

Question Paper

Financial Management – I (MSF1B3): July 2007

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

1. Which of the following risks is associated with the secondary market in which the particular security is traded? [< Answer >](#)
- (a) Interest rate risk
 (b) Market risk
 (c) Business risk
 (d) Liquidity risk
 (e) Financial risk.
- (1 mark)
2. Which of the following risk factors is diversifiable? [< Answer >](#)
- (a) A change in interest rates
 (b) A change in economic policy
 (c) Industrial recession
 (d) Bankruptcy of a major supplier
 (e) Major changes in tax rates.
- (1 mark)
3. Which of the following statements is/are **true** with respect to beta? [< Answer >](#)
- I. It measures the risk associated with any individual portfolio in relation to the risk of the market portfolio.
 II. Stocks with betas less than one are more risky than the market portfolio.
 III. It depends only on non-diversifiable risks.
- (a) Only (II) above
 (b) Both (I) and (II) above
 (c) Both (I) and (III) above
 (d) Both (II) and (III) above
 (e) All (I), (II) and (III) above.
- (1 mark)
4. The CAPM establishes a linear relationship between which of the following two parameters? [< Answer >](#)
- (a) Alpha of the security and the risk-free rate of return
 (b) Alpha of the security and its beta
 (c) Required rate of return of a security and its systematic risk
 (d) Required rate of return of a security and the risk-free rate of return
 (e) Required rate of return of a security and its expected rate of return.
- (1 mark)
5. Which of the following statements are **not true** with respect to the security market line? [< Answer >](#)
- I. It is a graphic representation of the market model, $k_j = \alpha_j + \beta_j k_m + e_j$.
 II. It provides a framework for evaluating whether high-risk stocks are offering returns more or less in proportion to their risk and vice-versa.
 III. If the expected rate of return is more than the required rate of return, the stock is said to be undervalued.
 IV. Overvalued stocks lie above the SML.
- (a) Both (I) and (II) above
 (b) Both (I) and (IV) above
 (c) Both (II) and (III) above
 (d) Both (II) and (IV) above
 (e) Both (III) and (IV) above.
- (1 mark)
6. Which of the following statements is/are **true** with respect to the effective rate of interest? [< Answer >](#)

- I. It is that rate of return under annual compounding, which produces the same effect as that produced by the nominal rate of interest at shorter periods of compounding.
- II. It is always more than the nominal rate of interest.
- III. It increases with an increase in the frequency of compounding.
- (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 represents the amount that has to be invested at the end of every year for a period of “n” years at the rate of interest “k”, in order to accumulate Re.1 at the end of the period? [< Answer >](#)

- (a) Present value interest factor annuity
- (b) Future value interest factor annuity
- (c) Sinking fund factor
- (d) Capital recovery factor
- (e) Present value of perpetuity.

(1 mark)

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

- (a) Present value interest factors can be used only when the cash flows are equal and occur at the end of every period
- (b) PVIFA is the inverse of FVIFA
- (c) Perpetuity is an annuity of infinite duration
- (d) Annuity due occurs when the payments are made at the beginning of every period
- (e) PVIFA can be used to know whether a financial project is viable or not.

(1 mark)

9. Which of the following statements with respect to the capital recovery factor is/are **true**? [< Answer >](#)

- I. It is the inverse of FVIFA.
- II. It can be used to compute the amount to be paid annually to liquidate a loan over a specified period at a given rate of interest.
- III. It can be used to compute the amount that can be withdrawn periodically for a certain length of time, if a given amount is invested today.
- (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)

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

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

(1 mark)

11. Which of the following activities does **not** form part of deployment function of a finance manager? [< Answer >](#)

- (a) Procuring new machinery for the R&D activities
- (b) Spending for the promotion of the company's products
- (c) Adopting state of art technology to reduce the cost of production
- (d) Designing an optimal capital structure so as to reduce the cost of funds
- (e) Purchasing a new building for the company's regional office.

(1 mark)

12. Which of the following statements is **not true** with respect to the call rates? [< Answer >](#)

- (a) They represent the interest paid on a call loan
- (b) They freely reflect the day-to-day availability of funds
- (c) Low rates indicate tightness of liquidity in the financial system
- (d) They are influenced by the forces of demand and supply for funds
- (e) They are very volatile and vary highly from day-to-day and often from hour-to-hour.

(1 mark)

[< Answer >](#)

13. Which of the following statements is/are **true** with respect to the Cash Reserve Ratio?

- I. It is the cash that the banks have to deposit with the RBI as a proportion of their deposits.
 - II. It requires the banks to maintain the specified reserves in the form of government securities, specified bonds and approved securities.
 - III. It will be specified by the RBI from time to time as a percentage on Net Demand and Time Liabilities (NDTL) of banks.
- (a) Only (II) above
 - (b) Only (III) above
 - (c) Both (I) and (II) above
 - (d) Both (I) and (III) above
 - (e) Both (II) and (III) above.

(1 mark)

[< Answer >](#)

14. Which of the following is the method of raising additional finance from existing members by offering securities to them on a pro rata basis?

- (a) Public issue
- (b) Rights issue
- (c) Bonus issue
- (d) Private placement
- (e) Bought-out deal.

(1 mark)

[< Answer >](#)

15. Which of the following statements is/are **true** with respect to bond valuation?

- I. When the YTM of the bond decreases, the bond's market price also decreases.
 - II. When the required rate of return is greater than the coupon rate, the value of the bond is more than its par value.
 - III. When the required rate of return is less than the coupon rate, the premium on the bond declines as maturity approaches.
- (a) Only (II) above
 - (b) Only (III) above
 - (c) Both (I) and (II) above
 - (d) Both (I) and (III) above
 - (e) Both (II) and (III) above.

(1 mark)

[< Answer >](#)

16. Other things remaining the same, which of the following will increase the value of a common stock as per the dividend discount model for variable growth in dividends?

- (a) Increase in the required rate of return
- (b) Decrease in the growth rate
- (c) Decrease in the earning per share
- (d) Increase in the dividend pay-out ratio
- (e) Decrease in the investment horizon.

(1 mark)

[< Answer >](#)

17. Which of the following statements is **not true** with respect to a warrant?

- (a) It is a call option to buy a stated number of shares at a predetermined price during some specified period of time
- (b) Detachable warrants can be traded as independent securities
- (c) Exercise price of a warrant is what the holder has to pay to purchase the stated number of shares
- (d) A warrant holder also has voting rights as if a shareholder
- (e) The actual value of the warrant is equal to the theoretical value on the expiry date.

(1 mark)

[< Answer >](#)

18. Which of the following statements is/are **true** with respect to the expected and actual P/E ratios?

- I. If the expected P/E ratio exceeds the actual P/E ratio, the stock is under priced.
 - II. If the expected P/E ratio is less than the actual P/E ratio, it is the time to buy the stock.
 - III. If the expected P/E ratio is equal to the actual P/E ratio, the stock is correctly priced.
- (a) Only (II) above
 - (b) Both (I) and (II) above
 - (c) Both (I) and (III) above
 - (d) Both (II) and (III) above.
 - (e) All (I), (II) and (III) above.

(1 mark)

[< Answer >](#)

19. Other things remaining the same, which of the following will decrease the value of a bond?

- (a) Increase in the coupon rate
- (b) Decrease in the yield to maturity
- (c) Increase in the maturity premium
- (d) Increase in the term to maturity of the bond
- (e) Increase in the yield of the bond.

(1 mark)

[< Answer >](#)

20. Which of the following statements is/are **true** with respect to the earning power?

- I. It is a measure of operating profitability.
 - II. It is not affected by interest charges and tax payments.
 - III. It cannot be used for inter-firm comparisons.
- (a) Only (II) above
 - (b) Both (I) and (II) above
 - (c) Both (I) and (III) above
 - (d) Both (II) and (III) above
 - (e) All (I), (II) and (III) above.

(1 mark)

[< Answer >](#)

21. Which of the following ratios is **not** a leverage ratio?

- (a) Debt-equity ratio
- (b) Debt-asset ratio
- (c) Interest coverage ratio
- (d) Dividend yield
- (e) Debt service coverage ratio.

(1 mark)

[< Answer >](#)

22. Which of the following statements is/are **not true** with respect to different types of comparative analyses?

- I. Under cross-sectional analysis, financial ratios of a company are compared with the industry averages or with a good player in the industry.
 - II. Under common-size analysis, items in a balance sheet are expressed as a percentage of sales.
 - III. Common-size statements are well-suited for inter-firm comparisons.
 - IV. Index analysis helps in assessing how the variables of a particular statement are changing over a longer period of time.
- (a) Only (II) above
 - (b) Only (III) above
 - (c) Both (I) and (II) above
 - (d) Both (II) and (III) above
 - (e) (I), (III) and (IV) above.

(1 mark)

[< Answer >](#)

23. Which of the following is an efficiency ratio?

- (a) Current ratio
- (b) Price-earnings ratio
- (c) Return on equity
- (d) Inventory turnover ratio
- (e) Average collection period.

(1 mark)

[< Answer >](#)

24. Equity multiplier is equal to

- (a)
- (b)
- (c)
- (d)
- (e)

(1 mark)

25. Which of the following statements is **true** with respect to schedule of changes in working capital?

[< Answer >](#)

- (a) An increase in sundry debtors decreases working capital
- (b) A decrease in accounts receivables increases working capital
- (c) An increase in accounts payables increases working capital
- (d) A decrease in sundry creditors increases working capital
- (e) A decrease in prepaid expenses increases working capital.

(1 mark)

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

[< Answer >](#)

- (a) It can be used to rectify inefficiencies in inventory management
- (b) It can indicate whether short-term liabilities have been used to finance fixed assets
- (c) It can reveal a firm's total prospective need for funds
- (d) It cannot be used for appraising divisional performance
- (e) It can be used to evaluate a firm's financing options.

(1 mark)

27. Which of the following is a measure of business risk?

[< Answer >](#)

- (a) Working capital leverage
- (b) Debt equity ratio
- (c) Operating leverage
- (d) Financial leverage
- (e) Combined leverage.

(1 mark)

28. If the degree of operating leverage is 1.5 and the degree of financial leverage is 2, it means that

[< Answer >](#)

- (a) A 1% change in sales will result in 2% change in EBIT
- (b) A 1% change in EBIT will result in 1.5% change in EPS
- (c) A 3% change in sales will result in 1% change in EPS
- (d) A 1% change in sales will result in 3% change in EPS
- (e) A 1% change in EBIT will result in 3% change in EPS.

(1 mark)

29. Which of the following statements is/are **true** with respect to the overall breakeven point?

[< Answer >](#)

- I. It is the level of output at which the DFL will be zero.
- II. It is the level of output where the EPS is at its maximum.
- III. It is the level of output at which the DTL will be undefined.
- (a) Only (II) above
- (b) Only (III) above
- (c) Both (I) and (II) above
- (d) Both (I) and (III) above
- (e) Both (II) and (III) above.

(1 mark)

30. While preparing proforma financial statement by using budgeted expense method,

[< Answer >](#)

- (a) The method of extrapolation is applied to assess the total expenses of the company in proportion to increase in sales
- (b) The items related to various expenses are projected on the basis of the anticipated changes in the future period
- (c) The future cost-sales ratio is assumed to be prevailed as per historical relationship
- (d) A regression equation may be framed to project the costs during the future years
- (e) All the expenses are increased by a fixed percentage.

(1 mark)

[< Answer >](#)

31. Other things remaining same, which of the following increase(s) the external funds requirement?

- I. An increase in the spontaneous liabilities to sales ratio.
 - II. A decrease in the retention ratio.
 - III. An increase in the assets turnover ratio.
 - IV. A decrease in the short-term bank borrowings.
- (a) Only (II) above
 - (b) Only (IV) above
 - (c) Both (I) and (II) above
 - (d) Both (II) and (III) above
 - (e) Both (III) and (IV) above.

(1 mark)

[< Answer >](#)

32. At the beginning of last year, Mr.Kiran invested Rs.40,000 in eighty shares of Dayal Corporation of India Ltd. During the year, the company paid a dividend of Rs.15 per share. At the end of the year, Mr.Kiran sold the shares for Rs.620 a share. What is the holding period return to Mr.Kiran and how much of it is attributed to the dividend income?

- (a) 20%, 2%
- (b) 22%, 2%
- (c) 24%, 3%
- (d) 27%, 3%
- (e) 27%, 5%.

(1 mark)

[< Answer >](#)

33. Consider the following information regarding securities A and B:

Security	Expected return (%)	Standard deviation (%)	Proportion (%)	Beta
A	10	20	35	0.85
B	15	25	65	1.15

The correlation coefficient between the two securities is – 0.6. The portfolio variance and the portfolio beta respectively are

- (a) 3.345%; 0.951
- (b) 4.254%; 1.045
- (c) 5.375%; 1.045
- (d) 5.375%; 1.054
- (e) 6.375%; 1.054.

(2 marks)

[< Answer >](#)

34. Consider the following investments:

Investment	Expected Return (%)	Variance (%) ²
A	12	144
B	10	100
C	11	100
D	11	121
E	9	121

Mr.Amit is a risk averse investor and Mr.Sumit is a risk-taking investor. Which of the above investments would both of them select respectively?

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

(1 mark)

[< Answer >](#)

35. The probability distributions of returns of Nikhil Technologies Ltd. (NTL) and the market returns are given below:

Probability	0.40	0.25	0.15	0.20
NTL (in %)	3	4	5	7
Market return (in %)	6	9	8	7

The covariance of market returns and returns from NTL is $0.4625(\%)^2$. If the market return is zero, the return earned by NTL is

- (a) 1.595%
- (b) 1.900%
- (c) 2.103%
- (d) 5.695%
- (e) 6.598%.

(2 marks)

[< Answer >](#)

36. The covariance of returns on the two securities, A and B is -0.0005 . The standard deviation of A's returns is 4% and the standard deviation of B's returns is 6%. What is the correlation coefficient between the returns of A and B?

If the correlation coefficients of both A and B with the market are 0.97 and 0.66 respectively, and the variance of returns from the market is $121(\%)^2$, which of the above two stocks has a lesser systematic risk?

- (a) -0.0208 ; A
- (b) -0.2083 ; A
- (c) -0.2083 ; B
- (d) 0.2084 ; B
- (e) 0.5302 ; A.

(2 marks)

[< Answer >](#)

37. The projected returns from the equity shares of Sumangal Traders Ltd. and their probabilities for the next one year are as follows:

Probability (%)	35	40	25
Projected Returns (%)	12	14	18

What is the expected risk in terms of standard deviation for the equity shares of Sumangal Traders Ltd.?

- (a) 1.15%
- (b) 1.67%
- (c) 2.03%
- (d) 2.30%
- (e) 2.67%.

(2 marks)

[< Answer >](#)

38. Consider the following information regarding three stocks A, B and C:

Stock	Expected Return (%)	Beta
A	13	?
B	12	0.85
C	14	1.2

What is the beta of stock A?

- (a) 0.705
- (b) 0.915
- (c) 1.025
- (d) 1.215
- (e) 1.505.

(2 marks)

[< Answer >](#)

39. The capital structure of Amrutha Estates Ltd. is as follows:

	(Rs.)
11% Preference shares, Re.1 each	12,00,000
Ordinary shares, Re.1 each	32,00,000
9% Debentures	15,00,000

The company reported a net profit of Rs.10,84,000 and paid 20% of its earnings as dividends. the shares of the company are presently trading at Rs.9. The cover for ordinary dividend and the P/E ratio of the company respectively are

- (a) 1.25 times; 24.25
- (b) 1.34 times; 30.25
- (c) 1.49 times; 30.25

- (d) 1.49 times; 34.45
(e) 1.64 times; 34.45.

(2 marks)

[< Answer >](#)

40. Akhila Enterprises Ltd. furnished the following information for the current financial year:

Sales	Rs.8,10,000
Net working capital	Rs.90,000
Current ratio	1.5
Quick ratio	0.9
Gross profit margin	20%

The inventory turnover ratio for the company is

- (a) 2 times
(b) 3 times
(c) 5 times
(d) 6 times
(e) 8 times.

(3 marks)

[< Answer >](#)

41. Ashish Traders Ltd. has furnished the following details for the year ended 2006-07:

Owners' equity	Rs.10,00,000
Current debt to total debt	0.40
Total debt to owners' equity	0.60
Fixed assets to total debt	0.8
Total assets turnover	2 times
Inventory turnover	8 times

The inventory to current assets ratio is

- (a) 0.254
(b) 0.357
(c) 0.465
(d) 0.543
(e) 0.654.

(2 marks)

[< Answer >](#)

42. Amit Enterprises Ltd. has estimated that the company will employ total assets of Rs.8,00,000, 50% of the assets being financed by borrowed capital at an interest rate of 16% per annum. The direct costs for the year are estimated at Rs.4,80,000 and all other operating expenses are estimated at Rs.80,000. The company is intending to sell the goods to the customers at 150% of the direct costs. The income tax rate is assumed to be 50%. The net profit margin to the company would be

- (a) 4.8%
(b) 5.6%
(c) 6.7%
(d) 7.4%
(e) 7.8%.

(2 marks)

[< Answer >](#)

43. Consider the following information relating to Nidhi Trading Concerns Ltd.

	(Rs.)
Average inventory	10,00,000
Sales	1,65,00,000
Cost of goods sold	60,00,000
Management expenses	5,00,000
Average receivables	13,20,000

Credit sales are 40% of total sales. Assuming there are 360 days in a year, the inventory turnover ratio and the average collection period respectively are

- (a) 5 times; 46 days
(b) 6 times; 57 days
(c) 6 times; 72 days

- (d) 7 times; 72 days
(e) 7 times; 80 days.

(2 marks)

[< Answer >](#)

44. Consider the following information relating to Nidhi Trading Concerns Ltd.

(Rs.)

Total liabilities	Rs.5,50,000
Current liabilities	Rs.1,50,000
Fixed assets	Rs.2,50,000
Average collection period	36 days
Inventory turnover	10 times
Assets turnover	2 times
Credit sales	50%

If the firm has inventory, sundry debtors and liquid cash as current assets, the amount of liquid cash with the company and the acid-test ratio for the firm respectively are (Assume 360 days in a year)

- (a) Rs.1,27,000; 0.98
(b) Rs.1,27,000; 1.15
(c) Rs.1,35,000; 1.15
(d) Rs.1,35,000; 1.27
(e) Rs.1,42,000; 1.27.

(2 marks)

[< Answer >](#)

45. Komala Textiles Ltd. has declared its net earnings as Rs.50,00,000 for the current year. The company's total paid up capital is Rs.1,00,00,000 (face value of each share, Rs.20). If the dividend payout ratio is 0.30 and capitalization rate is 8.00 percent, the dividend yield and the market price of the company's share respectively are

- (a) 1.75%; Rs.125
(b) 2.40 %; Rs.125
(c) 2.67 %; Rs.140
(d) 3.75 %; Rs.140
(e) 14.25%; Rs.200.

(2 marks)

[< Answer >](#)

46. The net worth and 8% debentures of Sohail Industries Ltd. amount to Rs.300 lakh and Rs.500 lakh respectively. The net profit of the company after deducting a marginal tax rate of 40 percent is 48 lakh. The return on investment of Sohail Industries is

- (a) 12%
(b) 15%
(c) 18%
(d) 20%
(e) 22%.

(2 marks)

[< Answer >](#)

47. Consider the following information regarding Kiwi Industries Ltd. for the current year:

Earnings after tax	Rs.18,00,000
Interest payment	Rs.16,00,000
Assets turnover	1.50
Net profit margin	5%
Corporate tax rate	40%

Earning power of the company is

- (a) 7.5%
(b) 8.5%
(c) 14.2%
(d) 19.2%
(e) 25.4%.

(2 marks)

[< Answer >](#)

48. Consider the following data regarding Mahati Enterprises Ltd.

Assets turnover ratio	1.111
Return on total assets	16%
Equity multiplier	3.75
Dividend	37.5%
Equity capital	Rs.12 lakhs
Face value per share	Rs.6

The profit after tax and the internal growth rate that the company can achieve without resorting to external equity respectively are

- (a) Rs.5.8 lakhs; 22%
- (b) Rs.5.8 lakhs; 25%
- (c) Rs.6.4 lakhs; 25%
- (d) Rs.7.2 lakhs; 26%
- (e) Rs.7.2 lakhs; 29%.

(2 marks)

[< Answer >](#)

49. The sales turnover of Garuda Travels Ltd. is Rs.600 lakh. They are planning to increase it by 25 percent by the next year. Total assets of the company are Rs.360 lakh out of which Rs. 140 lakh is financed by the spontaneous liabilities. Its net profit for the last year was Rs.48 lakh while dividend paid was Rs.4.0 per share. The company's equity share capital is Rs.200 lakh. (Face value of each share Rs.40). Assuming that the net profit margin and dividend pay-out ratio will remain constant, the amount of external funds required by the company is

- (a) Rs. 9.04 lakh
- (b) Rs.12.02 lakh
- (c) Rs.15.06 lakh
- (d) Rs.18.00 lakh
- (e) Rs.20.02 lakh.

(2 marks)

[< Answer >](#)

50. Sheetal Textiles Ltd. paid a dividend of Rs.3.5 per share during the current year. The company expects the dividend to grow at 8% per annum forever. The covariance of the stock's returns with the market is $196(\%)^2$ and the variance of the market returns is $144(\%)^2$. The return on the market is 12% and the risk-free rate of return is 6%. The market price of the company's share is

- (a) Rs.56.78
- (b) Rs.61.36
- (c) Rs.70.36
- (d) Rs.79.06
- (e) Rs.85.36.

(2 marks)

[< Answer >](#)

51. Suman Agri Products Ltd., paid a dividend of Rs.3 per share during the current year which is expected to grow at an annual rate of 14% for 3 years and 11% p.a. for next 3 years after which it will grow at 4% p.a. forever. What amount should be paid for the stock, if the rate of return required by the equity investors is 16%?

- (a) Rs.16.51
- (b) Rs.21.58
- (c) Rs.31.09
- (d) Rs.38.09
- (e) Rs.43.09.

(3 marks)

[< Answer >](#)

52. A bond with a face value of Rs.100 provides 12% annual return and is redeemed at a premium of 5% at the time of maturity, which is 10 years from now. If the investors required rate of return is 13%, at what price should the company issue the bond?

- (a) Rs.79.056
- (b) Rs.85.076
- (c) Rs.92.045
- (d) Rs.96.087
- (e) Rs.99.086.

(1 mark)

[< Answer >](#)

53. A company is offering a bond with the issue price of Rs.100. Its current yield is 12% and maturity period 5 years. If the bond is to be redeemed at par and the investor faces a 30% tax on income and a 10% capital gains tax, the effective yield to

maturity for the investor is

- (a) 6.8%
- (b) 7.4%
- (c) 8.4%
- (d) 9.2%
- (e) 12.0%.

(2 marks)

[< Answer >](#)

54. The profit after tax for Maruti Associates Ltd. is Rs.20 lakh. The dividend pay-out ratio is 50%. The growth rate of the earnings is 4% and the scrip trades at 2.5 times its EPS in the market. The required rate of return by equity shareholders, if the company has 5 lakh shares outstanding is

- (a) 16.8 %
- (b) 18.4%
- (c) 24.8%
- (d) 28.6%
- (e) 32.8%.

(2 marks)

[< Answer >](#)

55. A bond of face value Rs.1,000 is currently quoting in the market at Rs.1,062. The coupon rate of the bond is 14% payable semi-annually. The remaining maturity of the bond is five years and the principal is repayable at two equal installments at the end of the 4th and 5th year from now. The yield to maturity of the bond is 12.16%. What would be the new price of the bond, if the YTM for similar type of bonds increases by 2%?

- (a) Rs.945.49
- (b) Rs.956.39
- (c) Rs.978.39
- (d) Rs.987.59
- (e) Rs.995.29.

(2 marks)

[< Answer >](#)

56. Given below are the Balance Sheets of Jyothi Enterprises Ltd. for the years ended 31st March 2007 and 31st March 2006.

Liabilities	31.03.2006	31.03.2007	Assets	31.03.2006	31.03.2007
Share capital	1,80,000	1,80,000	Plant and machinery	72,000	80,000
Profit and Loss Account	16,000	23,000	Freehold land and sheds	1,00,000	1,00,000
Reserve for contingencies	60,000	50,000	Stock-in-trade	92,000	1,06,000
Depreciation fund	40,000	44,000	Prepaid expenses	1,000	2,000
5% Debentures	90,000	70,000	Short term investments	1,10,000	84,000
Outstanding expenses	13,000	22,000	Sundry debtors	77,000	73,000
Sundry creditors	1,03,000	96,000	Cash and bank balances	50,000	40,000
Total	5,02,000	4,85,000	Total	5,02,000	4,85,000

The change in working capital is

- (a) – Rs.27,000
- (b) – Rs.34,000
- (c) Rs.27,000
- (d) Rs.35,000
- (e) Rs.40,000.

(2 marks)

[< Answer >](#)

57. Mohini Associates Ltd. is planning to set aside certain amount of money in a sinking fund to retire bonds of Rs.10 lakh whose remaining term to maturity is 10 years. If the appropriate discount rate is 9% per annum, how much money would the company need to set aside at the end of each year for the next 10 years to be able to repay the bonds when they become due?

- (a) Rs.59,720
- (b) Rs.62,320
- (c) Rs.65,820

- (d) Rs.68,430
(e) Rs.72,820.

(1 mark)

58. Mr. Sarathi deposits Rs.500 at the beginning of every quarter in the recurring deposit scheme of Majeera Bank for six years. [< Answer >](#)
If the bank offers an interest rate of 12 percent per annum compounded quarterly, the amount accumulated by the end of six years is (Round off your answer to the nearest integer)

- (a) Rs.15,546
(b) Rs.17,729
(c) Rs.18,765
(d) Rs.19,254
(e) Rs.20,187.

(2 marks)

59. Mr.Aravind wants to invest in a pension fund according to which ten years from now he will start receiving a pension of Rs.2,000 every month. The payment will continue for 10 years. How much is the pension worth today if the interest rate is 11.50% compounded quarterly? (Round off your answer to the nearest integer) [< Answer >](#)

- (a) Rs.25,238
(b) Rs.29,237
(c) Rs.34,568
(d) Rs.39,876
(e) Rs.45,997.

(2 marks)

60. Mr.Kiran borrows Rs.1,00,000 at 8% compounded annually. Equal annual payments are to be made for six years. However, at the time of the fourth payment, the individual decides to pay off the entire loan. How much amount should Mr.Kiran pay at the end of the fourth year approximately? [< Answer >](#)

- (a) Rs.45,609
(b) Rs.50,207
(c) Rs.56,578
(d) Rs.60,208
(e) Rs.65,428.

(3 marks)

61. Bhagyanagar Finance Company Ltd. is offering a pension scheme for people who have just completed 40 years. According to the scheme the individuals who subscribe will have to deposit Rs.25,000 per year for 20 years. At the end of 20 years, every subscriber will receive a specific sum plus an annuity of Rs.1,00,000 for a period of 25 years. If the depositors wish to earn 11% rate of return, the specific amount to be paid by Bhagyanagar Finance Company Ltd. at the end of 20 years apart from the annuities is [< Answer >](#)

- (a) Rs. 1,18,007
(b) Rs. 7,62,875
(c) Rs. 5,31,650
(d) Rs. 9,39,433
(e) Rs.12,94,695.

(2 marks)

62. Rohan Electronics Ltd. sells 1,000 units of electronic chokes @ Rs.10 per unit. The cost of production is Rs.7 per unit and the whole of the cost is variable in nature. The firm incurs fixed costs of Rs.1,000. Suppose the firm is able to increase its sales by 400 units, the operating leverage to the company is [< Answer >](#)

- (a) 0.8
(b) 1.0
(c) 1.2
(d) 1.5
(e) 2.0.

(1 mark)

63. The Balance sheet of Pioneer Steels Ltd. is as follows: [< Answer >](#)

Liabilities	Rs.	Assets	Rs.
Equity share capital	60,000	Fixed assets	1,50,000
Retained earnings	20,000	Current assets	50,000

10% Long-term debt	80,000		
Current liabilities	40,000		
Total	2,00,000	Total	2,00,000

The company's total assets turnover ratio is 3, its fixed operating costs are Rs.1,00,000 and its variable operating cost ratio is 40%. The income-tax rate is 40%. The face value of the company's shares is Rs.10. What is the company's total leverage and if the sales of the company increase by 45%, the new EPS of the company would be

- (a) 1.29; Rs.32.67
- (b) 1.36; Rs.32.67
- (c) 1.43; Rs.39.67
- (d) 1.43; Rs.41.42
- (e) 1.56; Rs.49.32.

(2 marks)

[< Answer >](#)

64. The following information is available regarding Sumit Enterprises Ltd.

Variable expenses as a % of sales	75%
Interest	Rs.30,000
Degree of Operating leverage	1.6
Degree of financial leverage	2.0
Income tax rate	40%

The quantity of sales for the company is

- (a) Rs. 60,000
- (b) Rs.1,20,000
- (c) Rs.1,45,000
- (d) Rs.1,75,000
- (e) Rs.1,92,000.

(2 marks)

[< Answer >](#)

65. Bharat Chemicals Ltd. has never issued any preference share since its incorporation. For the first time it is planning to issue 10% preference shares. Its contribution margin is 20 percent against a selling price of Rs.500 per unit. The fixed expenses for its operations is Rs.90,000 and the interest on term loan is Rs.75,000. It feels that if it issues preference shares, its overall break-even point increases by 200 units. If the company falls in the tax bracket of 40%, how much preference capital can the company issue at the revised break-even point?

- (a) Rs. 60,000
- (b) Rs. 90,000
- (c) Rs.1,20,000
- (d) Rs.1,50,000
- (e) Rs.1,80,000.

(2 marks)

[< Answer >](#)

66. The EBIT for a company at 8,000 level of production is Rs.7,50,000. At the financial break even point, the EBIT of the company is Rs.2,10,000. The Degree of Financial Leverage (DFL) for the company at this level of production is

- (a) 1.56
- (b) 1.51
- (c) 1.49
- (d) 1.46
- (e) 1.39.

(1 mark)

[< Answer >](#)

67. Consider the following information about Krishna Textiles Ltd.

Operating leverage	1.1
Financial leverage	1.5
10% Debentures	Rs.6 crore
10% Preference shares	Rs.4 crore
Variable cost to sales ratio	40%
Income tax rate	50%

The fixed costs and variable costs for the company respectively are

- (a) Rs.36 lakh; Rs.2.48 crore
- (b) Rs.42 lakh; Rs.2.75 crore

- (c) Rs.42 lakh; Rs.3.08 crore
 (d) Rs.50 lakh; Rs.3.08 crore
 (e) Rs.54 lakh; Rs.3.54 crore.

(2 marks)

Suggested Answers

Financial Management – I (MSF1B3): July 2007

1. Answer : (d) [< TOP](#)
[≥](#)
 Reason : Liquidity risk is associated with the secondary market in which the particular security is traded. A security which can be bought or sold quickly without significant price concession is considered liquid. The greater the uncertainty about the time element and the price concession, the greater the liquidity risk. Hence (d) is the answer.
2. Answer : (d) [< TOP](#)
[≥](#)
 Reason : Bankruptcy of a major supplier is a company specific risk which can be diversified away by changing the supplier. All the remaining risks are applicable to all the companies and cannot be diversified away. Hence (d) is the answer.
3. Answer : (c) [< TOP](#)
[≥](#)
 Reason : It measures the risk associated with any individual portfolio in relation to the risk of the market portfolio. Statement (I) is true.
 Stocks with betas less than one are less risky than the market portfolio. Statement (II) is not true.
 Since the risk of the market portfolio is non-diversifiable in nature, beta depends only on non-diversifiable risks. Statement (III) is true.
 Hence (c) is the answer.
4. Answer : (c) [< TOP](#)
[≥](#)
 Reason : The CAPM establishes a linear relationship between the required rate of return of a security and its systematic or undiversifiable risk or beta. Hence (c) is the answer.
5. Answer : (b) [< TOP](#)
[≥](#)
 Reason : Characteristic Regression Line (CRL) is a graphic representation of the market model, $k_j = \alpha_j + \beta_j k_m + e_j$. Statement (I) is not true.
 It provides a framework for evaluating whether high-risk stocks are offering returns more or less in proportion to their risk and vice-versa. Statement (II) is true.
 If the expected rate of return is more than the required rate of return, the stock is said to be undervalued and the stock lies above the SML. Statement (III) is true.
 If the expected rate of return is less than the required rate of return, the stock is said to be overvalued and the stock lies below the SML. Statement (IV) is not true.
 Hence (b) is the answer.
6. Answer : (d) [< TOP](#)
[≥](#)
 Reason : Effective rate of interest (r) =
 Where,
 r = Effective rate of interest
 k = Nominal rate of interest
 m = Frequency of compounding per year.
 Therefore effective rate of interest is that rate of return under annual compounding, which produces the same effect as that produced by the nominal rate of interest at shorter periods of compounding.
 It is equal to the nominal rate of interest when the frequency of compounding is one. It increases with an increase in the frequency of compounding. Therefore it is more than the nominal rate of interest when the frequency of compounding is more than one.

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

7. Answer : (c)

Reason : Sinking fund factor represents the amount that has to be invested at the end of every year for a period of "n" years at the rate of interest "k", in order to accumulate Re.1 at the end of the period. Hence (c) is the answer.

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8. Answer : (b)

Reason : Present value interest rate factors can be used only when the cash flows are equal and occur at the end of every period. Statement (a) is true.

PVIFA is not the inverse of FVIFA though PVIF is the inverse of FVIF. Sinking fund factor is the inverse of FVIFA. Statement (b) is not true.

Perpetuity is an annuity of infinite duration. Statement (c) is true.

Capital recovery factor is the inverse of PVIFA. Statement (d) is true.

Annuity due occurs when the payments are paid at the beginning of every period. Statement (e) is true.

Hence (b) is the answer.

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9. Answer : (e)

Reason : Capital recovery factor is the inverse of PVIFA. Statement (I) is not true.

It can be used to compute the amount to be paid annually to liquidate a loan over a specified period at a given rate of interest. Statement (II) is true.

It can be used to compute the amount that can be withdrawn periodically for a certain length of time, if a given amount is invested today. Statement (III) is true.

Hence (e) is the answer.

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10. Answer : (c)

Reason :



Statement (a) is true.

Statement (b) is true.

. Statement (c) is not true.

. Statement (d) is true.

PV of perpetuity = $1/k$. Statement (e) is true.

Hence (c) is the answer.

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11. Answer : (d)

Reason : Designing an optimal capital structure is a part of the financing decision and all other activities come under the deployment of funds function. Hence (d) is the answer.

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12. Answer : (c)

Reason : They represent the interest paid on a call loan. They freely reflect the day-to-day availability of funds. They are very volatile and vary highly from day-to-day and often from hour-to-hour. They are influenced by the forces of supply and demand for funds. High rates indicate tightness of liquidity in the financial system and low rates indicate an easy liquidity position in the market. Hence statement (c) is not true and is the answer.

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13. Answer : (d)

Reason : Cash reserve ratio is the cash that the banks have to deposit with the RBI as a proportion of their deposits. It will be specified by the RBI from time to time on Net Demand and Time Liabilities (NDTL). Statutory liquidity ratio requires the banks to maintain the specified reserves in the form of government securities, specified bonds and approved securities. Therefore statements (I) and (III) are true and statement (II) is not true. Hence (d) is the answer.

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14. Answer : (b)

Reason : Public involves raising of funds directly from the public. Rights issue is the method of raising additional finance from existing members by offering securities to them on a pro rata basis. Bonus shares are shares issued to the shareholders in lieu of dividend in the ratio of existing shares held. Private placement involves sale of securities by a public limited or a private limited company directly to a limited number of sophisticated investors. Bought out deals are carried out through intermediaries to the public. Hence (b) is the answer.

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15. Answer : (b)

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Reason : Bond's YTM is inversely proportional to its market price. Therefore when the YTM of the bond decreases, the bond's market price increases. 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 its par value. Statement (II) is not true.

When the required rate of return is less than the coupon rate, the premium on the bond declines as maturity approaches. Statement (III) is true.

Hence (b) is the answer.

16. Answer : (d)

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Reason : As per the dividend discount model, value of the stock = $\frac{D_1}{r - g}$

Increase in the required rate of return decreases the value of the share.

Decrease in the growth rate decreases the value of the share.

Decrease in the earning per share decreases the dividend which in turn decreases the value of the share.

Increase in the dividend pay-out ratio increases the dividend which in turn increases the value of the share.

Decrease in the investment horizon decreases the value of the share.

Hence (d) is the answer.

17. Answer : (d)

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Reason : A warrant is a call option to buy a stated number of shares at a predetermined price during some specified period of time. Statement (a) is true.

Detachable warrants after being detached from their bonds or preference shares can be traded as independent securities. Statement (b) is true.

Exercise price of a warrant is what the holder has to pay to purchase the stated number of shares. Statement (c) is true.

A warrant holder neither receives dividends nor has voting rights like a shareholder. Statement (d) is not true.

The actual value of the warrant is equal to the theoretical value on the expiry date. Statement (e) is true.

Hence (d) is the answer.

18. Answer : (c)

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Reason : If the expected P/E ratio exceeds the actual P/E ratio, the stock is under priced and it is the time to buy the stock. Statement (I) is true.

If the expected P/E ratio is less than the actual P/E ratio, the stock is overpriced and it is the time to sell the stock. Statement (II) is not true.

If the expected P/E ratio is equal to the actual P/E ratio, the stock is correctly priced. Statement (III) is true.

Hence (c) is the answer.

19. Answer : (e)

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Reason : Increase in the coupon rate will increase the value of the bond.

Decrease in the yield to maturity will increase the value of the bond as the YTM and the bond price are inversely proportional to each other.

Increase in the maturity premium will increase the value of the bond.

Increase in the term to maturity of the bond will increase the value of the bond.

Increase in the yield of the bond will decrease the value of the bond.

Hence (e) is the answer.

20. Answer : (b)

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Reason : Earning power is a measure of operating profitability. As it is not affected by interest charges and tax payments, it is well-suited for inter-firm comparisons. Therefore statements (I) and (II) are true and statement (III) is not true. Hence (b) is the answer.

21. Answer : (d)

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Reason : Leverage ratios comprise of capital structure ratios and coverage ratios. Alternatives (a) and (b) are capital structure ratios and alternatives (c) and (e) are coverage ratios. Dividend

yield is a dividend ratio. Hence (d) is the answer.

22. Answer : (a)

Reason : Under cross-sectional analysis, financial ratios of a company are compared with the industry averages or with a good player in the industry. Statement (I) is true.

Under common-size analysis, liabilities and assets in a balance sheet are expressed as the percentage of their respective totals and items in an income statement are expressed as a percentage of sales. Statement (II) is not true.

Common-size statements are well-suited for inter-firm comparisons. Statement (III) is true.

Index analysis helps in assessing how the variables of a particular statement are changing over a longer period of time. Statement (IV) is true.

Hence (a) is the answer.

23. Answer : (c)

Reason : Efficiency ratios are the profitability ratios. Gross profit margin, net profit margin, asset turnover, return on equity and earning power come under efficiency ratios. Therefore return on equity is the profitability/efficiency ratio. Hence (c) is the answer.

24. Answer : (c)

Reason :

Hence (c) is the answer.

25. Answer : (d)

Reason : The following points should be remembered while preparing a schedule of changes in working capital:

An increase in a current asset results in an increase in working capital

A decrease in a current asset results in an decrease in working capital

An increase in a current liability results in a decrease in working capital

A decrease in a current liability results in an increase in working capital.

Hence (d) is the answer.

26. Answer : (d)

Reason : Funds flow statements are very helpful in detecting any imbalances in inventory management, assisting in appraisal of divisional performance, evaluating the firm's financial options and planning for future financing. Hence (d) is the answer.

27. Answer : (c)

Reason : Business risk refers to the uncertainty or variability of the firm's EBIT. DOL measures the percentage change in EBIT for a given change in unit sales. So everything being equal, a higher DOL means higher business risk and vice-versa. Hence (c) is the answer.

28. Answer : (d)

Reason : $DTL = DOL \times DFL = 1.5 \times 2 = 3$

$= \% \text{ change in EPS} / \% \text{ change in sales}$

i.e, a 1% change in sales would result in a 3% change in EPS. Hence (d) is the answer.

29. Answer : (b)

The overall breakeven point is that level of output at which the DTL will be undefined and EPS will be equal to zero. Therefore statements (I) and (II) are not true and statement (III) is true.

Hence (b) is the answer.

30. Answer : (b)

Reason : The trend analysis, through the method of extrapolation and regression analysis are used for the projection of sales volume of the company. The future relationship between various costs to sales is assumed to follow historical relationship in case of percent of sales method. But in budgeted expense method, the estimation of the various items is considered on the basis of the expected changes to be happened in the market for the preparation of the proforma income statement. Hence, the option (b) is the answer.

31. Answer : (a)

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

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turnover ratio (i.e. a decrease in total assets to sales ratio) decreases the external funds required. Hence, (I) and (III) are incorrect. Short-term bank borrowings are one of the sources of the external funds and does not indicate the amount of funds required.

∴ statement (II) is correct. Hence (a) is the answer.

32. Answer : (d)

Reason : Purchase price of the share = Rs.40,000/80 = Rs.500

Sale price of the share = Rs.620

Dividend income = Rs.15 per share

Holding period return =

Amount of return attributed to dividend income =

Hence (d) is the answer.

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33. Answer : (c)

Reason :

$$= (0.35) \cdot 2(0.2)^2 + (0.65) \cdot 2(0.25)^2 + 2(-0.6)(0.2)(0.25)(0.35)(0.65)$$

$$= 0.0049 + 0.0625 - 0.01365$$

$$= 0.05375$$

$$\beta_p = 0.35 \times 0.85 + 0.65 \times 1.15 = 1.045$$

Hence (c) is the answer.

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34. Answer : (d)

Reason : A risk averse investor looks for lower variance and high expected return whereas a risk taking investor looks for higher variance and higher expected return. Hence (d) is the answer.

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35. Answer : (c)

Reason : $R = 0.40 \times 3 + 0.25 \times 4 + 0.15 \times 5 + 0.20 \times 7 = 4.35\%$.

$$R = 0.40 \times 6 + 0.25 \times 9 + 0.15 \times 8 + 0.20 \times 7 = 7.25\%.$$

$$\begin{aligned} \sigma^2 &= (6 - 7.25)^2 \cdot 0.4 + (9 - 7.25)^2 \cdot 0.25 + (8 - 7.25)^2 \cdot 0.15 + (7 - 7.25)^2 \cdot 0.2 \\ &= 0.625 + 0.766 + 0.084 + 0.0125 \\ &= 1.4875 \end{aligned}$$

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The alpha factor helps us in computing the rate of return that the security will earn when market return is zero.

$$R - R_M = 4.35\% - (0.31) 7.25\% = 2.1025\% \approx 2.103\%$$

Hence, the security will earn a return of 2.103% when the market return is zero and (c) is the answer.

36. Answer : (b)

Reason : Correlation coefficient =

$$\beta_A = \frac{\sigma_{AB}}{\sigma_B^2}$$

$$\beta_B = \frac{\sigma_{BA}}{\sigma_A^2}$$

Therefore stock A has lesser systematic risk. Hence (b) is the answer.

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37. Answer : (d)

Reason : Expected return from that equity share = $0.35 \times 12 + 0.40 \times 14 + 0.25 \times 18 = 14.30\%$.

$$\begin{aligned} \text{Expected risk may be calculated as: } &= \frac{1}{2} \cdot \frac{1}{2} \cdot \frac{1}{2} \cdot \frac{1}{2} \cdot \frac{1}{2} \\ &= \\ &= \\ &= 2.30\%. \end{aligned}$$

Hence (d) is the answer.

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38. Answer : (c)

[< TOP](#)[≥](#)Reason : Expected return = $R_f + \beta (R_m - R_f)$ For security B, $12 = R_f + 0.85 (R_m - R_f) \dots\dots (1)$ For security C, $14 = R_f + 1.20 (R_m - R_f) \dots\dots (2)$ $(1) - (2)$ will give $2 = 0.35 (R_m - R_f)$ $\therefore (R_m - R_f) = 5.714\%$ Substituting in (1), $12 = R_f + 0.85 (R_m - R_f) = R_f + 0.85 (5.714)$ $R_f = 7.1431\%$ Now, for security A, $13\% = 7.1431\% + \beta (5.714\%)$ $\therefore \beta =$

Hence (c) is the answer.

39. Answer : (c)

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Reason : Cover for ordinary dividend =

=

P/E ratio =

EPS =

Therefore P/E ratio = 30.25.

Hence (c) is the answer.

40. Answer : (d)

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Reason : Current assets – Current liabilities = 90,000

Current assets = 1.5 Current liabilities

 $1.5 \text{ Current liabilities} - \text{Current liabilities} = 90,000$

Current liabilities = Rs.1,80,000

Current assets = $1.5 \times \text{Current liabilities} = 1.5 \times 1,80,000 = \text{Rs.}2,70,000$

Now, Quick ratio =

Quick assets = $0.9 \times \text{Current liabilities} = 0.9 \times 1,80,000 = \text{Rs.}1,62,000$ Inventory = Current assets – Quick assets = $2,70,000 - 1,62,000 = \text{Rs.}1,08,000$.Gross profit margin = $20\% = 0.2$ Gross profit = $0.2 \times \text{Sales}$ COGS = Sales – Gross profit = 0.8 Sales $= 0.8 \times 8,10,000 = \text{Rs.}6,48,000$

Inventory turnover =

Hence (d) is the answer.

41. Answer : (b)

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Reason : Given Total debt to owners' equity = 0.6

Therefore, Total debt = $0.6 \times \text{Owners' equity} = 0.6 \times 10,00,000 = \text{Rs.}6,00,000$

Current debt to Total debt = 0.40

 $\Rightarrow$ Current debt = $0.4 \times \text{Total debt} = 0.4 \times 6,00,000 = \text{Rs.}2,40,000$.

Fixed assets to Total debt = 0.8

 $\Rightarrow$ Fixed assets = $0.8 \times \text{Total debt} = 0.8 \times 6,00,000 = \text{Rs.}4,80,000$.Total assets = Total liabilities = Owners' equity + Total debt = $\text{Rs.}10,00,000 + 6,00,000$ $= \text{Rs.}16,00,000$ Current assets = Total assets – Fixed assets = $16,00,000 - 4,80,000 = \text{Rs.}11,20,000$.

Assets turnover =

Sales = $2 \times \text{Assets} = 2 \times 16,00,000 = \text{Rs.}32,00,000$

Inventory turnover =

Inventory = $\text{Sales}/8 = 32,00,000/8 = \text{Rs.}4,00,000$

Inventory to current assets ratio = $4,00,000/11,20,000 = 0.357$

42. Answer : (c)

Reason : Net profit margin =

Profit after tax can be computed as follows:

Income Statement of Amit Enterprises Ltd.

(Rs.)	
Sales (150% of Rs.4,80,000)	7,20,000
Less: Direct costs	4,80,000
Gross profit	2,40,000
Less: Operating expenses	80,000
Earnings before interest and tax	1,60,000
Less: Interest (16% of Rs.4,00,000)	64,000
Profit before tax	96,000
Less tax @ 50%	48,000
Profit after tax	48,000

Therefore net profit margin =

Hence (c) is the answer.

43. Answer : (c)

Reason : Inventory turnover ratio =

Credit sales = $0.4 \times 1,65,00,000 = \text{Rs.}66,00,000$

Average collection period =

Hence (c) is the answer.

44. Answer : (d)

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

Assets turnover =

Sales = $2 \times \text{Assets} = 2 \times 5,50,000 = \text{Rs.}11,00,000$

Inventory turnover =

Inventory = $\text{Sales}/10 = 11,00,000/10 = \text{Rs.}1,10,000$

Average collection period = 36 days

Credit sales = Rs.5,50,000

Average collection period =

Average receivables =

Total assets = Fixed assets + Current assets

Current assets = Total assets – Fixed assets

= $5,50,000 - 2,50,000$

= Rs.3,00,000.

Current assets = Liquid cash + Inventory + debtors

Liquid cash = Current assets – (Inventory + debtors)

= $3,00,000 - (1,10,000 + 55,000)$

= Rs.1,35,000.

Acid-test ratio =

Hence (d) is the answer.

45. Answer : (b)

Reason : We know that dividend yield =

=

= Dividend pay out ratio $\times$ capitalization rate

= $0.3 \times 0.08 = 2.4$ percent.

Dividend yield =

P/E ratio = $1/0.08 \Rightarrow 12.5$

Therefore Price = EPS $\times$ 12.5

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EPS =

Number of shares outstanding = $\text{Rs.}1,00,00,000/20 = 5,00,000$

EPS =

Market price of the share = $10 \times 12.5 = \text{Rs.}125$.

Hence (b) is the answer.

46. Answer : (b)

Reason : Total asset of a company is financed by equity capital and total debt. So, the total asset of Sohail Industries = $\text{Rs.}300 \text{ lakh} + \text{Rs.}500 \text{ lakh} = \text{Rs.}800 \text{ lakh}$.

The return on investment (ROI) of a company is defined as:

ROI =

Here, post-tax income = $\text{Rs.}48 \text{ lakh}$ and so the pre-tax earnings = $\text{Rs.}80 \text{ lakh}$ as the tax rate = 40 percent. Interest expenses = $\text{Rs.}500 \text{ lakh} \times 8 \text{ percent} = \text{Rs.}40 \text{ lakh}$. Hence, the amount of earnings before interest and taxes = $\text{Rs.}80 \text{ lakh} + \text{Rs.}40 \text{ lakh} = \text{Rs.}120 \text{ lakh}$.

So, the return on investment for Sohail Industries Ltd. = 15% percent. Hence (b) is the answer.

47. Answer : (d)

Reason : Earning Power =

Earnings After Tax = $\text{Rs.} 18.0 \text{ lakhs}$.

Therefore, Earnings Before Tax = $\text{Rs.}30 \text{ lakh}$

EBIT = Earnings Before Tax + Interest = $30 + 16 = \text{Rs.} 46 \text{ lakhs}$.

Net profit margin = $\text{Net profit/Net Sales} = 0.05 \Rightarrow \text{Net Sales} = \text{Net profit/Net profit margin} = 18,00,000 / 0.05 = \text{Rs.}3,60,00,000$

Assets Turnover ratio = $\text{Net Sales} / \text{Total assets} = 1.5$

$\Rightarrow \text{Total Assets} = \text{Net Sales} / 1.5 = 3,60,00,000 / 1.5 = \text{Rs.}2,40,00,000$

Therefore, Earning power = $\text{EBIT} / \text{Total Assets} = 46,00,000 / 2,40,00,000 = 19.2\%$

Hence, the correct option is (d).

48. Answer : (e)

Reason : Sustainable growth rate =

Equity capital = $\text{Rs.}12 \text{ lakhs}$

Return On Assets = $\text{Net Profit Margin} \times \text{Assets Turnover Ratio}$

ROA = $\text{NPM} \times \text{ATO}$

$\Rightarrow m = \text{NPM} =$

$\text{A/E} = \text{Equity multiplier} =$

$3.75 =$

Average assets = $\text{Rs.}45 \text{ lakhs}$

ROA =

$0.16 =$

There fore PAT = $\text{Rs.}7.2 \text{ lakhs}$

Sustainable Growth Rate with internal equity

=

Hence, answer is (e).

49. Answer : (e)

Reason : External funds requirements (EFR) of any firm is given by

EFR =

Here, $A = \text{Rs.}360 \text{ lakh}$, $L = \text{Rs.}140 \text{ lakh}$, $S_0 = \text{Rs.}600 \text{ lakh}$, $\Delta S = 600 \times 25\% = \text{Rs.}150 \text{ lakh}$

$S = (600+150) = \text{Rs.}750 \text{ lakh}$.

The net profit margin of the company is $m = 48/600 = 0.08 = 8 \text{ percent}$

Number of shares outstanding = $\text{Rs.}200,00,000 / 40 = 5,00,000$

The amount of dividend paid was = $\text{Rs.}4 \times 5,00,000 = \text{Rs.}20 \text{ lakh}$.

Hence, the dividend payout ratio was $d = 20 / 48 = 0.417$ or 41.7% percent.

So, the required EFR =

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$$= 55 - 34.98 = \text{Rs.}20.02 \text{ lakh}$$

Hence (e) is the answer.

50. Answer : (b)

Reason : According to the Gordon's growth model value per share
= ₹

$$\text{Here, } k_e = R_f + \beta(R_m - R_f) = 6 + 1.36(12 - 6) = 14.16\%.$$

Beta =

Hence (b) is the answer.

51. Answer : (d)

Reason : Present value or intrinsic value of the stock

= PV of future dividend stream + PV of stock price at the end of the above normal growth period.

PV of future dividend stream is calculated as follows:

End of Year	Dividend	PV at 16% (Rs.)
1	$3(1.14) = 3.42$	2.95
2	$3(1.14)^2 = 3.9$	2.90
3	$3(1.14)^3 = 4.44$	2.85
4	$4.44(1.11) = 4.93$	2.72
5	$4.44(1.11)^2 = 5.47$	2.60
6	$4.44(1.11)^3 = 6.07$	2.49
		16.51

PV of stock price at the end of above normal growth period, i.e., at the end the year 6.

= where, K is the return required, by equity investors and g is the growth rate.

Dividend for the year 7 = Rs.6.07 (1.04) = Rs.6.31.

Market price at the end of year 6 =

Present value of Rs.52.58 @16% =

Hence, total value of the stock = Rs. (16.51 + 21.58) = Rs.38.09.

Therefore, Rs.38.09 can be paid now to acquire the stock.

52. Answer : (c)

$$\begin{aligned} \text{Reason : } P_0 &= 12 \times \text{PVIFA}_{(13\%,10)} + 105 \times \text{PVIF}_{(13\%,10)} \\ &= 12 \times 5.426 + 105 \times 0.295 = \text{Rs.}96.087. \end{aligned}$$

Hence (c) is the answer.

53. Answer : (c)

Reason : Current yield = Coupon interest / Market price

Since the bond is redeemed at par, market price = Rs.100

Coupon interest = current yield x market price = 0.12 x 100 = Rs.12.

Since the investor faces a tax of 30% of income, it will be 12 x 0.7, and since there is no capital gain, capital gain tax is zero.

Let the yield to maturity be 'i'. Then,

$$100 = 12 \times 0.7 \times \text{PVIFA}_{(i,5)} + 100 \times \text{PVIF}_{(i,5)}$$

"i" can be found out by trial and error method.

For i = 8%, R.H.S = Rs.101.64

For i = 9%, R.H.S = Rs.97.676

By interpolation,

$$i = \text{(app) } 8.4\%$$

Hence (c) is the answer.

54. Answer : (c)

Reason : EPS =

EPS =

Hence, market price per share = $P_0 = \text{Rs.}4 \times 2.5 = \text{Rs.}10$

Since, dividend pay-out ratio = 50%

 $\text{DPS} = 50\% \times \text{Rs.}4 = \text{Rs.}2 = D_0$ Given, growth rate of earnings = $g = 0.04$

Required rate of return by equity share holders

 $K_e =$

Where,

$$D_1 = \text{Dividend at the end of the year} = D_0 (1 + g)$$

$$= \text{Rs.}2 (1 + 0.04) = \text{Rs.}2.08.$$

 $K_e =$

Hence (c) is the answer.

55. Answer : (e)

Reason : The market interest rate increases by 2%, then the interest rate for similar type of bonds will be $(12.16\% + 2\%) 14.16\%$.

Here coupon will be paid @ 7% for the first four years. During the second half of the fourth year, half amount, i.e, Rs.500 is redeemed. Therefore coupon during the fifth year is paid only on the remaining amount of Rs.500. The remaining Rs.500 is also redeemed during the second half of the 5th year.

Therefore, price of bond =

$$= 70 \times \text{PVIFA}_{(7.08, 8)} + 500 \times \text{PVIF}_{(7.08, 8)} + 35 \times \text{PVIF}_{(7.08, 9)} + 535 \times \text{PVIF}_{(7.08, 10)}$$

$$= 70 \times 5.953 + 500 \times 0.579 + 35 \times 0.540 + 535 \times 0.505$$

$$= \text{Rs.}995.285 \approx \text{Rs.}995.29 \text{ (app).}$$

Hence (e) is the answer.

56. Answer : (a)

Reason :

Particulars	31.03.2006	31.03.2007	Working Capital	
			Increase	Decrease
Current Assets				
Stock-in-trade	92,000	1,06,000	14,000	—
Prepaid expenses	1,000	2,000	1,000	—
Short term investments	1,10,000	84,000	—	26,000
Sundry debtors	77,000	73,000	—	4,000
Cash and bank balances	50,000	40,000	—	10,000
(A)	3,30,000	3,05,000		
Current Liabilities				
Outstanding expenses	13,000	22,000	—	9,000
Sundry creditors	1,03,000	96,000	7,000	
(B)	1,16,000	1,18,000	27,000	
Working capital (A-B)	2,14,000	1,87,000	49,000	49,000

Therefore decrease in working capital is Rs.27,000

Hence (a) is the answer.

57. Answer : (c)

Reason : In this case, the future value should be equated to the annuity amount multiplied by the $\text{FVIFA}_{(9\%, 10 \text{ years})}$, i.e.,

$$10,00,00,000 = \text{Annuity amount} \times \text{FVIFA}_{(9\%, 10 \text{ years})}$$

$$\text{Annuity amount} = 10,00,000 / 15.193 = \text{Rs.}65,819.785 \approx \text{Rs.}65,820.$$

Hence (c) is the answer.

58. Answer : (b)

[< TOP](#)Reason : Quarterly rate of interest is $12/4 = 3.0$ percent $= 0.03 = r$ (say)[>](#)

Tenure of the scheme = 6 years = 24 quarters.

The maturity value of this recurring deposit plan will be =

$$\text{Rs.}500 \times \text{FVIFA}_{(3\%, 24)}(1+0.03) = 500 \times 34.426 \times 1.03 = \text{Rs.}17,729.39 \approx \text{Rs.}17,729$$

(approximately).

59. Answer : (e)

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Reason : First we need to find the annual interest rate. It is given that the interest rate is compounded quarterly, therefore the effective annual rate (EAR) of interest is found out as follows:

EAR =

$$\text{Monthly rate of return} = \sqrt[12]{\quad} = 0.0095 \approx 0.95\%$$

Total number of months = 120

The value of the pension annuity today can be found out in two steps.

Step 1: find the present value of the annuity in the 9th year as the payment starts in the tenth year.

$$\text{i.e., Annuity value} \times \text{PVIFA}_{(0.95\%, 120)} = 2,000 \times 71.53 = \text{Rs.}1,43,050$$

Step 2: Find the present value of the figure obtained in step 1, i.e.,

$$\text{Rs.}1,43,050 \times \text{PVIF}_{(0.95\%, 120)} = 1,43,050 \times 0.322 = \text{Rs.}45,997.$$

60. Answer : (d)

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Reason : The Equated annual payment (EAP) which is computed comprises of both the interest and the principle amount. In this case, we need to first compute the EMI and then compute the break up of interest and principle amount. This will give us the amount of principle to be repaid at the end of each year. Thus while making the fourth payment, the EMI plus the principle amount remaining has to be paid.

$$1,00,000 = \text{EAP} \times \text{PVIFA}_{(8\%, 6)}$$

EAP =

Now let us see the breakup of the EAP.

Year	Principle (1)	Interest component (2) = (1) x 0.08	Principle component (3) = EAP – (2)	Principle remaining (4) = (1) – (3)
1	1,00,000	8,000.00	13,630.98	86,369.02
2	86,369.02	6,909.52	14,721.46	71,647.56
3	71,647.56	5,731.80	15,899.18	55,748.38
4	55,748.38	4,459.87	17,171.11	38,577.27
5	38,577.27	3,086.18	18,544.80	20,032.47*
6	20,032.47	1,602.60	20028.38*	-

*Actually these figures should be the same. But due to rounding off there is a minor deviation.

Now the amount to be paid at the end of fourth year:

= EMI + the principle amount remaining at the end of fourth year

$$= \text{Rs.}21,630.98 + \text{Rs.}38,577.27$$

$$= \text{Rs.}60,208.25 \approx \text{Rs.}60,208.$$

Hence (d) is the answer.

61. Answer : (b)

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Reason : According to the given information subscribers will deposit Rs.25,000 for 20 years and after 20 years scheme will pay Rs.1,00,000 at the end of every year for 25 years plus Rs.x at the end of 20 years from now.

The discount rate is 11%.

Therefore the data can be fit into an equation as

$$25,000 \times \text{FVIFA}_{(11\%, 20)} = X + 1,00,000 \times \text{PVIFA}_{(11\%, 25)}$$

$$25,000 \times 64.203 = X + 1,00,000 \times 8.422$$

$$16,05,075 = X + 8,42,200$$

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X = the amount which will be returned = Rs.7,62,875

Hence (b) is the answer.

62. Answer : (d)

Reason : Operating leverage is given as

EBIT can be calculated as follows:

	1,000 units	1,400 units
Sales @ Rs.10 per unit	10,000	14,000
(-) Variable cost @ Rs.7 per unit	7,000	9,800
Contribution	3,000	4,200
(-) Fixed cost	1,000	1,000
EBIT	2,000	3,200

Operating leverage =

% change in EBIT =

% change in sales =

Hence (d) is the answer.

63. Answer : (d)

Reason : Degree of total leverage =

Total Assets turnover ratio =

Sales = 3 x Total assets = 3 x 2,00,000 = Rs.6,00,000

	Rs.
Sales	6,00,000
(-) Variable cost (40%)	2,40,000
Contribution	3,60,000
(-) Fixed cost	1,00,000
EBIT	2,60,000
(-) Interest @ 10% on Rs.80,000	8,000
EBT	2,52,000
Tax @ 40%	1,00,800
PAT	1,51,200
No. of shares outstanding	6,000
EPS	25.2

DTL =

If sales increase by 45%, new EPS = ?

DTL =

Therefore, % change in EPS = DTL x % change in sales = 1.43 x 45% = 64.35%.

∴ The EPS of the company is = 25.2 x (1 + 0.6435) = Rs.41.42

Hence (d) is the answer.

64. Answer : (e)

Reason : Given Financial leverage =

EBIT = 2 x PBT ----- (A)

EBIT – Interest = PBT

EBIT – 30,000 = PBT

Substituting in (A),

EBIT = 2 x (EBIT – 30,000)

EBIT = 2EBIT – 60,000

EBIT = Rs.60,000

Therefore PBT = EBIT / 2 = Rs.30,000.

Also Operating leverage =

Contribution = 1.6 EBIT = 1.6 x 30,000 = Rs.48,000

But Sales – Variable cost = Contribution

Sales – 0.75 Sales = Contribution = 48,000

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$$0.25 \text{ Sales} = 48,000$$

$$\text{Sales} = \text{Rs.}1,92,000.$$

Hence (e) is the answer.

65. Answer : (c)

Reason : First we need to find out the overall break-even point for any company is

$$Q =$$

$$\text{For Bharath chemicals, } S - V = \text{Rs.}500 \times 20\% = \text{Rs.}100,$$

$$F = \text{Rs.}90,000 \text{ and } I = \text{Rs.}75,000 \text{ while Initially } D_p = 0.$$

$$\text{Hence, } Q = 1,650$$

If the overall breakeven point increases by 200 units, $Q = 1,850$ units.

From the above equation, we can get D_p

$$D_p = \text{Preference capital} \times \text{interest rate}$$

$$\text{Preference capital} = D_p / 0.1 = 12,000 / 0.1 = \text{Rs.}1,20,000.$$

Hence (c) is the answer.

66. Answer : (e)

Reason : At the financial break even point, $EBIT = I +$

$$\text{i.e. } I + = \text{Rs } 2,10,000.$$

$$DFL = =$$

Hence, (e) is the answer.

67. Answer : (c)

Reason :

Overall breakeven point =

We need to compute the fixed costs and sales.

Let S represent Sales, V represent variable costs and F represent fixed costs.

$$\text{Degree of Operating Leverage} = 1.1$$

$$\text{i.e.} = 1.1$$

$$\text{i.e. } 0.6 S = 0.66S - 1.1F$$

$$\text{i.e. } 0.06 S - 1.1F = 0. \text{ ----- (Equation 1)}$$

Degree of Financial Leverage

$$= 1.5.$$

$$\text{i.e.} = 1.5$$

$$= 1.5$$

$$\text{i.e. } 0.6S - F = 0.9S - 1.5 F - 210,00,000$$

$$\text{i.e. } 0.3S - 0.5F = 210,00,000. \text{ ----- (Equation 2)}$$

Multiplying equation 1 by 0.3 and multiplying equation 2 by 0.06, and solving the resultant equations, we get

$$\text{Putting the value of } F \text{ in equation 1, we get } S = \text{Rs. } 770,00,000$$

$$\text{Variable costs} = 0.4 \times 770,00,000 = \text{Rs.}3,08,00,000 = \text{Rs.}3.08 \text{ crore}$$

Hence (c) is the answer.

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