and (b) above but within the maximum limit prescribed by RBI.
- (1 mark)
3. Which of the following is/are **true** regarding the relationship between the real and nominal rate of interest? [< Answer >](#)
- I. Expected nominal rate of interest will be less than the real rate of interest, if the expected rate of inflation and risk premium are more than zero.
 - II. Expected nominal rate of interest and real rate of interest will be equal, if expected rate of inflation and risk premium are zero.
 - III. If expected rate of inflation is equal to risk premium, expected nominal rate of interest will exceed the real rate of interest by twice the risk premium.
- (a) Only (I) above
 - (b) Only (II) above
 - (c) Only (III) above
 - (d) Both (II) and (III) above
 - (e) Both (I) and (II) above.
- (1 mark)
4. Which of the following statements is/are **true**? [< Answer >](#)
- I. The diversifying effect of each additional stock increases with an increase in the number of stocks in the portfolio
 - II. The higher the degree of positive correlation between the stocks, the greater is the amount of risk reduction that is possible
 - III. The portfolio risk will be minimum, if the stocks are perfectly negatively correlated.
- (a) Only (I) above
 - (b) Only (II) above
 - (c) Only (III) above
 - (d) Both (I) and (II) above
 - (e) Both (I) and (III) above.
- (1 mark)
5. The objective of financial management to increase the wealth of the shareholders means to [< Answer >](#)
- (a) Increase the physical assets owned by the firm
 - (b) Increase the market value of the shares of the firm
 - (c) Increase the current assets of the firm
 - (d) Increase the cash balance of the company
 - (e) Increase the total number of outstanding shares of the company.

(1 mark)

[< Answer >](#)

6. Three bonds A, B and C with same coupon rate, par value and maturity have yields to maturity (YTM) of 10%, 8% and 12% respectively. Then which of the following expressions is/are **true** regarding the value of bonds A, B and C?
- (a) $A > B > C$ (b) $A > C > B$ (c) $B > A > C$ (d) $C > A > B$ (e) $C > B > A$.

(1 mark)

[< Answer >](#)

7. Which of the following is **not** a benefit of funds flow analysis to an organization?
- (a) Detection of imbalances and appropriate action
(b) Divisional performance appraisal
(c) Evaluation of firm's financing
(d) Evaluation of the quality of the top management of the organization
(e) Planning for future financing.

(1 mark)

[< Answer >](#)

8. A system of financial statement analysis which highlights the inter-relationships in the contents of financial statements is called
- (a) Du Pont analysis (b) Common size analysis
(c) Time series analysis (d) Index analysis
(e) None of the above.

(1 mark)

[< Answer >](#)

9. If the degree of operating leverage is 3 and the degree of financial leverage is 2, it means that
- (a) 1% change in EPS will be caused by 5% change in sales
(b) 1% change in EBIT will result in 3% change in EPS
(c) 1% change in sales will result in 3 percent change in EBIT and 6% change in EPS
(d) 1% change in EPS will be caused by 6% change in EBIT
(e) 1% change in sales will result in 2% change in EPS.

(1 mark)

[< Answer >](#)

10. Which of the following increases the external funds required?
- (a) An increase in the spontaneous liabilities to sales ratio
(b) A decrease in the retention ratio
(c) An increase in the assets turnover ratio
(d) A decrease in the short-term bank borrowings
(e) Both (b) and (d) above.

(1 mark)

[< Answer >](#)

11. In a forex market if an investor wants to hedge his forex payments and have minimum risk, which of the following should the investor prefer?
- (a) Sell the forex futures
(b) Enter into a forward contract to purchase the required forex
(c) Enter into a call option to purchase the required forex
(d) Buy forex futures
(e) Enter into a put option to sell the required forex.

(1 mark)

[< Answer >](#)

12. Which of the following is a disadvantage of bought-out-deals?
- (a) It is more expensive than public issue
(b) It involves a time consuming procedure
(c) It is difficult to convince a wholesale investor
(d) Promoters are not assured of immediate funds
(e) Sponsor may misuse their power.

(1 mark)

[< Answer >](#)

13. Which of the following may be termed as "Limited Discretionary Order"?

- (a) An order limited by a fixed price as decided solely by the customer
- (b) An order limited by a fixed price as decided solely by the broker
- (c) An order to be executed by a broker at a price that is very near to the price set by the customer
- (d) An order that is to be executed by the broker any time at the discretion of the customer
- (e) An order that is to be executed by the broker any time at his discretion.

(1 mark)

[< Answer >](#)

14. Which of the following is/are the special privileges enjoyed by the private company?

- I. It may allot shares without issuing any prospectus or a statement to the Registrar
 - II. It can do with only two directors
 - III. It can have only two members.
- (a) Only (I) above
 - (b) Only (II) above
 - (c) Only (III) above
 - (d) Both (II) and (III) above
 - (e) All (I), (II) and (III) above.

(1 mark)

[< Answer >](#)

15. Which of the following may be considered as the correct reason for money having time value?

- (a) It is the legal tender for carrying out any type of transaction
- (b) In India, it is guaranteed by the union government
- (c) Its purchasing power increases with the passage of time due to inflation
- (d) Money can be productively invested to generate real returns over a period of time
- (e) None of the above.

(1 mark)

[< Answer >](#)

16. The intervention of the government in the financial system to influence macro economic variables like interest rates or inflation is an example of which function of the financial system?

- (a) Savings Function
- (b) Liquidity Function
- (c) Payment Function
- (d) Risk Function
- (e) Policy Function.

(1 mark)

[< Answer >](#)

17. The financial leverage of a firm is an indicator of the

- (a) Systematic risk of the shares of the firm
- (b) Profitability of the firm
- (c) Yield on the debt securities of the firm
- (d) Financial risk of the firm
- (e) Business risk of the firm.

(1 mark)

[< Answer >](#)

18. In arriving at funds from operations, which of the following will be deducted from net profit?

- (a) Preliminary expenses written off
- (b) Transfer to reserves
- (c) Proposed dividends
- (d) Profit on sale of investments
- (e) Loss on sale of fixed assets.

(1 mark)

[< Answer >](#)

19. Which of the following players **cannot** act as a borrower in the call money market?

- (a) Discount and Finance House of India
- (b) SBI Mutual Fund
- (c) State Bank of India
- (d) Securities Trading Corporation of India
- (e) Reserve Bank of India.

(1 mark)

[< Answer >](#)

20. If the rates of return from a security are not at all related to the market returns, the beta for that security will be

- (a) -1
- (b) 0
- (c) Between 0 and 1
- (d) Greater than 1
- (e) Less than -1.

(1 mark)

[< Answer >](#)

21. Which of the following entities is/are **not** eligible to issue CDs?

- I. Scheduled Commercial banks
- II. Regional Rural Banks
- III. Scheduled Cooperative Banks.

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

(1 mark)

[< Answer >](#)

22. On which basis, the yield for government securities is quoted?

- (a) Daily
- (b) Monthly
- (c) Quarterly
- (d) Semi-annually
- (e) Annually.

(1 mark)

[< Answer >](#)

23. Which of the following levels of ADR issue requires the registration of the issuing company with the SEC?

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

(1 mark)

[< Answer >](#)

24. Which of the following is **not true** with regard to valuation of bonds?

- (a) An increase in the required rate of return, other things remaining the same, will decrease the bond value
- (b) An increase in the number of years to maturity, other things remaining the same, will increase the present value of the face value of the bond payable at maturity
- (c) An increase in the coupon rate, other things remaining the same, will increase the bond value
- (d) An increase in the face value of the bond payable at maturity, other things remaining the same, will increase the bond value
- (e) An increase in yield to maturity will occur, if the amount payable at maturity increases, other things remaining the same.

(1 mark)

[< Answer >](#)

25. Which of the following is/are **correct** with respect to the act(s) of the arbitrageurs in the derivatives market?

- (a) To protect one's position in the spot by taking suitable instrument(s) in the derivatives market
- (b) To protect one's anticipated position in the spot by taking suitable instrument(s) in the derivatives market
- (c) To make profit from the subsequent price movements of any particular instrument in the derivatives market
- (d) To make risk free profits by simultaneously buying and selling different instruments in different markets
- (e) Both (a) and (b) above.

(1 mark)

[< Answer >](#)

26. Which of the following ratios indicates the efficiency of utilization of assets by a firm?

- (a) Net profit margin
- (b) Debt-equity ratio
- (c) Current ratio
- (d) Asset turnover ratio
- (e) Interest coverage ratio.

(1 mark)

[< Answer >](#)

27. If a company appoints a number of skilled managers with a very high amount of compensation package, which of the following conditions may occur immediately after the appointment?

- (a) The operating break-even point of the company will come down
- (b) The company will be able to reach the financial break-even point easily
- (c) The degree of operating leverage will be zero
- (d) The degree of total leverage will reduce to zero

(e) The degree of total leverage will increase.

(1 mark)

[< Answer >](#)

28. Which of the following will decrease with an increase in the interest rate?

- (a) Future Value Interest Factor
- (b) Future Value Interest Factor For Annuity
- (c) Capital Recovery Factor
- (d) Present Value Interest Factor for a perpetual annuity
- (e) Inverse of Present Value Interest Factor For Annuity.

(1 mark)

[< Answer >](#)

29. The privately placed bonds issued in the Japanese markets are referred to as

- (a) Yankee Bonds
- (b) Samurai Bonds
- (c) Bulldog Bonds
- (d) Shibosai Bonds
- (e) None of the above.

(1 mark)

[< Answer >](#)

30. The risk arising out of the use of debt financing is called

- (a) Price risk
- (b) Market risk
- (c) Trading risk
- (d) Liquidity risk
- (e) Financial risk.

(1 mark)

[< Answer >](#)

31. Which of the following is/are statistical method(s) of sales forecasting?

- (a) Jury of executive opinion
- (b) Sales force estimates
- (c) Regression analysis
- (d) Both (a) and (b) above
- (e) None of the above.

(1 mark)

[< Answer >](#)

32. Which of the following is a diversifiable risk for an investor who wants to invest in the shares of Sahana Arts Ltd., a film producing company in India?

- (a) Major change in the government policy on the entertainment industry
- (b) Possibility of a war threat from the neighboring country
- (c) The fiscal deficit exceeding well beyond the budgeted level
- (d) Possibility of low rainfall thereby leading to widespread drought across India
- (e) None of the above.

(1 mark)

[< Answer >](#)

33. Which of the following represents the amount that can be realized by a company, if it terminates its business and sells all its assets?

- (a) Book value
- (b) Liquidation value
- (c) Replacement value
- (d) Going concern value
- (e) Market value.

(1 mark)

[< Answer >](#)

34. Which of the following is **true**, when the required rate of return is greater than the coupon rate?

- (a) The discount on the bond increases as maturity approaches
- (b) The premium on the bond declines as maturity approaches
- (c) The discount on the bond declines as maturity approaches
- (d) The premium on the bond increases as maturity approaches
- (e) The discount on the bond remains the same as maturity approaches.

(1 mark)

[< Answer >](#)

35. Which of the following is **not true** with respect to Stock Certificates?

- (a) It specifies that the owner is a registered holder in the book of the Public Debt Office (PDO)
- (b) It indicates the interest rate, interest due dates and face value of the stock
- (c) It is transferable by endorsement
- (d) The transfer deed required for transferring stock certificate requires stamp duty
- (e) Both (c) and (d) above.

(1 mark)

[< Answer >](#)

36. Which of the following will lead to an increase in the expected Price-Earning ratio?

- I. Increase in the expected dividend payout ratio
 - II. Increase in the cost of equity capital
 - III. Increase in the growth rate.
- (a) Only (I) above (b) Only (II) above
(c) Only (III) above (d) Both (I) and (III) above
(e) Both (II) and (III) above.

(1 mark)

[< Answer >](#)

37. Sustainable growth rate increases with a decrease in

- (a) Payout ratio (b) Debt ratio
(c) Profit margin ratio (d) Sales-assets ratio
(e) None of the above.

(1 mark)

[< Answer >](#)

38. Which of the following is **not** a technique of financial projection?

- I. Proforma balance sheet
 - II. Operating budget
 - III. Projected income statement
 - IV. Cash budget
 - V. Projected statement of changes in Financial position.
- (a) Only (I) above (b) Only (II) above
(c) Both (III) and (IV) above (d) Only (V) above
(e) None of the above.

(1 mark)

[< Answer >](#)

39. Which of the following is **true** regarding the earnings power of two companies?

- (a) Pre-tax earnings being same, higher the tax rate, lower the earnings power
(b) Debt-equity ratio and pre-tax earnings being same, higher the interest rate, lower the earnings power
(c) Total assets being same, higher the debt-equity ratio, higher the earnings power
(d) Pre-tax earnings being the same, greater the total assets, higher the earnings power
(e) Sales and pre-tax earnings being the same, greater the total assets turnover ratio, higher the earnings power.

(1 mark)

[< Answer >](#)

40. Which of the following is considered while preparing funds flow statement on working capital basis?

- (a) Increase in pre-paid expenses (b) Payment of dividend
(c) Decrease in sundry creditors (d) Decrease in provision for tax
(e) Purchase of raw materials.

(1 mark)

[< Answer >](#)

41. Mr. Varma wishes to purchase a 91 day T-bill of face value Rs.100, maturing after 50 days. If, on maturity, he wishes to earn a yield of 9.5%, the purchase price for Mr. Varma should be

- (a) Rs.88.50 (b) Rs.92.21 (c) Rs.97.22 (d) Rs.98.72 (e) Rs.99.03.

(1 mark)

[< Answer >](#)

42. If the beta of a stock is 0.5 and the covariance of returns of the stock and market is 324%², then the standard deviation of the return on the market is

- (a) 28.75% (b) 25.46% (c) 23.19% (d) 22.42% (e) 21.00%.

(1 mark)

[< Answer >](#)

43. Cotton Silks Ltd., issued bonds having a maturity premium of 20 percent and a coupon rate of 6 percent. The bonds are presently trading at par. The yield to maturity of the bond to an investor as of now, by approximation method, is 10 percent, what will be the approximate maturity period for the bonds?

- (a) 4.00 years (b) 4.78 years (c) 5.98 years (d) 6.88 years (e) Data insufficient.

(2 marks)

[< Answer >](#)

44. Consider the following data:

	Rs. lakhs
Closing balance of accounts receivables	50
Opening balance of accounts receivables	30
Average collection period (days)	40
Credit sales are 75% of sales	

Assuming 365 days in year, the total sales amount to

(Round off your answer to the nearest integer)

- (a) Rs.234 lakhs (b) Rs.243 lakhs (c) Rs.392 lakhs (d) Rs.487 lakhs (e) Rs.556 lakhs.

(1 mark)

[< Answer >](#)

45. Consider the following data regarding M/s. Epsilon Ltd:

Total assets	Rs.56 lakhs
Fixed operating costs	Rs.24 lakhs
Variable cost to sales ratio	0.6
Total asset turnover ratio	2
Interest coverage ratio	3.2
Depreciation	Negligible
Preference Dividend	Nil

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

- (a) If the sales increase by 1%, EPS will increase by 3.12%
(b) If the sales decrease by 1%, EBIT will decrease by 2.15%
(c) If EBIT increase by 1%, EPS will increase by 3.12%
(d) If the sales increase by 1%, EBIT will increase by 1.45%
(e) Both (a) and (b) above.

(3 marks)

[< Answer >](#)

46. Light Metals Ltd. issued fully convertible debentures with a face value of Rs.100 each. The coupon rate is 8 percent and the interest is payable half yearly over a period of three years. After three years, each bond will be converted into 5 equity shares of face value Rs.20 per share which is expected to fetch a dividend of Rs.2.00 per share every year. Presently, the yield on the risk-free securities is 4 percent per annum. The bondholders of the company need 2 percent more as the risk premium while the expected return to the equity shareholders will go up by an additional risk premium of 3 percent over the bond holders. The intrinsic value of these fully convertible debentures is: (Round off your answer to the nearest integer).

- (a) Rs.107 (b) Rs.148 (c) Rs.168 (d) Rs.179 (e) Rs.186.

(2 marks)

[< Answer >](#)

47. Mr. Suresh deposited Rs.3,000 at the beginning of every month in a bank for five years, if the interest rate is 6% p.a. compounded monthly, the accumulated amount he will get after 5 years is: (Round off your answer to the nearest integer)

- (a) Rs.89,910 (b) Rs.1,34,400 (c) Rs.1,63,340 (d) Rs.2,10,360 (e) Rs.2,92,000.

(1 mark)

[< Answer >](#)

48. If the net profit margin is 8%, retention ratio is 40%, asset to equity ratio is 2 and sales turnover ratio is 0.80, the rate of sustainable growth with internal equity will be

- (a) 3.47% (b) 3.73% (c) 5.12% (d) 5.40% (e) 6.84%.

(1 mark)

[< Answer >](#)

49. Consider the following information:

Quantity produced	—	10,000 units
Variable cost per unit	—	Rs.47,500
Selling price per unit	—	Rs.60,000
Fixed cost	—	Rs.5.00 crores
Interest	—	Rs.3.00 crores
Preference dividend	—	Nil
Tax rate	—	40%

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

- (a) Rs.1.4 crores (b) Rs.3 crores (c) Rs.3.86 crores (d) Rs.5.00 crores (e) Rs.5.50 crores.

(1 mark)

[< Answer >](#)

50. Given total debt-equity ratio = 5:4; total assets = Rs.9,000; short-term debt = Rs.1,200 and total debt consists only of long-term debt and short-term debt, the long-term debt is equal to

- (a) Rs.2,567 (b) Rs.3,800 (c) Rs.4,167 (d) Rs.5,000 (e) Rs.5,833.

(1 mark)

51. The probability distribution of returns of stock of M/s. BDPL Ltd. and the returns on market are given below:

Probability (P)	Returns of stock of M/s. BDPL Ltd. (in %)	Market returns (in %)
0.30	7	9
0.35	8	5
0.35	15	12

The variance associated with the market returns is $8.6275(\%)^2$. The risk-free rate of return is 5%. According to CAPM, the risk premium for the stock of M/s. BDPL Ltd. is

- (a) 2.77% (b) 3.43% (c) 4.56% (d) 4.72% (e) 6.39%.

(3 marks)

[< Answer >](#)

52. If the amount of reserves and surplus of a company increases by Rs.25 lakhs and the fixed assets increase by Rs.5 lakhs over a period of time, then the amount of funds available for other uses is

- (a) Rs.5 lakhs (b) Rs.10 lakhs (c) Rs.20 lakhs (d) Rs.30 lakhs (e) Rs.40 lakhs.

(1 mark)

[< Answer >](#)

53. Mr. Shruti has borrowed Rs.4,00,000 from a housing finance company. The loan carries interest at the rate of 8 per cent per annum and has to be repaid in six equated annual installments, which include both principal and interest. The equated annual installments will be paid at the end of every year and the first installment will fall due one year hence. The amount of each equated annual installment is approximately

- (a) Rs.86,524 (b) Rs.89,750 (c) Rs.1,25,000 (d) Rs.1,50,750 (e) Rs.1,75,500.

(1 mark)

[< Answer >](#)

54. If the intrinsic value of an equity share is Rs.88, the dividend for the current year is Rs.4.80 and the required rate of return is 12%, the growth rate of dividends is

- (a) 3.4% (b) 4.8% (c) 5.3% (d) 6.2% (e) 7.4%.

(1 mark)

[< Answer >](#)

55. The total capital employed by M/s.Jupiter Ltd. is Rs.18,00,000. The firm has debt-equity ratio of 5:4. The ratio of owner's equity to fixed assets is 8:15. The amount of fixed assets in the company is

- (a) Rs.15,00,000 (b) Rs.18,00,000 (c) Rs.20,00,000 (d) Rs.21,00,000 (e) Rs.25,00,000.

(3 marks)

[< Answer >](#)

56. If a borrower promises to repay Rs.22,976 at the end of eight years from now in return for a loan of Rs.2,000 at the beginning of every year for a period of 8 years, the effective annual interest rate on this loan is

- (a) 8% (b) 10% (c) 12% (d) 13% (e) 14%.

(1 mark)

[< Answer >](#)

57. The required rate of return on security X as per CAPM is 10%. If the current purchase price of the security is Rs.58, the last paid dividend is Rs.4 and the growth rate is 4%, then what should be the increase/decrease in the price of security X such that it is at equilibrium?

- (a) Increase by Rs.11 (b) Increase by Rs.20
(c) Decrease by Rs.20 (d) Decrease by Rs.11
(e) Security is already at equilibrium.

(2 marks)

[< Answer >](#)

58. The P/E ratio of a stock is 12. The expected dividend from the stock is Rs.2.00 per share with an EPS of Rs.10. The expected return for holding the stock for 1 year, if it was bought for Rs.90 per share is

(a) 35.56% (b) 40.26% (c) 43.86% (d) 44.23% (e) 44.86%.

(1 mark)

[< Answer >](#)

59. The following information is related to M/s. Indigo Ltd. for the year 2003-04:

Current ratio	31:13
Quick ratio	18:13
Net working capital	Rs.18,00,000

The average inventory is

(a) Rs.18,00,000 (b) Rs.14,50,000 (c) Rs.13,00,000 (d) Rs.10,00,000 (e) Rs.9,00,000.

(2 marks)

[< Answer >](#)

60. Mr.Raghava plans to send his son abroad for higher education 15 years hence. Presently the expenditure on the same is Rs.300,000 and this is growing at a rate of 3 percent per annum. If the rate of interest is 8 percent per annum, how much should Mr. Raghava 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?(Round off your answer to the nearest integer).

(a) Rs.17,214 (b) Rs.56,187 (c) Rs.5,34,426 (d) Rs.6,50,755 (e) Rs.8,50,825.

(1 mark)

[< Answer >](#)

61. The balance sheet for M/s. Hitech Ltd. which is a semi-conductor manufacturing firm is given below:

Balance Sheet as on Mar 31st 2004

Rs. (in Lakhs)

Liabilities		Assets	
Share Capital	220	Fixed Assets	450
Retained Earnings	90	Inventories	120
Long-term Loan	210	Accounts Receivable	160
Short-term Borrowings	105	Cash and Bank	70
Accounts Payable	160		
Provisions	15		
	800		800

The sales for the year 2003-2004 were Rs. 12 crore and they are expected to go up by 26% in the year 2004-2005. Last year's net profit margin of 5% and the dividend payout ratio of 40% are expected to remain same in the year 2004-2005. The external funds requirement of the company for the year 2004-2005 is Rs.117.14 lakhs. The company wants to raise external funds through short-term borrowings and equity (in the same order). If the current ratio should not be less than 1.2, the minimum amount of equity to be raised by the company is

(a) Rs.94.50 lakhs (b) Rs.89.90 lakhs
(c) Rs.75.14 lakhs (d) Rs. 45.01 lakhs (e) Rs. 22.64 lakhs.

(3 marks)

[< Answer >](#)

62. The expected rate of return on the market is 10 percent and the risk-free rate of return is 5 percent. If the beta of stock A is 1.75 and that of stock B is 0.85, the excess return required on the riskier stock than on the less risky stock is

(a) 4.20% (b) 4.50% (c) 10.20% (d) 13.50% (e) 15.75%.

(1 mark)

[< Answer >](#)

63. Mr.Rajkamal is 70 years old and he is expecting that he will live for another ten years. His total savings are Rs.1,00,000, which he has deposited in a bank. He wants to spend his savings equally over these ten years. If the interest earned on these deposits is 8%per annum, the annual withdrawal made over the defined period such that the account balance becomes zero at the end of 10 years is: (Round off your answer to the nearest integer).

(a) Rs.38,550 (b) Rs.20,000 (c) Rs.18,550 (d) Rs.14,903 (e) Rs.6,275.

(1 mark)

[< Answer >](#)

64. Consider the following data regarding M/s. Jargan Ltd. for the year 2003:

Cost of goods sold: Rs.39,00,000

Gross profit margin: 25%

Average receivables turnover ratio: 52 : 15

Quick assets: Rs.18,00,000

The cash balance is

- (a) Rs.2,75,000 (b) Rs.3,00,000 (c) Rs.6,00,000 (d) Rs.9,00,000 (e) Rs.9,56,250.

(3 marks)

[< Answer >](#)

65. Consider the following information regarding the bond issued by MX Biotech Ltd:

Face value of the bond Rs.1,000

Coupon per annum 10%

Issued at a discount of 10%

If the current yield of the bond is 8.25%, the bond is trading at a

- (a) Discount of 12% (b) Discount of 16.67%
(c) Premium of 21.20% (d) Premium of 16.67%
(e) Premium of 30%.

(1 mark)

[< Answer >](#)

66. Mr.Yaswant has planned to purchase a flat, whose present cost is Rs.15 lakh. He has approached City Home Finance, which has agreed to finance 80% of the cost of the flat. As he, presently, has Rs.1 lakh only which is not sufficient to purchase the flat, he deferred his plan of purchase for three years and deposited the amount he had in a bank. Mr. Yaswant decided to save an amount of Rs.x annually from that day in a recurring deposit account in order to finance the margin money to buy the flat. The rate of interest that can be earned on the bank deposits is 8% p.a. and the cost of the flat is expected to escalate by 5% p.a. The value of x is

- (a) Rs.0.630 lakhs (b) Rs.0.795 lakhs
(c) Rs.0.859 lakhs (d) Rs.1.248 lakhs
(e) Rs.1.348 lakhs.

(3 marks)

[< Answer >](#)

67. The Profit After Tax (PAT) for M/s. MRK Ltd. is Rs.4,80,000, preference dividends is Rs.60,000 and the number of outstanding shares is 60,000. If the market price of the share is Rs.100 and the book value of the share is Rs.80, the capitalization rate for M/s. MRK Ltd is

- (a) 7.00% (b) 8.00% (c) 8.75% (d) 9.00% (e) 10.00%.

(1 mark)

[< Answer >](#)

68. Consider the following data regarding the companies M/s. A Ltd. and M/s. B Ltd.

Particulars	A Ltd.(Rs.)	B Ltd.(Rs.)
Sales	32,00,000	30,00,000
Net profit after tax	1,23,000	1,58,000
Equity capital (Rs.10 share)	10,00,000	8,00,000
General reserves	2,32,000	6,42,000
Long-term debt	8,00,000	6,60,000
Creditors	3,82,000	5,49,000
Bank credit (short term)	60,000	2,00,000
Fixed assets	15,99,000	15,90,000
Inventories	3,31,000	8,09,000
Other current assets	5,44,000	4,52,000

The management of company A declared a dividend of 6% and company B declared a dividend of 8% for the current year.

Which of the following statements is/are **false**?

- I. Asset utilization of company A is more than company B
II. Company B retains larger proportion of its income in the business than Company A
III. Company A is using the shareholders money more profitable than Company B.

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

(3 marks)

[< Answer >](#)

69. In order to buy a car worth Rs.5,00,000, you are planning to take loan of Rs.400,000 from a Commercial Bank. The loan is to be repaid along with interest in equated monthly installments of Rs.9,000 within a period of 5 years, payable at the end of every month. However, the margin money of Rs.100,000 is to be borrowed from a local money lender that is to be repaid with interest at a rate of 20 percent by the end of the year. What is the implicit cost of your borrowed funds?

- (a) 12.42 percent (b) 12.92 percent (c) 13.32 percent (d) 13.72 percent (e) 14.12 percent.

(3 marks)

[< Answer >](#)

70. Consider the following data regarding the bonds issued by Beta Ltd. on June 15, 2002 to be redeemed on June 15, 2009:

Face value of the bond	Rs.100
Issued at a discount of	10%
Redeemable at a premium of	10%
Interest payable semi-annually	8% p.a.
Current market price as on June 15, 2004	Rs.95

The yield to maturity of the bond to a prospective investor is

- (a) 9.27% (b) 10.80% (c) 12.24% (d) 12.66% (e) 13.55%.

(2 marks)

[< Answer >](#)

71. Consider the following information:

Expected return on market	15%
Required rate of return as per CAPM	13.2%
Beta of Stock X	0.8

Expected rate of return on stock X 15%

Which of the following is/are **true** regarding stock X according to the Security Market Line (SML)?

- I. It is correctly priced as its return is equal to the market return
II. It is a stock of below average risk as its beta is less than 1
III. It is an over valued security as its expected rate of return is more than its required rate of return
IV. It will lie below the SML as its beta is less than 1.

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

(1 mark)

[< Answer >](#)

72. P Ltd. and Q Ltd. are two companies that manufacture computer hardware. The most recent dividend paid by these two companies is Rs.1.80 per share and the required rate of return for both the companies is 11%. The intrinsic value of the share of P Ltd. is Rs.34.12. The dividends of Q Ltd. are expected to grow at a rate of 8% annually for 3 years, followed by "x%" annual growth rate from year 4 to infinity. The price of the security of P Ltd. is greater than the price of the share of company Q by Rs.7.60. The value of "x" is: (Round off your answer to the nearest integer)

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

(3 marks)

[< Answer >](#)

73. Highlight Industries Ltd. recently paid Rs.2.00 per share as dividend for the last year. Its dividend is expected to grow by 15 percent every year for the next three years, thereafter it will continue a normal growth rate of 6 percent per annum. If the required rate of return is 12 percent, what is the intrinsic value of the equity share of Highlight Industries Ltd.?

- (a) Rs.35.78 (b) Rs.38.65 (c) Rs.40.45 (d) Rs.44.55 (e) Rs.59.65.

(2 marks)

[< Answer >](#)

74. The stock of SilverTechnologies Ltd. is currently quoting at Rs.60 per share in the market and it is expected to pay a dividend of Rs.2 per share in the current year. The stock price expected one year

hence has the following probability distribution:

Probability	0.40	0.50	0.10
Price (Rs.)	70	80	90

The expected return from investing in the stock is approximately

- (a) 15.00% (b) 25.33% (c) 31.67% (d) 45.84% (e) 60.79%.
(1 mark)

[< Answer >](#)

75. Ajay Finance, is offering a pension scheme for people who are at the age of 40 years. According to the scheme the individuals who subscribe will have to deposit Rs.25,000 at the beginning of every year for 20 years. Every subscriber will receive a specific sum at the end of 20 years plus an annuity of Rs.75,000 for a period of 25 years. If the depositors wish to earn 7% rate of return, the minimum amount to be paid by Ajay finance at the end of 20 years is

- (a) Rs.1,18,007 (b) Rs.2,22,610 (c) Rs.6,31,650 (d) Rs.9,63,045 (e) Rs.15,94,695.
(2 marks)

END OF QUESTION PAPER

Suggested Answers

Financial Management - I (141) – July 2004

1. Answer : (e) [< TOP >](#)
Reason : An optimal capital structure can satisfy the return expectations of the stakeholders at a lower cost that will result in share price of the company to a healthier one. It is a financing decision. While the cases mentioned in the other alternatives are the investment decisions as these may bring return to the company over a period of time.
2. Answer : (d) [< TOP >](#)
Reason : In the call money market day-to-day surplus funds of banks are traded. The call loans are of very short term in nature and any amount of money can be lent or borrowed at a convenient interest rate, which is acceptable to both the lender and the borrower and there is no maximum ceiling on the interest rate. Hence, in the given case, though the amount is huge, the interest is decided by the lender and the borrower and RBI has no role in the interest determination. The correct answer is (d).
3. Answer : (d) [< TOP >](#)
Reason : Expected nominal rate of interest is equal to real rate of interest + expected rate of inflation + risk premium. If expected rate of inflation and risk premium are zero, expected nominal rate of interest is equal to real rate of interest. Hence, statement II is true. In the above equation if expected rate of interest is equal to risk premium, expected nominal rate of interest exceeds the real rate of interest by twice the risk premium. Hence, III is also true and the answer is (d).
If expected rate of inflation and risk premium are more than zero, expected nominal rate of interest will be more than the real rate of interest. Hence, I is incorrect.
4. Answer : (c) [< TOP >](#)
Reason : The amount of risk reduction depends on the degree of correlation between the stocks. The portfolio risk will be minimum if the stocks are perfectly negatively correlated. Hence, statement III is correct.
Lower the degree of positive correlation, greater is the amount of risk reduction that is possible. Hence, statement II is incorrect.
Statement I is incorrect as the diversifying effect of each additional stock diminishes with increase in number of stocks. Hence, (c) is the answer.
5. Answer : (b) [< TOP >](#)
Reason : According to the objective of financial management to increase the wealth of the shareholders means to increase in the market value of the shares issued by the firm. Increasing the physical assets or current assets of the company may not provide adequate returns to the shareholders, if it is done through incremental borrowing. Increasing cash balance imparts more liquidity to a company but decreases the returns on investments. Increase in the total number of outstanding shares of the company does not make any impact on the total value of the firm.
6. Answer : (c) [< TOP >](#)
Reason : According to the bond value theorems, price of the security and the yield to maturity are inversely related. As YTM increases, other things remaining constant, the value of the bond decreases. Hence, in the given question the value of bond B will be greater than the value of bond A which is greater than the value of bond C. Hence, the answer is (c).
7. Answer : (d) [< TOP >](#)
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 (d) is the answer.
8. Answer : (a) [< TOP >](#)
Reason : Analyzing return ratios is referred to as DuPont Analysis. This system highlights the inter-relationships in the contents of financial statements. Hence, the answer is (a). The other alternatives compares the financial statements by taking the individual items of different financial statements and

reviewing the changes that have occurred from year to year and over the years.

9. Answer : (c) [< TOP >](#)
Reason : DOL of 3 implies that 1% change in sales will result in 3% 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 6, which implies that 1% change in sales will result in 6% change in EPS. Hence, (c) is the answer.
10. Answer : (b) [< TOP >](#)
Reason : A decrease in the retention ratio implies an increase in the dividend payment and less amount of funds available for investment and hence increases the external funds required. Hence, (b) is true. An increase in the spontaneous liabilities to sales ratio, an increase in assets turnover ratio (i.e. a decrease in total assets to sales ratio) decreases the external funds required. Hence, (a) and (c) are incorrect. Short-term bank borrowings are one of the sources of the external funds and does not indicate the amount of funds required.
11. Answer : (c) [< TOP >](#)
Reason : Call option is a contract that confers the right, but not an obligation to the holder to buy an underlying asset at a price agreed on a specific date or by a specific expiry date. In the given case, the investor is interested to hedge his forex payments and have a minimum risk position. Hence, it is better for him to enter into a call option to purchase the required forex at an agreed price on the expected future date. Thus if the exchange rate behaves against the expectation the investor shall not exercise his right and the loss that will be incurred will be only the premium paid by him to the writer of the option. Hence, the answer is (c).
Though payment can be hedged through purchasing the forex futures or entering into a forward contract to purchase, there is no downside limit to the loss that can be incurred.
12. Answer : (e) [< TOP >](#)
Reason : Since, in a bought-out-deal, the shares are initially offered to the sponsor and the sponsor has the discretion to offload the shares to the public at an appropriate time, it may misuse its discretion to disinvest the shares in favor of the public; this may affect the interests of the promoters of the company.
13. Answer : (c) [< TOP >](#)
Reason : In case of limited discretionary order, a broker is given the discretion to execute order at a price that is approximately equal to the price fixed by the client. Hence, the option (c) is the answer. The option (a) represents the limit orders while the option (b) is generally an impossible proposition, except in the case of a best rate order. The option (d) represents the general mode of operations of the stock market while the option (e) occurs rarely.
14. Answer : (e) [< TOP >](#)
Reason : The special privileges that can be enjoyed by the private companies are : It may allot shares without issuing any prospectus or a statement to the Registrar. It can operate with only two directors. The minimum number of persons required is only two.
15. Answer : (d) [< TOP >](#)
Reason : Being a legal tender and having the government guarantee do not have any role in relation to the time value of money. The purchasing power of money gradually decreases due to inflation and so the individuals prefer to spend money, rather than saving the same without any suitable incentives. But money may be productively invested to generate higher returns in future. Hence the option (d) is the correct one.
16. Answer : (e) [< TOP >](#)
Reason : The intervention of the government in the financial system to influence macro economic variables like interest rates or inflation is an example of policy function of the financial system.
17. Answer : (d) [< TOP >](#)
Reason : Financial leverage of a firm is an indicator of its financial risk. The systematic risk of the shares of a firm is indicated by beta. Profitability of the firm is indicated by the profitability ratios. Yield on the debt securities is indicated by yield to maturity. Business risk of a firm is indicated by operating leverage.
18. Answer : (d) [< TOP >](#)

Reason : Profit on sale of investments was added to arrive at the net profit figure. So the same has to be deducted in arriving at the funds from operations. Hence, the answer is (d).

In arriving at the net profit, preliminary expenses written off, transfer to reserve, loss on sale of fixed assets, proposed dividends have been deducted. Hence, to arrive at the funds from operations all the above have to be added. Hence, (a),(b), (c) and (e) are not the answers.

19. Answer : (b)

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Reason : All the participants in the call money market are split into two categories. The first comprises of the entities who can borrow as well as lend in the market and the second comprises of only lenders i.e. the participants in the second category cannot borrow in the call money market. RBI, DFHI, STCIL and commercial banks belong to the first category and all the financial institutions and mutual funds belong to the second. Hence, (b) cannot borrow in the call money market.

20. Answer : (b)

[< TOP >](#)

Reason : $\text{Beta} = \text{cov}(r_i, r_m) / \sigma_m^2$ When the returns from the security are not at all related to the market returns $\text{cov}(r_i, r_m)$ is equal to zero. Hence in such a case the beta of the security will be zero.

21. Answer : (d)

[< TOP >](#)

Reason : All scheduled banks other than Regional Rural Banks and Scheduled Cooperative Banks are eligible to issue CDs.

22. Answer : (d)

[< TOP >](#)

Reason : The yield on government securities is quoted on semi-annual basis.

23. Answer : (c)

[< TOP >](#)

Reason : ADR Level-III is used for raising fresh capital through public offering in the US Capital Markets. The company has to be registered with the SEC and comply with the listing requirements of AMEX/NYSE while following the US-GAAP.

24. Answer : (b)

[< TOP >](#)

Reason : In the intrinsic value formula the face value of the bond is multiplied with the factor $PVIF(r,n)$. The factor $PVIF(r,n)$ decreases as the number of years to maturity increases, other things remaining the same. Hence, other things remaining the same, the present value of the face value of the bond decreases as the number of years to maturity increases. Therefore alternative (b) is not true. All other alternatives are true.

25. Answer : (d)

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Reason : The options (a) and (b) represent the acts of hedgers who are interested to minimize their risk in a volatile market. The option (c) represents the act of the speculators who wants to make profits from the price movements in a volatile market through speculation. The option (d) represents the act of the arbitrageurs who take the opportunity of improper pricing in different markets and imparts a better efficiency in the system.

26. Answer : (d)

[< TOP >](#)

Reason : Assets turnover ratio is the ratio of sales value to total assets. For a company, generally, the sales value can be improved in a very short term and the higher the sales value at a certain level of asset size, more will be assets turnover ratio that implies a better utilization of the assets the company.

27. Answer : (e)

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Reason : Appointment of the managers at a very high compensation package will increase the fixed cost of the company thereby decreasing the denominator of the DOL, DFL and DTL. As a result of this, these leverages will go up. So, the operating break-even point and the financial break-even point will increase. So, the option (e) is correct

28. Answer : (d)

[< TOP >](#)

Reason : Present value factor for a perpetual annuity = $\frac{1}{i}$.

Hence it decreases with an increase in the interest rate. Hence (d) is the correct option.

Future Value Interest Factor = $(1+i)^n$.

Hence it increases with increase in the interest rate.

Future Value Interest Factor For Annuity (FVIFA) = $\frac{(1+i)^n - 1}{i}$. FVIFA also increases with increase in the interest rate.

Capital Recovery Factor = $\frac{i(1+i)^n}{(1+i)^n - 1}$. It is the inverse of PVIFA, which decreases with increase in interest rate. Therefore, Capital Recovery Factor increases with increase in the interest rate.

Inverse of PVIFA is capital recovery factor, which increases with increase in the interest rate.

Hence, options (a), (b), (c) and (e) are incorrect.

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

Reason : The US dollar denominated issues by foreign borrowers in the US bond markets are referred to as Yankee Bonds. The bonds issued by non-Japanese borrowers in the domestic Japanese markets are referred to as Samurai Bonds. The privately placed bonds issued in the Japanese markets are referred to as Shibosai Bonds.

The sterling denominated foreign bonds which are raised in the UK domestic securities market are Bulldog Bonds.

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

Reason : The risk arising due to the debt financing is called financial risk.

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

Reason : Except (c) all the others are subjective methods of sales forecasting.

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

Reason : For any investment, the investor is required to bear two types of risks – Diversifiable and non-diversifiable. Changes in the Government policy, war, inflation (due to high level of fiscal deficit), drought, etc are the examples of non-diversifiable risk as these will affect the entire market. But the change in the Government policy on the entertainment industry will affect the instruments for that sector only that may be easily diversifiable.

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

Reason : Book Value is an accounting concept. Assets are recorded at historical costs and they are depreciated over years. Book value may include intangible assets at acquisition cost minus amortized value.

Replacement Value is the amount that a company would be required to spend if it were to replace its existing assets in the current condition.

Liquidation Value is the amount that a company could realize if it sold its assets after having terminated its business.

Going Concern Value is the amount that a company could realize if it sold its business as an operating one.

Market Value of an asset or security is the current price at which the asset or the security is being sold or bought in the market.

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

Reason : When the required rate of return is greater than the coupon rate, the discount on the bond declines as maturity approaches.

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

Reason : When public debt is issued in the form of stock, the owner gets a certificate specifying that he is a registered holder in the book of the Public Debt Office (PDO). The Certificate indicates the interest rate, interest due dates and face value of the stock. A stock certificate is not transferable by endorsement. Transfer can take place only by means of a transfer deed upon the execution of which the transferee's name is substituted in the place of the transferor in the books of the PDO. Such transfer deed requires no stamp duty.

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

Reason : Expected Price-earning ratio is computed as $\frac{\text{Expected Dividend payout ratio}}{\text{Cost of capital} - \text{growth rate}}$

From the above equation, we can conclude that increase in the expected dividend payout ratio and increase in the growth rate will lead to increase in Expected Price-earning ratio. Hence statements I and III are correct. Therefore, option (d) is the answer.

Increase in the cost of capital will decrease the Expected Price-earning ratio.

37. Answer : (a)

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Reason : A decrease in the pay-out ratio increases the sustainable growth rate. Hence the answer is (a).

38. Answer : (e)

[< TOP >](#)

Reason : All the given techniques are used to forecast financial statements. Hence, (e) is the answer.

39. Answer : (e)

[< TOP >](#)

Reason : Earnings power is not affected by tax and leverage. Hence, (a), (b) and (c) are not correct.

Greater the total assets, lower the earning power. Hence, (d) is also not correct. Sales and pre-tax earnings being the same, earning power would be higher if the total assets turnover ratio is higher. Hence, the answer is (e).

40. Answer : (b)

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Reason : All other alternatives will cause either an equal increase in current assets and current liabilities or an increase in one current asset and decrease in another current asset by the same amount or an equal decrease in current liabilities and current assets or a decrease in one current liability and increase in another current liability by the same amount. These will not cause any change in the working capital position. Hence, these are not considered while preparing funds flow statement on working capital basis.

41. Answer : (d)

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Reason : Yield is calculated as $\frac{F - P}{P} \times \frac{365}{d}$

Where, F is face value

P is purchase price

d is the duration/maturity period

In the given case, yield = $\frac{100 - P}{P} \times \frac{365}{50}$

If yield = 9.5%, P is calculated as,

$$\frac{100 - P}{P} \times \frac{365}{50} = 0.095$$

$$\frac{100 - P}{P} = \frac{0.095 \times 50}{365}$$

$$\frac{100 - P}{P} = 0.013$$

$$1.013 P = 100 \Rightarrow P = \frac{100}{1.013}$$

$$P = \text{Rs.}98.72.$$

42. Answer : (b)

[< TOP >](#)

Reason : Beta is measured by covariance of returns on stock and market divided by variance of the market returns. In the given case,

$$0.5 = \frac{324}{\text{Variance}_m}$$

$$\Rightarrow \text{Variance of the market returns} = \frac{324}{0.5} = 648$$

$$\therefore \text{Standard deviation of market returns} = \sqrt{648} = 25.46\%$$

43. Answer : (a)

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Reason : Let the approximate maturity period for the bonds be n years and the face value of the bonds be Rs.100.

The yield to maturity of the bonds is defined as, through approximation method

$$\text{YTM} = \frac{I + (F - P) / n}{(F + P) / 2}$$

Here, we have, I = Rs.6.00, P = Rs.100 F = Rs.120 and YTM = 10 percent.

$$\Rightarrow 0.10 = \frac{6 + (120 - 100) / n}{(120 + 100) / 2}$$

$$\Rightarrow 0.10 = \frac{6 + 20 / n}{110} \quad \text{or } 11 - 6 = \frac{20}{n}$$

$$\text{or, } n = \frac{20}{5} = 4 \text{ years}$$

44. Answer : (d)

[< TOP >](#)

$$\text{Reason : Average collection period} = \frac{\text{Re ceivables balance}}{\text{Average daily credit sales}}$$

$$\text{Average daily credit sales} = \frac{\text{Sales}}{365}$$

$$\therefore \text{Average collection period} = \frac{\text{Re ceivables balance}}{\text{Credit sales}} \times 365$$

$$\text{Average collection period} = 40 \text{ days (given)}$$

$$\text{Average Receivables balance} = \frac{50 + 30}{2} = \text{Rs.40 lakhs}$$

$$\therefore 40 = \frac{40}{\text{Credit sales}} \times 365$$

$$\text{Or Credit sales} = \frac{40 \times 365}{40} = \text{Rs.365 lakhs.}$$

$$\therefore \text{Total sales} = \frac{365}{0.75} = \text{Rs.486.66. say 487 lakhs}$$

45. Answer : (e)

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Reason : Change in EBIT with change in sales is reflected by DOL, change in EPS with change in EBIT is measured by DFL and change in EPS with change in sales is measured by DTL.

$$\text{DOL} = \frac{\text{Contribution}}{\text{EBIT}}$$

$$\text{Total assets turnover} = \frac{\text{Sales}}{\text{Total assets}} \text{ i.e. } 2 = \frac{\text{Sales}}{56,00,000}$$

Hence, sales = Rs. 1,12,00,000.

(in Rs.)

Sales	1,12,00,000
-------	-------------

Less: Variable costs (60% of sales)	67,20,000
Contribution	44,80,000
Less fixed costs	24,00,000
Earnings Before Interest and Taxes	20,80,000

$$\text{Degree of Operating Leverage} = \frac{\text{Contribution}}{\text{EBIT}}$$

$$= \frac{44,80,000}{20,80,000} = 2.15$$

DOL=2.15 indicates that if the sales increase or decrease by 1%, then EBIT will increase or decrease by 2.15%.

Hence, (b) is correct and (d) is incorrect.

$$\text{DFL} = \frac{\text{EBIT}}{\text{EBIT} - \text{I} - \frac{\text{P}_d}{1-t}}$$

Where EBIT = 20,80,000

$I = \frac{\text{EBIT}}{3.2}$, given by interest coverage ratio of 3.2, depreciation is negligible and P_d is nil

$$\text{DFL} = \frac{20,80,000}{20,80,000 - 6,50,000} = \frac{20,80,000}{14,30,000} = 1.45$$

DFL of 1.45 indicates if EBIT increase/decrease by 1%, EPS will increase/decrease by 1.45%
Hence, (c) is incorrect.

$$\text{DTL} = \text{DOL} \times \text{DFL} = 2.15 \times 1.45 = 3.12$$

46. Answer : (a)

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Reason : Discount rate before conversion = 4 + 2 = 6 percent and the same after conversion will be = 6 + 3 = 9 percent.

The expected cash flows from that instrument will be as follows:

Year	1	2	3	4	5	6
Cash flows	8	8	8	10	10	10

Here, the cash flows for the first three years will occur half-yearly where each installment is of Rs.4 and it has been assumed that the holder of the instrument will hold all the shares and will get the dividends. The intrinsic value of the debentures is = Present value of all the above cash flows = $\text{Rs.4} \times \text{PVIFA}(3\%,6) + 10 \times \{\text{PVIF}(9\%,4) + \text{PVIF}(9\%,5) + \text{PVIF}(9\%,6) + \dots\}$

$$= \text{Rs.4} \times 5.4172 + \frac{10}{(1.09)^4} \times \left\{ \frac{1}{1 - \frac{1}{1.09}} \right\} = \text{Rs.4} \times 5.42 + \frac{10}{(1.09)^3} \times \frac{1}{0.09}$$

Hence, the required intrinsic value = Rs.107.47 = Rs.107 (approximately).

47. Answer : (d)

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Reason : $\text{FVIFA}(\text{annuity due}) = \text{FVIFA}(1 + \text{interest rate})$

$$\begin{aligned} \text{FVIFA}(0.5\%, 60) &= \left[\frac{(1.005)^{60} - 1}{0.005} \right] (1.005) \\ &= 70.12 \end{aligned}$$

$$\therefore \text{Amount receivable in future} = 70.12 \times 3000 = \text{Rs.2,10,360}$$

(Note that 6% compounded monthly means 0.5% interest for each month for 12 x 5 = 60 months).

48. Answer : (d)

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Reason : Sustainable growth rate (g)

$$g = \frac{\frac{m(1-d)\frac{A}{E}}{\frac{A}{S_o} - m(1-d)\frac{A}{E}}}$$

where, m is net profit margin = 8%, d is dividend payout ratio = 60%

Asset to equity ratio, $\frac{A}{E} = 2$

Assets to sales ratio (S_o) = $\frac{1}{0.8}$

$$g = \frac{0.08(0.4)2}{\frac{1}{0.8} - 0.08(0.4)2} = 0.054 = 5.4\%$$

49. Answer : (b)

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Reason : Financial break even point = EBIT = $I + \frac{D_p}{1-t}$

Where,

I = Interest

D_p = Preference Dividend

t = Tax rate

Given: $D_p = 0$.

∴ In this case, at financial break even point EBIT = I.

∴ At financial break even point, EBIT = Rs.3 crores. Hence the answer is (b).

50. Answer : (b)

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Reason : $\frac{\text{Total debt}}{\text{Equity}} = \frac{5}{4}$ Adding 1 to both sides of the equation we get:

$$\frac{\text{Total debt}}{\text{Equity}} + 1 = \frac{5}{4} + 1 \text{ or } \frac{\text{Total debt} + \text{equity}}{\text{Equity}} = \frac{5+4}{4} \text{ or } \frac{\text{Total asset}}{\text{Equity}} = \frac{9}{4}$$

$$\text{From above, Equity} = \frac{\text{Total asset} \times 4}{9} = \frac{9000 \times 4}{9} = \text{Rs.4,000}$$

$$\begin{aligned} \text{Now, total assets} &= \text{Total debt} + \text{equity} = \text{Rs.9,000} \\ \text{or Total debt} + 4000 &= 9000 \\ \text{or Total debt} &= 9000 - 4000 = \text{Rs.5000} \end{aligned}$$

$$\text{Long term debt} = \text{Total debt} - \text{Short term debt} = 5000 - 1200 = \text{Rs.3,800}.$$

51. Answer : (b)

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Reason : Risk premium = $\beta(R_m - R_f)$

Prob.	k_A	k_m	$(k_A - \bar{k}_A)$	$(k_m - \bar{k}_m)$	$(k_m - \bar{k}_m)$ $(k_A - \bar{k}_A)$	$(k_m - \bar{k}_m)$ $(k_A - \bar{k}_A) \cdot P$
0.30	7	9	-3.15	0.35	-1.1025	-0.33075
0.35	8	5	-2.15	-3.65	7.8475	2.746625
0.35	15	12	4.85	3.35	16.2475	5.686625

	$\bar{k}_A = \sum k_A P$ = 10.15	$\bar{k}_m = \sum k_m P$ = 8.65				8.1025
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$$\beta_A = \frac{\text{Cov}(k_A, k_m)}{\text{Var}(k_m)} = \frac{\sum P \cdot (k_A - \bar{k}_A)(k_m - \bar{k}_m)}{\sum P(k_m - \bar{k}_m)^2} = \frac{8.1025}{8.6275} = 0.939$$

Risk premium = $0.939(8.65 - 5) = 3.43\%$.

Hence, option (b) is the correct choice.

52. Answer : (c)

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Reason : Given: Source : Increase in reserves and surplus = Rs.25 lakh

	Use: increase in fixed assets	
= Rs. 5 lakh		_____
	Excess of funds available for other uses	= Rs.20 lakh

53. Answer : (a)

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Reason : Let the amount of each installment be 'A'.

$\therefore A \cdot PVIFA(8\%, 6) = 400,000$

$$\text{or } A = \frac{4,00,000}{PVIFA(8\%, 6)} = 86,523.9$$

$\therefore$ The amount of each equated annual installment is Rs.86,524 (approximately).

54. Answer : (d)

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Reason :

$$k_e = \frac{D_1}{P_0} + g = \frac{D_0(1+g)}{P_0} + g$$

$$\text{or } 0.12 = \frac{4.80(1+g)}{88} + g$$

$$\text{or } 10.56 = 4.8(1+g) + 88g$$

$$\text{or } 10.56 = 4.8 + 4.8g + 88g$$

$$\text{or } 5.76 = 92.8g$$

$$\text{or } g = \frac{5.76}{92.8} = 0.062 \text{ i.e. } 6.2\%.$$

55. Answer : (a)

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Reason : Debt Equity ratio = 5:4

$$\text{Therefore Equity} = \frac{4}{9} \times 18,00,000 = \text{Rs. } 8,00,000.$$

Computation of fixed assets:

It is given that ratio of owner's equity to fixed assets is 8:15.

$$\text{i.e. } \frac{8,00,000}{\text{Fixed Assets}} = \frac{8}{15}$$

$$\text{Therefore, fixed assets} = 8,00,000 \times \frac{15}{8} = \text{Rs. } 15,00,000.$$

Hence Choice (a) is the correct option.

56. Answer : (a)

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Reason : The effective annual interest is the value of 'r' in the following:

$$2000 \text{ FVIFA}_{r,8} (1 + r) = 22,976$$

$$\text{FVIFA}_{r,8} (1 + r) = 11.488$$

$$\text{At } r = 8\%, \text{ L. H. S.} = 11.488$$

Hence, $r = 8\%$.

57. Answer : (a)

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$$\text{Reason : Expected rate of return} = \frac{D_0(1+g)}{P_0} + g$$

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

$$\text{Hence, } 0.10 = \frac{4(1+0.04)}{P_0} + 0.04$$

$$P_0 = \text{Rs. } 69.33 \text{ say Rs. } 69.$$

58. Answer : (a)

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$$\text{Reason : } r = \frac{2 + (12 \times 10 - 90)}{90} = \frac{32}{90} = 0.3555 \text{ i.e. } 35.56\%.$$

59. Answer : (c)

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$$\text{Reason : Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}} = \frac{31}{13} \text{ i.e. Current assets} = \frac{31}{13} \text{ Current liabilities}$$

We know that working capital = Current assets – Current liabilities = Rs. 18,00,000

$$\text{i.e. } \frac{31}{13} \text{ Current liabilities} - \text{Current liabilities} = 18,00,000$$

$$\text{Current liabilities} = 9,00,000 \times \frac{13}{18} = \text{Rs. } 13,00,000.$$

$$\text{Current assets} = \frac{31}{13} \text{ Current liabilities} = \frac{31}{13} \times 13,00,000 = \text{Rs. } 31,00,000.$$

$$\text{It is given that liquid ratio} = \frac{18}{13}$$

$$\text{i.e. } \frac{\text{Current assets} - \text{Inventories}}{\text{Current liabilities}} = \frac{18}{13}$$

$$\frac{31,00,000 - \text{Inventories}}{13,00,000} = \frac{18}{13}$$

Therefore, Inventory = Rs. 13,00,000.

60. Answer : (a)

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$$\begin{aligned} \text{Reason : At the end of 15 years, the amount of expenditure will be} &= \text{Rs. } 3,00,000 \times (1.03)^{15} \\ &= \text{Rs. } 4,67,390.225 \end{aligned}$$

$$\text{So the required amount of annual installment will be} = \frac{4,67,390.225}{\text{FVIFA}(8\%, 15 \text{ years})}$$

$$= \frac{4,67,390.225}{27.152}$$

$$= 17,213.84$$

$$= \text{Rs. } 17,214$$

61. Answer : (c)

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Reason : Let new short-term borrowing be denoted by x.

Current ratio should not be less than 1.2 i.e. $\frac{\text{Current Assets}}{\text{Short-term bank borrowing} + \text{Current Liabilities}} \geq 1.2$

$$\text{i.e. } \frac{441}{x + 105 + 220.50} \geq 1.2$$

(Note: Current assets here are computed as 350 (1+26%) = Rs. 441 lakhs and Spontaneous liabilities are computed as: 175 × (1 + 26%) = Rs. 220.50 lakhs)

$$\text{i.e. } 441 \geq 1.2 (x + 105 + 220.5)$$

$$x \leq \text{Rs. 42 lakhs}$$

$$\text{i.e. } x \leq \text{Rs. 42 lakhs}$$

Hence, maximum short-term bank borrowing that can be made is Rs. 42 lakhs.

Therefore minimum equity to be raised = External funds requirement – New short-term bank borrowing

$$= 117.14 \text{ lakhs} - 42 \text{ lakhs} = \text{Rs. 75.14 lakhs.}$$

62. Answer : (b)

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Reason : Required rate of return on stock A = $R_f + \beta (R_m - R_f) = 5 + 1.75(10 - 5) = 13.75\%$

Required rate of return on stock B = $5 + 0.85 (10 - 5) = 9.25$

Excess return = 4.5%

63. Answer : (d)

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Reason : Equated annual withdrawal × PVIFA(8%,10) = Rs.1,00,000

$$\text{CIF} \times 6.71 = 1,00,000$$

$$\text{CIF} = 1,00,000 / 6.71 = \text{Rs. 14,903.13 say } 14,903$$

64. Answer : (b)

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Reason : Cost of goods sold = Rs. 39,00,000.

Gross profit margin is given to be 25%. In other words gross profit is 25% of sales.

Let Sales be x.

Therefore, Cost of goods sold + 0.25 x = x

$$39,00,000 + 0.25x = x$$

Hence x (i.e. Sales) = Rs. 52,00,000.

Average receivables turnover ratio is given to be 52:15

$$\text{i.e. } \frac{\text{Net credit sales}}{\text{Average accounts receivables}} = \frac{52}{15} \quad (\text{assume that the entire sales are on a credit basis})$$

$$\frac{52,00,000}{\text{Average accounts receivables}} = \frac{52}{15}$$

Therefore, Debtors (or average account receivables) = Rs. 15,00,000.

Cash and Bank = Quick assets – debtors = 18,00,000 – 15,00,000 = Rs.3,00,000.

65. Answer : (c)

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Reason : Current yield = $\frac{\text{Coupon interest}}{\text{Market Price}} = 8.25\%$

$$\therefore \text{Market Price} = \frac{\text{Coupon Interest}}{0.0825} = \frac{0.10 \times 1000}{0.0825} = \text{Rs. 1,212 (approx.)}$$

Hence, the bond is trading at a premium of Rs.212 i.e., 21.20%. Hence, answer is (c).

66. Answer : (a)

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Reason : $1(1.08)^3 + x \text{ FVIFA}_{8\%,3} (1.08) = 15(1.05)^3 \times 0.2 = 1.260 + 3.506x = 3.473$

$$x = \frac{3.473 - 1.260}{3.506} = \text{Rs.0.630 lakhs}$$

67. Answer : (a)

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Reason : Capitalization rate = $\frac{\text{Earning Per Share}}{\text{Market Price of the share}}$
 Earning Per Share = $(4,80,000 - 60,000) / 60,000 = \text{Rs. 7.}$
 Hence, capitalization rate = $7/100 = 7\%$.

68. Answer : (c)

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Reason : Efficiency in the utilization of assets is measured by asset turnover ratio.
 Asset turnover ratio = sales/total assets
 Asset turnover ratio (company A) = $\text{Rs.}32,00,000 / \text{Rs.}24,74,000 = 1.29$ times
 Asset turnover ratio (company B) = $\text{Rs.}30,00,000 / \text{Rs.}28,51,000 = 1.05$ times
 So asset utilization of company A is greater than company B.
 Hence statement (I) is correct.
 Payout ratio determines the amount that is paid-out by the company and (1- paid-out) gives the amount retained

	(Amount in Rs.)	
	A	B
Dividends declared	$0.06 \times 10 \times 1,00,000$ = Rs.60,000	$0.08 \times 10 \times 80,000$ = Rs.64,000
Net profit	Rs.1,23,000	Rs.1,58,000
Retained earnings	Rs.63,000	Rs.94,000
R E as % of N P	51.2%	59.5%

Hence company B retains larger proportion of its income & statement II is also true.
 Utilization of shareholders money is determined by return on net worth.

	(Amount in Rs.)	
	A	B
Net worth	12,32,000	14,42,000
Net profit	1,23,000	1,58,000
R O N W	9.98%	10.96%

Hence, company B utilizes shareholders funds more profitably than company A.
 Hence, statement III is not true and the answer is (c).

69. Answer : (e)

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Reason : Let the cost of funds be k.

$$\frac{(1+k)^{60} - 1}{k(1+k)^{60}} + \frac{\text{Rs.}1,20,000}{(1+k)^{12}}$$

So, from the terms of the question, we get, $\text{Rs.}9,000 \times \frac{(1+k)^{60} - 1}{k(1+k)^{60}} + \frac{\text{Rs.}1,20,000}{(1+k)^{12}}$
 At, k = 1%, the RHS = $\text{Rs.}9000 \times 44.955 + \text{Rs.}1,20,000 \times 0.887 = \text{Rs.}5,11,035$
 At, k = 2 percent, the RHS = $\text{Rs.}9000 \times 34.7609 + \text{Rs.}1,20,000 \times 0.7885 = \text{Rs.}4,07,468$
 By interpolation, we get k = 1.107%
 So, the annualized cost of funds will be = $\{(1.01107)^{12} - 1\} \times 100 = 14.123 = 14.12$ percent (approximately)

70. Answer : (b)

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Reason : The YTM is the value of 'i' in the following:
 $95 = 4\text{PVIFA}_{i,10} + 110\text{PVIF}_{i,10}$
 At i = 5%, RHS = 98.428
 At i = 6%, RHS = 90.82

$$i = 5 + \frac{98.428 - 95}{98.428 - 90.82}$$

$$= 5.4$$

$$= 10.8\% \text{ (approximately)}$$

Hence, the answer is (b).

71. Answer : (b)

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Reason : Beta is a measure of the non-diversifiable risk of an asset relative to that of the market portfolio. Beta of the market portfolio is 1 and the securities with beta of less than 1 are classified as securities with below average risk and beta of more than 1 as securities with above average risk. Hence, statement II is true.

According to SML, a security is said to be correctly priced, if its required rate of return according to SML is equal to its expected return. As the required rate of return is not equal to the expected return the stock cannot be said to be correctly priced. Hence, statement I is not true. If the expected rate of return is more than the required rate of return the stock is said to be undervalued and if the expected rate of return is less than the required rate of return it is said to be overvalued. In the given case, as the expected rate of return is more than the required rate of return, the stock is an undervalued security. Hence, statement III is not true. When security's expected return and beta are plotted on a graph with reference to the SML of the security, the security will lie above the SML if it is undervalued and will lie below the SML if it is overvalued. In the given case, as the security is undervalued it will lie above the SML and the beta of the security is immaterial. Hence, statement IV is not true.

72. Answer : (c)

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Reason : IV of P Ltd. = Rs.34.12 Price of Q Ltd. = $34.12 - 7.60 = \text{Rs.}26.52$

Price = PV of dividends + PV of IV

$$= \frac{1.8(1.08)}{1.11} + \frac{1.8(1.08)^2}{(1.11)^2} + \frac{1.8(1.08)^3}{(1.11)^3} + \frac{1.8(1.08)^3(1+x)}{(k-g)(1.11)^3} = 26.52$$

$$= 1.751 + 1.704 + 1.658 + \frac{1.658(1+x)}{0.11-x} = 26.52$$

$$\frac{1.658(1+x)}{0.11-x} = 21.407$$

$$1.658 + 1.658x = 2.355 - 21.407x$$

$$23.065x = 0.6968$$

$$x = 0.03$$

Hence $x = 3\%$ and answer is (c).

73. Answer : (d)

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Reason : Dividends for the next three years are as follows:

Year	1	2	3
Dividend (Rs.)	$2 \times 1.15 = 2.30$	$2 \times 1.15 \times 1.15 = 2.65$	$2 \times (1.15)^3 = 3.04$

So, the required intrinsic value of the share is

$$= \frac{2.30}{1.12} + \frac{2.65}{(1.12)^2} + \frac{3.04}{(1.12)^3} + \frac{3.04 \times 1.06}{0.12 - 0.06} \times \frac{1}{(1.12)^3}$$

$$= 2.05 + 2.11 + 2.16 + 38.23 = 44.55$$

74. Answer : (c)

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Reason : Expected price = $\sum x_i p_i$

Where, ' x_i ' is the price expected and ' p_i ' is the probability

Hence, expected price = $70 \times 0.4 + 80 \times 0.5 + 90 \times 0.1 = \text{Rs.}77$

The expected one year return is calculated as

$$\frac{(\text{Expected Price at the end} + \text{Expected dividend}) - \text{Price at the beginning}}{\text{Price at the beginning}} \times 100$$

$$\text{Expected return} = \frac{(77 + 2) - 60}{60} \times 100 = 31.67\%$$

75. Answer : (b)

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Reason : According to the given information subscribers will deposit Rs.25000 at the beginning of every year for 20 years and after 20 years scheme will pay Rs.75,000 at the end of every year for 25 years plus Rs.x at the end of 20 years from now.

The discount rate is 7%.

Therefore the data can be fit into a equation as

$$(1.07)^{25} 25,000 \times FVIFA(7\%, 20) = X + 75,000 PVIFA(7\%, 25)$$

$$(1.07)^{25} 25,000 \times 40.9955 = X + 75,000(11.6536)$$

$$1096629.625 = X + 874020$$

$$X = \text{The amount which will be returned} = \text{Rs. } 222609.625 \text{ Rs. } 222610$$

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