

Question Paper

Financial Management – I (141) : October 2005

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

1. Shareholder wealth in a firm is represented by < Answer >
 - (a) The number of people employed in the firm
 - (b) The book value of the firm's assets less the book value of its liabilities
 - (c) The amount of salary paid to its employees
 - (d) The market price per share of the firm's common stock
 - (e) The book value of the firm's assets.

(1 mark)
2. By which of the following means, can Government Securities be held? < Answer >
 - I. Stock certificates.
 - II. Promissory notes.
 - III. Bearer bonds.
 - (a) Only (I) above
 - (b) Only (II) above
 - (c) Only (III) above
 - (d) Both (I) and (III) above
 - (e) All (I), (II) and (III) above.

(1 mark)
3. Which of the following is false? < Answer >
 - (a) Operating leverage measures the relationship between sales revenue and EBIT
 - (b) Operating leverage is calculated by dividing the percentage change in EBIT by the percentage change in sales revenue
 - (c) Operating leverage measures the effect of change in sales revenue on the level of EBIT
 - (d) Operating leverage is calculated by dividing %change in sales revenue by the percentage change in EBIT
 - (e) If Operating leverage is 1, it means the fixed cost of the firm is Zero.

(1 mark)
4. Which of the following is/are **true** regarding the capital recovery factor? < Answer >
 - I. It is the present value of an annuity receivable at the end of every year for a period of n years at a rate of interest k.
 - II. It represents the amount that has to be paid annually to liquidate a loan over a specified period at a given rate of interest.
 - III. It can be applied to find out the amount to be withdrawn at equal intervals for a certain period, if a given amount is invested today.
 - (a) Only (II) above
 - (b) Only (III) above
 - (c) Both (II) and (III) above
 - (d) Both (I) and (III) above
 - (e) All (I), (II) and (III) above.

(1 mark)
5. If a bond sells at a premium, then which of the following holds true? < Answer >
 - (a) $P_0 < \text{par value}$ and $\text{YTM} > \text{coupon rate}$
 - (b) $P_0 < \text{par value}$ and $\text{YTM} < \text{coupon rate}$
 - (c) $P_0 > \text{par value}$ and $\text{YTM} = \text{coupon rate}$
 - (d) $P_0 > \text{par value}$ and $\text{YTM} < \text{coupon rate}$
 - (e) $P_0 = \text{par value}$ and $\text{YTM} > \text{coupon rate}$.

(1 mark)
6. Which of the following results from the early repayment of the debenture capital by a firm? < Answer >
 - (a) The degree of operating leverage increases
 - (b) The degree of operating leverage decreases

- (c) The degree of financial leverage increases
- (d) The degree of financial leverage decreases
- (e) The degree of total leverage remains unchanged.

(1 mark)

< Answer >

7. Which of the following ratios does not affect the ROE in Du Pont analysis?

- (a) Debt assets ratio (b) Assets turnover ratio (c) Sales turnover ratio
(d) Net profit margin (e) Assets to equity ratio.

(1 mark)

< Answer >

8. Which of the following is the primary purpose of the cash budget?

- I. To break down income statement into monthly periods.
- II. To determine monthly cash receipts.
- III. To determine the collection pattern.
- IV. To allow the firm to anticipate the need for outside funding.

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

(1 mark)

< Answer >

9. Debt to Equity ratio for a company is 1.6 and the industry average is 1.4. This implies that the company

- (a) Will get better credit terms from suppliers
- (b) Has less liquidity than other firms in the industry
- (c) Will be viewed as having high credit worthiness
- (d) Has greater than average financial risk when compared to other firms in the industry
- (e) Will see the increase in it's share value.

(1 mark)

< Answer >

10. Which of the following Euro instruments is a medium-term legally binding commitment under which, a borrower can issue short-term paper of maturity upto one year?

- (a) Note Issuance Facilities (b) Commercial paper (c) Straight debt bonds
(d) Floating Rate Notes (e) Medium-term notes.

(1 mark)

< Answer >

11. 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?

- The operating break-even point of the company will come down
- The company will be able to reach the financial break-even point easily
- The degree of operating leverage will be zero
- The degree of total leverage will reduce to zero
- The degree of total leverage will increase.

(1 mark)

< Answer >

12. Which of the following is **not** a function of the finance manager?

- (a) Deployment of funds
- (b) Risk-return trade off
- (c) Giving proposals for investment in various technical projects
- (d) Mobilization of funds
- (e) Control over the use of funds.

(1 mark)

< Answer >

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

- It is possible to construct a portfolio in such a way that the total risk of the portfolio is less than the sum of the risk of the individual assets taken together
- In general, it is always possible to build a perfectly negatively correlated portfolio, if selection is done properly
- The amount of risk reduction achieved by diversification also depends on the number of stocks in the portfolio
- Non-diversifiable risk of a portfolio is that part of total risk that is related to general economy
- The systematic relationship between the return on the security or a portfolio and the return on the market can be described using a simple linear regression.

(1 mark)

< Answer >

14. Which one of the following statements about Companies Act is/are **not true**?

- I. A minimum paid-up capital limit of Rs.1.00 Lac and Rs.5.00 Lac has been fixed for private and

public limited companies respectively.

- II. A public limited company can issue only two kinds of shares – preference shares and equity shares.
- III. There has to be a provision for the constitution of audit committees of the board in public companies with a paid-up capital of Rs.10 crore and above

- (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)

15. Which is **false** in relation to Futures?

[< Answer >](#)

- (a) A futures contract obligates the buyer to purchase the underlying instrument, and the seller to sell it, unless the contract is sold to another before settlement date, which may happen in order to take a profit or limit a loss
- (b) Futures contracts are traded on an organized exchange with standardized terms of contract
- (c) Future contracts specify the quantity and the quality of the commodity that can be delivered to fulfill the futures contract
- (d) Trading of futures is usually done through hedgers as brokers are not located on the floor of the exchange
- (e) The clearing house insists on margin and daily settlement for safeguarding the interests of both the parties to perform their contractual obligation.

(1 mark)

16. A stock with a beta of 1.25 would be expected to

[< Answer >](#)

- (a) Increase 25% faster than the market in up markets
- (b) Increase 25% faster than the market in down markets
- (c) Decrease 25% faster than the market in up markets
- (d) Increase 125% faster than the market in up markets
- (e) Decrease 125% faster than the market in up markets.

(1 mark)

17. Which of the following statements is/are **not true** regarding a rights offering?

[< Answer >](#)

- I. The position of current shareholders is protected.
 - II. A rights offering provides the firm with a built-in securities market.
 - III. More interest may be generated in the market.
 - IV. The Rupee value of rights traded on exchanges is high.
- (a) Only (I) above
 - (b) Only (II) above
 - (c) Only (IV) above
 - (d) (I),(II) and (III) above
 - (e) (I), (III) and (IV) above.

(1 mark)

18. Which of the following components of total return represents the return you receive, while owning the investment?

[< Answer >](#)

- (a) The capital gain
- (b) The income component
- (c) Your reward for bearing risk
- (d) Your total rupee return
- (e) Your gross return on that investment.

(1 mark)

19. ABC Corporation has current assets of Rs.90,000 and current liabilities of Rs.1,80,000. Which of the following transactions would improve the current ratio?

[< Answer >](#)

- (a) Refinancing a Rs.30,000 long-term mortgage with a short-term note
- (b) Purchasing Rs.50,000 of merchandise inventory with a short-term account payable
- (c) Paying Rs.20,000 of short-term accounts payable
- (d) Collecting Rs.10,000 of short-term accounts receivable
- (e) Paying the accrued expenses worth Rs.30,000.

(1 mark)

20. Which of the following is **true** when you are examining two perpetuities which are identical in every aspect, except that perpetuity A will begin making annual payments of Rs.X to you two years from today while the first Rs.X payment of perpetuity B will occur one year from today?

[< Answer >](#)

- (a) The present value of perpetuity A is greater than that of B by Rs.X
- (b) The present value of perpetuity B is greater than that of A by Rs.X
- (c) The present value of perpetuity B is equal to that of perpetuity A
- (d) The present value of perpetuity A exceeds that of B by the PV of Rs.X for one year

- (e) The present value of perpetuity B exceeds that of A by the PV of Rs.X for one year.

(1 mark)

< Answer >

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

- I. If you invest in stocks with higher-than-average betas, you are certain to earn higher-than-average returns over the next year.
- II. The projected risk premium is defined as the sum of the expected return on a risky investment and the return on a risk-free investment.
- III. The riskiness associated with individual assets can be partially eliminated by forming portfolios.

- (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)

< Answer >

22. Which of the following statements is/are **true** regarding liquidity ratios?

- I. The ratios like receivables turnover ratio and inventory turnover ratio are the only ratios used to measure liquidity.
- II. A firm, which has large amount of accounts receivable, is more liquid than a firm with a high amount of inventories in its current assets, though both the firms may have the same current assets and current liabilities.
- III. Current ratio is useful in measuring and predicting the future fund flows.

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

(1 mark)

< Answer >

23. Which of the following is **not** true for exchange rates?

- I. Under Direct Quotation method, the exchange rate is expressed as the price per unit of foreign currency in terms of home or local currency equal to one unit of foreign currency.
- II. In an indirect quotation, the principle adopted is “buy low, sell high”.
- III. USD 1 = Rs.43.75 – Rs.43.60 (In this example, 43.60 is buying rate and 43.75 is selling rate)

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

(1 mark)

< Answer >

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

- I. Money Market Mutual Funds (MMMFs) can either be open-ended or close-ended.
- II. The minimum size of the MMMFs should be Rs.50 crore and this should not exceed 2% of the aggregate deposits of the latest accounting year in case of banks.
- III. The minimum size of the MMMFs should be Rs.50 crore and this should not exceed 4% of the long term domestic borrowings in the case of public financial institutions.

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

(1 mark)

< Answer >

25. Which of the following is/are **true**, when annual rate of interest (r) and time (t) are greater than zero?

- I. Present value interest factors are less than 1.0.
- II. Future value interest factors are less than 1.0.
- III. Present value interest factors are greater than future value interest factors.

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

(1 mark)

< Answer >

26. Stock A has a beta of 0.8 and Stock B has a beta of 1.2. 50 percent of Portfolio P is invested in Stock A and 50 percent is invested in Stock B. If the market risk premium ($k_M - k_{RF}$) were to increase but the risk-free rate (k_{RF}) remained constant, which of the following would occur?

- (a) The required return will decrease by the same amount for both Stock A and Stock B
- (b) The required return will increase for both stocks but the increase will be greater for Stock B than

for Stock A

- (c) The required return will increase for Stock A but will decrease for Stock B
- (d) The required return will increase for Stock B but will decrease for Stock A
- (e) The required return on Portfolio P will remain unchanged.

(1 mark)

< Answer >

27. Which of the following is **not true** with respect to External Funds Requirement?

- (a) If the net profit margin increases EFR decreases
- (b) If the Dividend Pay-out Ratio increases EFR increases
- (c) If the asset to sales ratio increases EFR increases
- (d) If the growth rate increases EFR increases
- (e) The growth rate is the growth rate of the earnings.

(1 mark)

< Answer >

28. Which of the following is depicted by the yield curve?

- (a) Bond yields and default risk
- (b) Bond maturity and bond ratings
- (c) Current bond yields and maturity
- (d) Promised yields and default premiums
- (e) Bond yields and bond duration.

(1 mark)

< Answer >

29. Which of the following is **true** in the calculation of funds generated from operations?

- (a) The provision for tax shown in the balance sheet should be added to net profit
- (b) The provision for tax shown in the income statement should be deducted from net profit
- (c) The provision for tax shown in the income statement should be added to net profit
- (d) The provision for tax shown in the balance sheet should be deducted from net profit
- (e) The provision for tax stated is not considered.

(1 mark)

< Answer >

30. Which of the following statements in relation to bought-out deal is **not true**?

- I. It is the method of raising additional finance from existing members by offering securities to them on pro rata basis.
- II. Bought-out deals are also known as Angels in UK.
- III. In a bought-out deal shares are generally offloaded through the mechanism of the Over the Counter exchange of India.

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

(1 mark)

< Answer >

31. Which of the following is/are **true** regarding the Warrants and Convertibles?

- I. The actual value of a warrant will be equal to the theoretical value on the expiry date.
- II. Since converted stock is affected by tax, corporate investors are more keen to invest, as they do get tax shield.
- III. The maximum value of the convertible based on the current price of the issuer's stock is the conversion value.

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

(1 mark)

< Answer >

32. Which of the following can affect the price-earnings ratio a firm?

- I. The earnings and sales growth of the firm.
- II. The volatility of the firm's performance.
- III. The debt-equity structure of the firm.

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

(1 mark)

< Answer >

33. Which of the following is **true** when there is an increase in the inflation premium?

- (a) The yield to maturity will decrease
- (b) The price of the bond will decrease
- (c) The maturity of the bond will change proportionally
- (d) There will be no effect on the price of the bond
- (e) The price of the bond will increase.

(1 mark)

< Answer >

34. Which of the following is least likely to be a reason for seeking stock market floatation?

- (a) Building the company's image
- (b) Gaining access to wider and larger sources of finance
- (c) Creating an "exit" mechanism for some existing shareholders
- (d) Improving the amount of control exerted by the existing owners over the business
- (e) For efficient capital allocation.

(1 mark)

< Answer >

35. Which of the following statements is/are **true** with respect to funds flow statement?

- (a) It shows the changes in the ownership patterns of the company
- (b) It shows the sources and uses of funds at any particular date in a year
- (c) It can be considered as a snapshot picture for the operations of the business
- (d) It cannot be manipulated by means of window dressing
- (e) It indicates how the business financed its fixed assets.

(1 mark)

< Answer >

36. Which of the following statements is **correct**?

- (a) An increase in expected inflation could be expected to increase the required return on a riskless asset
- (b) A graph of the SML would show required rates of return on the vertical axis and standard deviations of returns on the horizontal axis
- (c) If two "normal" or "typical" stocks were combined to form a 2-stock portfolio, the portfolio's expected return would be a weighted average of the stocks' expected returns, but the portfolio's standard deviation would probably be greater than the average of the stocks' standard deviations
- (d) If investors become more risk averse, then (1) the slope of the SML would increase and (2) the required rate of return on low-beta stocks would increase by more than the required return on high-beta stocks
- (e) The CAPM has been thoroughly tested, and the theory has been confirmed beyond any reasonable doubt.

(2 marks)

< Answer >

37. Who of the following do not have any risk to hedge?

- I. Hedgers.
- II. Arbitrageurs.
- III. Speculators.

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

(1 mark)

< Answer >

38. The value of a business asset or security is _____ related to the expected cash flows of the asset, _____ related to the risk of the asset.

- (a) inversely; directly
- (b) directly; inversely
- (c) not; not
- (d) directly; directly
- (e) inversely, inversely.

(1 mark)

< Answer >

39. In the constant-growth dividend valuation model, the required rate of return on a common stock can be shown to be equal to the sum of the dividend yield plus.

- (a) Yield-to-maturity
- (b) Cost of capital
- (c) Present value yield
- (d) Price appreciation yield
- (e) Risk free interest rates.

(2 marks)

< Answer >

40. Through which of the following it is possible to raise fresh capital through public offering in the US Capital markets?

- (a) GDRs
- (b) ADR Level-I
- (c) ADR Level-II

(d) ADR Level-III

(e) Eurobonds.

(1 mark)[< Answer >](#)

41. You have invested Rs.3,000 in a deposit paying 12.4% p.a., compounded semi-annually. How much would you have in your account after 4 years?

- (a) Rs.4,788.36 (b) Rs.4,682.18 (c) Rs.4,854.20
(d) Rs.4,600.00 (e) Rs.6,280.50.

(2 marks)[< Answer >](#)

42. Consider the following data:

Risk-free rate of return	6% p.a.
Market risk premium	8% p.a.
Beta of stock X	1.15

If the risk free rate of return increases to 8% p.a. and the slope of the SML remains constant, the existing and the new required rate of return will be

- (a) 8.3%; 10.3% (b) 8.3%; 8.0% (c) 15.2%; 19.5%
(d) 15.2%; 17.2% (e) 10.2%; 12.2%.

(2 marks)[< Answer >](#)

43. Laxmi is considering investing in India Cements Ltd. Stock, and her broker has told her that she can purchase it for Rs.72. She requires a return 12% for this type of investment. The last dividend that India Cements Ltd. paid was Rs.4 and a 6% constant growth rate is anticipated. Should Laxmi purchase India Cements Ltd.?

- (a) No, because the stock is overpriced by Rs.1.33
(b) No, because the stock is overpriced by Rs.3.33
(c) Yes, because the stock is underpriced by Rs.1.33
(d) Yes, because the stock is underpriced by Rs.3.33
(e) Yes, because the stock is underpriced by Rs.4.25.

(2 marks)[< Answer >](#)

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

- (a) Rs. 133.33 (b) Rs. 33.30 (c) Rs. 53.58
(d) Rs. 84.40 (e) Rs. 750.00.

(2 marks)[< Answer >](#)

45. The market price of Rs.1,000 par value bond carrying a coupon of 14% and maturing after 5 years is Rs.1,050. The approximate Yield to Maturity (YTM) shall be:

- (a) 12.62% (b) 12.00% (c) 14.62% (d) 13.62% (e) 11.92%.

(2 marks)[< Answer >](#)

46. Consider the following for the year 2004-05:

Sales	Rs.10,00,000
Gross Profit Margin	40%
Current Ratio	2.5
Total Assets Turnover Ratio	2
Inventory Turnover Ratio	8
Fixed Assets : Current Assets	3:1

The quick ratio is

- (a) 0.6 (b) 0.8 (c) 1.0 (d) 1.2 (e) 1.5.

(2 marks)[< Answer >](#)

47. An unemployed youth is trying to determine whether to open a vegetable-burger shop near a university. The youth expects to have total fixed costs per year of Rs.50,000 a sale price per burger of Rs.10.00, and variable costs per burger of Rs.7.50. What percentage of every rupee sales will contribute to covering the fixed costs?

- (a) 30% (b) 35% (c) 25% (d) 40% (e)

45%.

(2 marks)

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

[< Answer >](#)

Probability (P)	Returns of stock of M/s. ACRO Ltd. (%)	Market returns (%)
0.30	7	9
0.35	8	5
0.15	14	10
0.20	16	14

The variance associated with the market returns is 10.6875(%)². The risk-free rate of return is 6%. According to CAPM, the risk premium for the stock of M/s. ACRO Ltd. is

- (a) 1.77% (b) 2.43% (c) 2.56% (d) 2.72% (e) 3.39%.

(2 marks)

49. You plan to buy a new flat screen TV set. The dealer offers to sell the set to you on credit at 15 % p.a. compounded quarterly. As an alternative to buying on credit, you can borrow the funds from your bank, but the bank will make you pay interest each month. At what nominal bank interest rate should you be indifferent between the two types of credit?

[< Answer >](#)

- (a) 13.76% (b) 14.21% (c) 14.82% (d) 15.54% (e) 15.40%.

(2 marks)

50. If 14-day T-bills of face value Rs.100 are issued at a price of Rs.97, the yield on the bill is approximately

[< Answer >](#)

- (a) 11.0% (b) 19.4% (c) 21.7% (d) 78.2% (e) 80.6%.

(2 marks)

51. Jaya Ltd. is forecasting EPS of Rs.5.00 per share for next year. The firm has 1,00,000 shares outstanding, it pays 12 percent interest on its debt, and it faces a 40 percent marginal tax rate. Its estimated fixed costs are Rs.2,00,000 while its variable costs are estimated at 45 percent of sales revenue. The firm's target capital structure is 50 percent equity and 50 percent debt and it has total assets of Rs.10,00,000. On what level of sales is the company basing its EPS forecast?

[< Answer >](#)

- (a) Rs.4,00,023 (b) Rs.5,00,025 (c) Rs.9,16,000
(d) Rs.19,87,879 (e) Rs.14,56,279.

(2 marks)

52. Bhiraj Ltd. has an EBIT of Rs.40 lakhs, and its degree of total leverage is 2.4. The firm's debt consists of Rs.200 lakh in bonds with a 10 percent yield to maturity. The company is considering a new production process that will require an increase in fixed costs but a decrease in variable costs. If adopted, the new process will result in a degree of operating leverage of 1.4. The chairman wants to keep the degree of total leverage at 2.4. If EBIT remains at Rs.40 lakhs, what amount of bonds must be outstanding to accomplish this (assuming the yield to maturity remains at 10 percent)?

[< Answer >](#)

- (a) Rs.167 lakh (b) Rs.185 lakh (c) Rs.192 lakh
(d) Rs.198 lakh (e) Rs.201 lakh.

(2 marks)

53. SFI Limited is trying to determine an acceptable growth rate in sales. While the firm wants to expand, it does not want to use any external funds to support such expansion due to the particularly high interest rates in the market now. Having gathered the following data for the firm, what is the maximum growth rate it can sustain without requiring additional funds?

[< Answer >](#)

Assets to Sales Ratio = 1.2
Profit margin = 10%
Dividend payout ratio = 50%
Current sales = Rs.100,000
Spontaneous liabilities = Rs.10,000

- (a) 3.6% (b) 4.8% (c) 5.2% (d) 6.1% (e) 5.7% .

(2 marks)

54. Consider the following financial data of M/S. Bhavya Ltd.

[< Answer >](#)

Equity capital	Rs.1,10,000
Total debt/equity ratio	0.60
Acid test ratio	1.2
Total assets turnover ratio	1.5
Average collection period	40 days
Gross profit margin	20%
Inventory ratio	5

The difference between receivables and cash is

- (a) Rs.20, 534 (b) Rs.20, 000 (c) Rs.20, 678
(d) Rs.40, 645 (e) Rs.32, 789.

(2 marks)

[< Answer >](#)

55. A firm has a return on equity of 20% and the directors have decided to retain 40% of their total earnings for future capital expenditure. The risk of this firm is such that equity holders expect a 30% return. The firm just paid a dividend of Rs.1. Given this information, the price of the stock will be

- (a) Rs. 7.81 (b) Rs. 4.91 (c) Rs. 5.89
(d) Rs. 4.71 (e) Rs. 10.07.

(2 marks)

[< Answer >](#)

56. The following data is extracted from the statements of Harsha Ltd. for the year 2004-05:

Net income after taxes : Rs.83,26,600.

Depreciation of Rs. 7,95,200 was deducted in arriving at net income for the fiscal year.

Plant equipment having net book value of Rs.4,32,100 was sold in August 2004, and loss on sale was Rs.1,33,400.

Tax refund : Rs. 2,84,300

Preference shares were retired for Rs.7,64,000.

Dividends paid : Rs. 58,52,100.

What was the net increase in Working Capital for the year ended March 31, 2005?

- (a) Rs.30,88,700 (b) Rs.66,16,100 (c) Rs. 97,04,800
(d) Rs. 2,98,700 (e) Rs.83,26,600.

(2 marks)

[< Answer >](#)

57. If the fixed cost is Rs.30,000, the operating BEP in units is 3000 and financial BEP is Rs.5000, the overall BEP in units is

- (a) 2000 (b) 2500 (c) 3000 (d) 3500 (e) 4000.

(1 mark)

[< Answer >](#)

58. Consider the following data regarding M/s. XIUS Ltd.:

Operating profit	Rs.1,00,000
Profit after tax	Rs. 50,000
10% Preference shares	Rs.1,00,000
Degree of total leverage	4
Tax rate	20%

If EBIT has to increase by 10%, sales have to be increased by

- (a) 10% (b) 8% (c) 5% (d) 4% (e) 2.5%.

(2 marks)

[< Answer >](#)

59. Mr. Venkatesh has borrowed Rs.6,00,000 from a housing finance company. The loan carries interest at the rate of 12 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.1,45,950 (b) Rs.1,80,750 (c) Rs.2,25,000
(d) Rs.2,50,750 (e) Rs.2,75,500.

(2 marks)

[< Answer >](#)

60. Assume that the risk-free rate is 5 percent and that the market risk premium is 7 percent. If a stock has a required rate of return of 13.75 percent, what is its beta?

- (a) 1.25 (b) 1.35 (c) 1.37 (d) 1.60 (e) 1.96.

(1 mark)

61. Consider the following data regarding the companies M/s. X Ltd. and M/s. Y Ltd.

< Answer >

Particulars	X Ltd. (Rs.)	Y 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 X declared a dividend of 6% and company Y declared a dividend of 8% for the current year.

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

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

- (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.

(2 marks)

62. For Bhawani Automobiles Ltd. (BAL), the total assets turnover ratio is 2 and the spontaneous liabilities amount to 20 percent of total sales. BAL wants to maintain 100 percent dividend pay-out ratio on its net profit. If it targets to increase the sales volumes by Rs.70 lakh, what will be the amount of external funds requirements?

< Answer >

- (a) Rs.14 lakh
- (b) Rs.21 lakh
- (c) Rs.35 lakh
- (d) Rs.49 lakh
- (e) Rs.56 lakh.

(2 marks)

63. Consider the following information regarding M/s. INTRA Ltd. for the year 2004-05:

< Answer >

Earnings after tax	Rs.9,00,000
Interest payment	Rs.8,00,000
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)

64. A fund manager is holding the following stocks:

< Answer >

Stock	Amount Invested	Beta
1	Rs.300 million	1.2
2	Rs.560 million	1.4
3	Rs.320 million	0.7
4	Rs.230 million	1.8

The risk-free rate is 5 percent and the market risk premium is also 5 percent. If the manager sells half of her investment in Stock 2 (Rs.280 million) and puts the money in Stock 4, by how many percentage points will her portfolio's required return increase?

- (a) 0.36%
- (b) 0.22%
- (c) 2.00%
- (d) 0.20%
- (e) 0.40%.

(2 marks)

65. The following information is related to Paradise Hotels Ltd.:

< Answer >

Gross profit	Rs.45 lakh
Gross profit margin	20 percent
Total assets turnover ratio	3
Total debt to equity ratio	1.50
Current assets	Rs.35 lakh
Current ratio	2.50

What is outstanding amount of term loan in its balance sheet? (Assume term loan is the only interest bearing borrowings made by the company)

- (a) Rs.22 lakh (b) Rs.25 lakh (c) Rs.28 lakh
(d) Rs.31 lakh (e) Rs.34 lakh.

(2 marks)

< Answer >

66. Consider the following information:

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

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

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

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

(2 marks)

< Answer >

67. You are the owner of a small business which has the following balance sheet:

(in Rs.)

Current assets	10,000	Accounts payable	2,500
Net Fixed Assets	20,000	Accruals	2,500
		Long Term Debt	10,000
		Common Equity	15,000
Total Assets	30,000	Total Liability and Equity	30,000

Fixed and current assets are fully utilized, and the sales/assets and sales/spontaneous liabilities ratios will remain constant. Next year you expect sales to increase by 50 percent. You also expect to retain Rs.2,250 of next year's earnings within the firm. What is next year's additional external fund requirement?

- (a) No additional funds are required (b) Rs.10,250
(c) Rs.15,000 (d) Rs.17,250
(e) The answer depends on this year's sales level.

(2 marks)

< Answer >

68. The following data pertains to a company:

(Rs.)

Liabilities	Year Beginning	Year End.	Assets	Year Beginning	Year End.
Creditors	40,000	44,000	Cash	10,000	7,000
Mr. A's Loan	25,000	---	Debtors	30,000	50,000
Loan from Bank	40,000	50,000	Stock	35,000	25,000
Capital	1,25,000	1,53,000	Machinery	80,000	55,000
			Land	40,000	50,000
			Building	35,000	60,000
	2,30,000	2,47,000		2,30,000	2,47,000

During the year a machine costing Rs. 10,000 (accumulated depreciation Rs. 3,000) was sold for Rs. 5,000. The provision for depreciation against machinery as on beginning of the year was Rs. 25,000 and on ending of the year Rs. 40,000. Net profit for the year amounted to Rs. 45,000. The cash from operations and the amount of sources of cash respectively are

- (a) Rs.65,000; Rs.1,04,000 (b) Rs.65,000; Rs. 39,000
(c) Rs.65,000; Rs.1,69,000 (d) Rs.39,000; Rs.65,000
(e) Rs.39,000; Rs.1,04,000.

(2 marks)

< Answer >

69. Mr. Sanjay Kothari who is now 40 years old, plans to retire in 20 years and he expects to live for another 25 years after he retires, that is, until he is 85. He wants a fixed retirement income that has the same purchasing power at the time he retires as Rs.75,000 has today. His retirement income will begin the day he retires, 20 years from today, and he will then get 24 additional annual payments. Inflation is expected to be 4 percent per year from today forward; he currently has Rs 2,00,000 savings; and he expects to earn a return on his savings of 7 percent per year, annual compounding. To the nearest rupee,

how much must he save during each of the next 20 years (with deposits being made at the end of each year) to meet his retirement goal?

- (a) Rs 31,105.90 (b) Rs 35,709.25 (c) Rs 54,332.88
(d) Rs 41,987.33 (e) Rs 62,191.25.

(2 marks)

< Answer >

70. The current sales and income of M/s. Sunbeam Industries Ltd. are Rs.25 lakh and Rs.4 lakh respectively. It is expected to increase its sales by 30%. If the company maintains the net profit margin ratio, pay out 30% as dividends and does not resort to external equity but maintains the debt-equity ratio of 1.75, the increase in borrowings will be

- (a) Rs.2.10 lakh (b) Rs.3.64 lakh (c) Rs.5.20 lakh
(d) Rs.6.37 lakh (e) Rs.9.10 lakh.

(2 marks)

Suggested Answers

Financial Management – I (141) : October 2005

1. Answer : (d) [<TOP>](#)
Reason: Shareholder wealth in a firm is represented by the market price per share of the firm's common stock. Hence, option (d) is the answer.
2. Answer : (e) [<TOP>](#)
Reason : Government securities can be held in three forms viz., Stock Certificates, Promissory Notes, Bearer Bonds.
Hence, option (e) is the answer.
3. Answer : (b) [<TOP>](#)
Reason : Operating leverage is calculated by dividing the % change in EBIT by the % change in sales revenue.
Hence, option (b) is the answer.
4. Answer : (c) [<TOP>](#)
Reason : Capital recovery factor is the **inverse** of the present value of an annuity receivable at the end of every year for a period of n years at a rate of interest k or the PVIFA factor. Statement I is not true but II and III are true and the answer is (c).
Hence, option (c) is the answer.
5. Answer : (d) [<TOP>](#)
Reason : For a bond selling at a premium $P_0 > \text{par value}$ and $YTM < \text{coupon rate}$.
Hence, option (d) is the answer.
6. Answer : (d) [<TOP>](#)
Reason : If a firm retires its debentures prematurely, its interest burden will come down that will decrease the financial leverage and total leverage of the company. It does not have any impact on the operating leverage of the company.
So, the option (d) is correct.
7. Answer : (c) [<TOP>](#)
Reason : According to the Du Pont Analysis,
$$ROE = \text{Net profit margin} \times \text{Assets turnover ratio} \times \text{Equity multiplier}$$

Where, $\text{Equity multiplier} = \frac{\text{Average assets}}{\text{Average equity}}$ (or) $\frac{1}{1 - \text{Debt to Assets ratio}}$.
Hence sales turnover ratio is not relevant in the Du Pont analysis.
Hence, option (c) is the answer.
8. Answer : (c) [<TOP>](#)
Reason : The primary purpose of the cash budget is to allow the firm to anticipate the need for outside funding at the end of each month. Hence the option (c) is the answer.
9. Answer : (d) [<TOP>](#)
Reason : High debt to equity ratio increases the financial risk of the firm due to increased interest burden as compared to other firms of the industry.
Hence, option (d) is the answer.
10. Answer : (a) [<TOP>](#)
Reason : Note Issuance Facility (NIF) is a medium-term legally binding commitment under which a borrower can issue short-term paper, of up to one year.
Commercial papers are short-term unsecured promissory notes, which pay a fixed amount. Straight debt bonds and floating rate notes are long-term instruments having a maturity of over one year.
Hence (a) is the answer.
11. Answer : (e) [<TOP>](#)
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.
12. Answer : (c) [<TOP>](#)
Reason : Giving investment proposals on technical projects is not the function of a finance manager. All other alternatives relate with functions of a finance manager.

Hence, option (c) is the answer.

13. Answer : (b)

[<TOP>](#)

Reason : In general, it is not possible to build a perfectly negatively correlated portfolio, even if selection is done properly, because, certain variables like economic factors, political climate etc. tend to affect all stocks. Thus, Option (b) is not correct about portfolio.

Hence, option (b) is the answer.

14. Answer : (c)

[<TOP>](#)

Reason : There has to be a provision for the constitution of audit committees of the board in public companies with a paid-up capital of Rs.5 crore and above.

Hence, option (c) is the answer.

15. Answer : (d)

[<TOP>](#)

Reason : Trading of futures is usually done through brokers as hedgers are not located on the floor of the exchange.

Hence, option (d) is the answer.

16. Answer : (a)

[<TOP>](#)

Reason : A stock with a beta of 1.25 would be expected to increase 25% faster than the market in up markets.

Hence, option (a) is the answer.

17. Answer : (c)

[<TOP>](#)

Reason : The subscription price for shares, under a rights offering, is usually somewhat lower than the current market share price. This and the short time before expiry of the right keep the value of the right to a minimum. Hence the statement the rupee value of rights traded on exchanges is high is false.

Hence, option (c) is the answer.

18. Answer : (b)

[<TOP>](#)

Reason : The income component is the one, which reflects the cash you receive directly while you own the investment.

Hence, option (b) is the answer.

19. Answer: (b)

[<TOP>](#)

Reason : It is given that the current assets are Rs.90,000 and current liabilities are Rs.1,80,000.

The present current ratio is 0.50.

- (a) Refinancing a Rs.30,000 long-term mortgage with a short-term note will increase the current liabilities figure to Rs.2,10,000 thereby reducing the current ratio to 0.43.
- (b) Purchasing Rs.50,000 of merchandise inventory with a short-term account payable will increase the current assets and current liabilities by Rs.50,000 thereby increasing the current ratio to 0.61.
- (c) Paying Rs.20,000 of short-term accounts payable will reduce the cash and accounts payable by Rs.20,000 reducing the current ratio reduces to 0.44.
- (d) Collecting Rs.10, 000 of short-term accounts receivable will not change the current ratio as increase in cash is offset by decrease in the accounts receivable.
- (e) Paying the accrued expenses worth Rs.30,000 will decrease both the cash and current liabilities. So the current ratio will be reduced to 0.40.

Hence, option (b) is the answer.

20. Answer : (e)

[<TOP>](#)

Reason : The current value of perpetuity B exceeds that of A by the PV of Rs.X for one year as per the given conditions.

Present Value of a perpetuity = $1/\text{interest rate}$.

Hence, option (e) is the answer.

21. Answer : (d)

[<TOP>](#)

Reason : If we invest in stocks with higher-than-average betas, we are **uncertain** to earn higher-than-average returns over the next year. The projected risk premium is defined as compensation for the risk for bearing it. It is the **difference** between the expected return on a risky investment and the return on a risk-free investment . Hence the statements (I) and (II) are false.

Some of the riskiness associated with individual assets can be eliminated by forming portfolios (III).

This is a correct statement.

Hence, option (d) is the answer.

22. Answer: (b)

[<TOP>](#)

Reason : Current ratio and the quick ratio are the two ratios to measure the liquidity directly. To measure liquidity, ratios like accounts receivable turnover ratio and inventory turnover ratios are also employed. Hence, statement I is not true.

Current assets consist of accounts receivable, inventory and cash. The most liquid form of current assets is cash and the next is the accounts receivable. These two are referred to as quick assets. Hence, even though the current assets and Current Liabilities of two companies are same, the one with more components of accounts receivable than inventory is said to be more liquid than the other one. Hence, statement II is true.

The main drawback of the current ratio is that it does not predict the future fund flows it only states the liquidity position of the company. Hence, statement III is not true.

Hence, the answer is (b).

23. Answer : (d)

[<TOP>](#)

Reason : In an indirect quotation, the principle adopted is “buy high, sell low”.

USD 1 = Rs.43.75 – Rs.43.60 (In this example, 43.75 is buying rate and 43.60 is selling rate)

Hence, option (d) is the answer.

24. Answer : (d)

[<TOP>](#)

Reason : MMMFs can either be open-ended or close-ended.

The minimum size of the MMMFs should be Rs.50 crore and this should not exceed 2% of the aggregate deposits of the latest accounting year in case of banks and 2% of the long term domestic borrowings in the case of public financial institutions.

Hence, option (d) is the answer.

25. Answer : (a)

[<TOP>](#)

Reason : Given, rate(r) and time period (t) greater than zero, the present value interest factors are less than 1.

Hence, option (a) is the answer.

26. Answer : (b)

[<TOP>](#)

Reason : The required return will increase for both stocks but the increase will be greater for Stock B than for Stock A.

Required Return = Risk Free rate + Beta (Market Risk Premium)

Hence, option (b) is the answer.

27. Answer : (e)

[<TOP>](#)

Reason : External financing requirement can be found out with the help of the following equation:

$$EFR = (A/S) (\Delta S) - (L/S) (\Delta S) - m S_1 (1 - d)$$

The equation highlights that the amount of external financing depends on the firm's projected growth in sales and not on growth rate in earnings.

Hence, option (e) is the answer.

28. Answer : (c)

[<TOP>](#)

Reason : The yield curve depicts the current relationship between yield of the bond and the term to maturity of the bond.

Hence, option (c) is the answer.

29. Answer : (c)

[<TOP>](#)

Reason : In calculation of funds generated from operations, only provision for tax shown in the income statement should be added to net profit .When it is shown in the balance sheet it should not be considered.

Hence, option (c) is the answer.

30. Answer : (a)

[<TOP>](#)

Reason : In a bought out deal, a company initially places its equity shares, which are to be offered to the public at a later date, to a sponsor or merchant banker, who in turn offloads the shares at the appropriate time. *Rights Issue* - It is the method of raising additional finance from existing members by offering securities to them on pro rata basis.

Hence, option (a) is the answer.

31. Answer : (a)

[<TOP>](#)

Reason : II. Since converted stock is affected by tax, corporate investors are not keen to invest, as they do not get tax shield. Hence II is not true

III. The minimum value of the convertible based on the current price of the issuer's stock is the conversion value. Hence, III is incorrect. Statement (I) is correct.

Hence, option (a) is the answer.

32. Answer : (e)

[< TOP >](#)

Reason : Future cash flows generated by the firm and their inherent risk are the keys to valuation of share prices. Thus the earnings, the sales growth, the volatility of the firm's performance and the debt-equity structure of the firm will affect the price-earning's ratio of a firm.

Hence the option (e) is the answer.

33. Answer : (b)

[< TOP >](#)

Reason : The discount rate or required rate of return will increase as the inflation premium increases. The bond price will drop with an increase in the interest rate.

Hence the option (b) is the answer.

34. Answer : (d)

[< TOP >](#)

Reason : Building the company's image, gaining access to wider and larger sources of finance, creating an "exit" mechanism for some existing shareholders, For efficient allocation, there are some of the major reasons for seeking stock market floatation. Improving the amount of control exerted by the existing owners over the business can be the least likely reason for seeking stock market floatation.

Hence the option (d) is the answer.

35. Answer : (e)

[< TOP >](#)

Reason : Fund Flow Statement indicates how the business financed its fixed assets.

Hence, option (e) is the answer.

36. Answer : (a)

[< TOP >](#)

Reason : An increase in expected inflation would lead to an increase in (risk-free rate of return) k_{RF} , the intercept of the SML. If risk aversion were unchanged, then the slope of the SML would remain constant. Therefore, there would be a parallel upward shift in the SML, which would result in an increase in (return on market portfolio) k_M that is equal to the expected increase in inflation.

Hence, option (a) is the answer.

37. Answer : (c)

[< TOP >](#)

Reason : Speculators do not have any risk to hedge, in fact, they operate at very high level of risk in anticipation of profits. They are basically traders who enter the futures or options contract, with a view to make profits for the subsequent price movements. Arbitrageurs obtain risk free profits by simultaneously buying and selling similar instruments in different markets and as a result make risk-less profits.

Hence, option (c) is the answer.

38. Answer : (b)

[< TOP >](#)

Reason : The value of a business asset or security is **directly** related to the expected cash flows of the asset, **inversely** related to the risk of the asset.

Hence, option (b) is the answer.

39. Answer : (d)

[< TOP >](#)

Reason : In the constant-growth dividend valuation model, the required rate of return on a common stock can be shown to be equal to the sum of the dividend yield plus price appreciation yield.

Hence, option (d) is the answer.

40. Answer : (d)

[< TOP >](#)

Reason : ADR Level-III: This level of ADR 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.

Hence, option (d) is the answer.

41. Answer : (c)

[< TOP >](#)

Reason : $3000(1 + 0.124/2)^8 = \text{Rs.}4854.20$

Hence, option (c) is the answer.

42. Answer : (d)

[< TOP >](#)

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

$$= 6 + 1.15 \times 8 = 15.2\%$$

New required rate of return = $8 + 1.15 \times 8 = 17.2\%$.

Hence, option (d) is the answer.

43. Answer : (a)

[< TOP >](#)

Reason : $P_0 = D_0(1 + g)/(k - g)$

$$P_0 = 4(1.06)/(.06) = \text{Rs.}70.67$$

Rs.72 – Rs.70.67 = Rs.1.33 Stock is overpriced. Laxmi should not buy the stock.

Hence, option (d) is the answer.

44. Answer : (c)

[<TOP>](#)

Reason : The value of growing stream of dividends: $P_s = \frac{DIV_1}{r - g} = \frac{20.00}{.20 - .05} = 133.33$

Note that the stock will have a value of Rs.133.33 at $t = 5$ (since we are treating the Rs.20 as the beginning of the perpetuity). Thus, the present value (at $t = 0$) of this cash flow is:

$$V_0 = \frac{133.33}{1.2^5} = 53.58$$

Hence, option (c) is the answer.

45. Answer : (a)

[<TOP>](#)

Reason :

$$YTM = \frac{\text{Interest} + (\text{Redemption Value} - \text{Market Price})/n}{0.4 \text{ Redemption value} + 0.60 \text{ Market price}} = \frac{140 + (1000 - 1050) / 5}{0.40 \times 1000 + 0.60 \times 1050} = 12.62\%$$

Hence, option (a) is the answer.

46. Answer : (c)

[<TOP>](#)

Reason : Quick ratio = $\frac{\text{Quick assets}}{\text{Current liabilities}}$

$$\text{Inventory turnover ratio} = 8$$

$$\text{Given sales} = \text{Rs.}10,00,000 \text{ and GPM} = 40\%, \text{ COGS} = \text{Rs.}6,00,000$$

$$\text{Inventory} = \frac{\text{COGS}}{\text{Inventory turnover ratio}} = \frac{6,00,000}{8} = \text{Rs.}75,000$$

$$\text{Total assets} = \frac{\text{Sales}}{\text{Total assets turnover ratio}} = \frac{10,00,000}{2} = 5,00,000$$

$$\text{Given FA : CA} = 3 : 1$$

$$CA = \frac{1}{4} \times 5,00,000 = \text{Rs.}1,25,000$$

$$CR = 2.5$$

$$\therefore CL = \frac{CA}{2.5} = \text{Rs.}50,000$$

$$QA = \frac{1,25,000 - 75,000}{50,000} = 1$$

Hence, option (c) is the answer.

47. Answer : (c)

[<TOP>](#)

Reason : $[P - V] / P = [\text{Rs.}10.00 - \text{Rs.}7.50] / \text{Rs.}10.00 = \text{Rs.}2.50 / \text{Rs.}10.00 = 0.25 = 25 \text{ percent.}$

Hence, option (c) is the answer.

48. Answer : (b)

[<TOP>](#)

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	-3.2	0.25	-0.8	-0.24
0.35	8	5	-2.2	-3.75	8.25	2.8875
0.15	14	10	3.8	1.25	4.75	0.7125
0.20	16	14	5.8	5.25	30.45	6.09
						9.45

$\bar{k}_A = \sum k_A P$ $= 10.20$	$\bar{k}_m = \sum k_m P$ $= 8.75$				
---------------------------------------	--------------------------------------	--	--	--	--

$$\beta_A = \frac{\text{Cov}(k_A, k_m)}{\text{Var}(k_m)} = \frac{\sum P.(k_A - \bar{k}_A)(k_m - \bar{k}_m)}{\sum P.(k_m - \bar{k}_m)^2} = \frac{9.45}{10.6875} = 0.884$$

$$\text{Risk premium} = 0.884 (8.75 - 6) = 2.43\%.$$

Hence, option (b) is the answer.

49. Answer : (c)

[<TOP>](#)

$$\begin{aligned} \text{Reason : Effective Annual Rate} &= (1 + i_{\text{Nom}}/4)^4 - 1 \\ &= (1 + 0.15/4)^4 - 1 \\ &= (1.0375)^4 - 1 \\ &= 15.8650\%. \end{aligned}$$

$$\begin{aligned} 15.8650\% &= (1 + i_{\text{Nom}}/12)^{12} - 1 \\ 1.15865 &= (1 + i_{\text{Nom}}/12)^{12} \\ 1.012347 &= 1 + i_{\text{Nom}}/12 \\ i_{\text{Nom}} &= 14.8163\% \approx 14.82\%. \end{aligned}$$

Hence, option (c) is the answer.

50. Answer : (e)

[<TOP>](#)

Reason : Yield on a T-bill is calculated as: [(Face value – Price)/Price] × 365/duration of the T-bill

$$\left[\frac{100 - 97}{97} \right] \times \frac{365}{14} = 0.8063 \text{ i.e., } 80.63\%.$$

∴ The yield is 80.6%.

Hence, option (e) is the answer.

51. Answer: (d)

[<TOP>](#)

Reason : $\text{EPS}_1 = (\text{Sales} - \text{Variable costs} - \text{Fixed costs} - \text{Interest}) \times (1 - \text{tax rate}) / \text{number of shares outstanding}$

$$\text{Amount of debt} = 0.50 \times \text{Rs.}10,00,000 = \text{Rs.}5,00,000.$$

$$\text{Interest expense} = \text{Rs.}5,00,000 \times 0.12 = \text{Rs.}60,000$$

$$\text{EPS}_1 = \text{Rs.}5.00 = (\text{Sales} - 0.45 \text{ Sales} - \text{Rs.}2,00,000 - \text{Rs.}60,000) \times (1 - 0.4) / \text{Rs.}1,00,000$$

$$= \text{Rs.}5.00 = ((0.55 \text{ Sales} - \text{Rs.}2,60,000) \times 0.6) / \text{Rs.}1,00,000$$

$$\text{Rs.}5.00 = (0.33 \text{ Sales} - \text{Rs.}1,56,000) / \text{Rs.}1,00,000$$

$$5,00,000 = 0.33 \text{ Sales} - \text{Rs.}1,56,000$$

$$\text{Rs.}6,56,000 = 0.33 \text{ Sales}$$

$$\text{Sales} = \text{Rs.}19,87,879.$$

Hence, option (d) is the answer.

52. Answer: (a)

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Reason : First, find the new DFL:

$$\text{DTL} = (\text{DOL})(\text{DFL})$$

$$2.4 = (1.4)(\text{DFL})$$

$$\text{DFL} = 1.7143.$$

Then, find the new interest payments in a year:

$$\text{DFL} = (\text{EBIT}) / (\text{EBIT} - I)$$

$$1.7143 = (\text{Rs.}40,00,000) / (\text{Rs.}40,00,000 - I)$$

$$I = \text{Rs.}16,66,686.11.$$

Finally, solve for the new debt level, knowing that the yield to maturity remains at 10%:

Debt value (YTM) = Interest payment

$$\text{Debt} (0.10) = \text{Rs.}16,66,686.11$$

$$= \text{Rs.}166,66,861.11 \approx \text{Rs.}167 \text{ lakhs.}$$

Hence, option (a) is the answer.

53. Answer : (b)

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Reason : Formula solution:

$$\text{Let } \Delta S = S_0(g) \text{ and } S_1 = S_0(1 + g).$$

$$\text{AFN} = \frac{A^*}{S^*} (S_0)(g) - \frac{L^*}{S^*} (S_0)(g) - MS_0(1 + g)(1 - d) = 0.$$

$$0 = 1.2(\text{Rs}100,000g) - \frac{10000}{100000} (\text{Rs}100,000g)$$

$$(-) (0.10)(\text{Rs}100,000)(1 + g)(0.5)$$

$$0 = \text{Rs}120,000g - \text{Rs}10,000g - \text{Rs}5,000g - \text{Rs}5,000$$

$$\text{Rs}5,000 = \text{Rs}105,000g; g = 4.76\% \approx 4.8\%.$$

Hence, option (b) is the answer.

54. Answer : (a)

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Reason : Equity capital = Rs.1, 10,000

Total debt/equity = 0.60

Total debt = 0.60*Rs.1, 10, 000=Rs.66, 000

Total assets = total debt + equity = Rs.1, 10, 000+Rs.66, 000 = Rs.1, 76, 000

Total assets turnover ratio=sales/total assets=1.5

Sales = 1.5*total assets=1.5*Rs.1, 76, 000=Rs.2, 64, 000.

Average collection period=receivables/average credit sales/day

40=receivables/Rs.2, 64, 000/360

Receivables=40*Rs.2, 64, 000/360 =Rs.29, 333.

Acid-test ratio=1.2

(Accounts receivables + cash)/current liabilities=1.2

Cash=(1.2 * current liabilities)-(accounts receivables) = (1.2*Rs.66, 000)-Rs.29, 333 =Rs.49, 867

The difference between cash and receivables is = Rs.49, 867-Rs.29, 333 = Rs.20, 534.

Hence option (a) is the answer.

55. Answer : (b)

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Reason : Growth = return on equity x plowback.

Thus, $g = 0.2 \times 0.4 = 0.08$.

$$\text{Thus, the price of the stock is: } P_s = \frac{1.08}{.30 - .08} = \frac{1.08}{.22} = \text{Rs.}4.91$$

Hence, option (b) is the answer.

56. Answer : (a)

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Reason : Funds from operations =

Net income after taxes + depreciation = Rs.83,26,600 +Rs.7,95,200 = Rs .91,21,800

Source from sale of machine =

Book value of plant sold + Loss on sale = Rs.4,32,100 - Rs. 1,33,400 = Rs. 2,98,700
(Rs.)

Sources	
Funds from operations	91,21,800
Sale of machine	2,98,700
Tax refund	2,84,300
Total sources	97,04,800
Uses	
Retirement of preference shares	7,64,000
Payment of dividends	58,52,100
Total Applications	66,16,100
Net increase in WC	30,88,700

Hence, option (a) is the answer.

57. Answer: (d)

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Reason :

$$\begin{aligned}
 \text{Overall BEP} &= (F+I+D_p/1-t)/S-V \\
 \text{Financial BEP} &= I+D_p/1-t = \text{Rs.5000} \\
 \text{Operating BEP} &= F/S-V = 3000 \\
 S-V &= \text{Rs.30,000}/3000 = 10 \\
 \text{Overall BEP} &= (5000+30000)/10 = 3500.
 \end{aligned}$$

Hence, option (d) is the answer.

58. Answer : (c)

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Reason : Change in EBIT with respect to change in sales is known by Degree of operating leverage.

$$\text{Degree of operating leverage} = \frac{\text{Degree of Total leverage}}{\text{Degree of Financial leverage}}$$

$$\text{DFL} = \frac{\text{EBIT}}{\text{EBIT} - I - \frac{D_p}{1-T}}$$

$$\text{PAT} = \text{Rs.50,000}$$

$$\text{Given tax rate} = 20\%, \text{PBT} = \frac{50,000}{0.8} = \text{Rs.62,500}$$

$$\text{Given EBIT} = \text{Rs.1,00,000}, \text{Interest} = 1,00,000 - 62,500 = \text{Rs.37,500}$$

$$\text{DFL} = \frac{1,00,000}{1,00,000 - 37,500 - \frac{0.1 \times 1,00,000}{1-0.2}} = \frac{1,00,000}{50,000} = 2$$

$$\text{DOL} = \frac{4}{2} = 2$$

Hence, if EBIT has to increase by 10%, sales have to be increased by 5%.

Hence, option (c) is the answer.

59. Answer : (a)

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

$$\therefore A \cdot \text{PVIFA} (12\%, 6) = 600,000$$

$$\text{or, } A = \frac{6,00,000}{\text{PVIFA} (12\%, 6)} = 145949.89$$

∴ The amount of each equated annual installment is Rs.145950 (approximately).

Hence, option (a) is the answer.

60. Answer : (a)

[< TOP >](#)Reason : $13.75\% = 5\% + (7\%)b$

$$8.75\% = 7\%$$

$$b = 1.25$$

Hence, option (a) is the answer.

61. 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

$$\text{Asset turnover ratio (company X)} = \text{Rs.32,00,000}/\text{Rs.24,74,000} = 1.29 \text{ times}$$

$$\text{Asset turnover ratio (company Y)} = \text{Rs.30,00,000}/\text{Rs.28,51,000} = 1.05 \text{ times}$$

So asset utilization of company X is greater than company Y.

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.)		
	X	Y
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 Y 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.)		
	X	Y
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 Y utilizes shareholders funds more profitably than company X.

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

62. Answer : (b)

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Reason : The external funds requirements is given by

$$EFR = \left(\frac{A}{S} - \frac{L}{S} \right) \times \Delta S - S_1 m (1-d)$$

$$\text{For BAL, } \frac{A}{S} = \frac{1}{2} = 0.5, \frac{L}{S} = 0.20 \quad d = 100\% \text{ and } \Delta s = \text{Rs.70 lakh}$$

$$\text{So, EFR} = (0.50 - 0.20) \times \text{Rs.70 lakh} = \text{Rs.21 lakh.}$$

Hence, option (b) is the answer.

63. Answer : (d)

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Reason :

$$\text{Earning Power} = \frac{\text{EBIT}}{\text{Average Total Assets}}$$

Earnings After Tax = Rs. 9.0 lakhs.

$$\text{Therefore, Earnings Before Tax} = \frac{9}{(1-0.40)} = \text{Rs.15 Lakhs}$$

EBIT = Earnings Before Tax + Interest = 15 + 8 = Rs. 23 lakhs.

$$\text{Net profit margin} = \frac{\text{Net profit}}{\text{Net sales}} \text{ i.e. Net sales} = \frac{\text{NP}}{\text{NPM}} = \frac{9,00,000}{0.05} = \text{Rs.180,00,000}$$

$$\text{ATO ratio} = \frac{\text{Net sales}}{\text{Total assets}} \text{ i.e. TA} = \frac{180 \text{ lakhs}}{1.5} = \text{Rs.120 lakhs}$$

$$\text{Therefore, Earning power} = \frac{\text{EBIT}}{\text{Average Total Assets}} = \frac{23}{120} = 0.192 \text{ i.e. } 19.2\%.$$

Hence, option (d) is the answer.

64. Answer : (e)

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Reason :

Step 1: Determine the betas of the two portfolios:

The total amount invested in the portfolios is: Rs.300 + Rs.560 + Rs.320 + Rs.230 = Rs.1,410 million.

(Note that the 2nd portfolio changes only in the composition of the stocks, not the amount invested.)

$$b_{\text{Old}} = (\text{Rs.300 million}/\text{Rs.1,410})1.2 + (\text{Rs.560}/\text{Rs.1,410})1.4 + (\text{Rs.320}/\text{Rs.1,410})0.7 + (\text{Rs.230}/\text{Rs.1,410})1.8 = 1.2638.$$

Now, creating the new portfolio by selling Rs.280 million of Stock 2 and reinvesting it in Stock 4. The new portfolio's beta will be:

$$b_{\text{New}} = (\text{Rs.300}/\text{Rs.1,410})1.2 + [(\text{Rs.560} - \text{Rs.280})/\text{Rs.1,410}]1.4 + (\text{Rs.320}/\text{Rs.1,410})0.7 + [(\text{Rs.230} + \text{Rs.280})/\text{Rs.1,410}]1.8 = 1.3433.$$

Step 2: Determine the returns of the two portfolios:

$$\begin{aligned} k_{p\text{Old}} &= k_{\text{RF}} + (k_M - k_{\text{RF}})b \\ &= 5\% + (5\%)1.2638 \end{aligned}$$

$$\begin{aligned}
 &= 11.3190\%. \\
 k_{pNew} &= k_{RF} + (k_M - k_{RF})b \\
 &= 5\% + (5\%)1.3433 \\
 &= 11.7165\%.
 \end{aligned}$$

The difference is: $11.7165\% - 11.3190\% = 0.3975\% \approx 0.40\%$.

Hence, option (e) is the answer.

65. Answer : (d)

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Reason : Gross profit = Rs.45 lakhs and gross profit margin = 0.2

$$\text{So, the sales turnover} = \frac{45}{0.2} = \text{Rs.225 lakhs}$$

$$\text{Total assets} = \frac{\text{Sales}}{\text{Total assets turnover ratio}} = \frac{225}{3} = \text{Rs.75 lakhs.}$$

But, total assets = Total liabilities = Total Debt + Total equity

and the total debt equity ratio = 1.50

$$\text{So, total debt} = 75 \times \frac{3}{2+3} = \text{Rs.45 lakhs.}$$

$$\text{and total equity} = 75 \times \frac{2}{2+3} = \text{Rs.30 lakhs}$$

Now, the amount of current liabilities

$$\frac{\text{Current Assets}}{\text{Current Ratio}} = \frac{35}{2.5} = \text{Rs.14 lakhs}$$

So, the amount of term loan in its balance sheet = $45 - 14 = \text{Rs.31 lakhs}$.

Hence, option (d) is the answer.

66. Answer : (e)

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Reason : According to single index model,

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

where α_j is the intercept of the regression line,

β_j is the beta of the stock

k_m is the market return,

In the given case,

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

$$\alpha_j = -0.03$$

α_j indicates the rate of return the stock will earn when the market return is zero. In the given case, α of -0.03 indicates that the stock will earn a negative return of 3%, when the market return is zero. Hence, statement (I) is true.

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

Beta of 1.5 implies that when the market return increases/decreases by 10%, return on the stock increase/decreases by 15%.

Hence, statement III is true and (e) is the correct answer.

67. Answer: (b)

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Reason :

Pro Forma Balance Sheet :

Current assets	Rs.15,000	Accounts payable	Rs. 3,750
Net fixed assets	Rs.30,000	Accruals	Rs. 3,750
		Long-term debt	Rs.10,000
		Common equity	Rs.17,250
Total assets	Rs.45,000	Total liabilities and equity	Rs.34,750
Additional funds required = Rs.45,000 - Rs.34,750 = Rs.10,250.			

Formula solution:

$$\begin{aligned}\text{Additional funds required} &= (\text{Rs.}30,000/s0)(0.5s0) - (\text{Rs.}5,000/s0)(0.5s0) - \text{Rs.}2,250 \\ &= (\text{Rs.}30,000 \times 0.5) - (\text{Rs.}5,000 \times 0.5) - 2,250\end{aligned}$$

$$\text{Additional funds required} = \text{Rs.}15,000 - \text{Rs.}2,500 - \text{Rs.}2,250 = \text{Rs.}10,250.$$

Hence, option (b) is the answer.

68. Answer : (a)

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Reason :

Net profit	45,000
Add: Loss on sale asset	2,000
Depreciation	<u>18,000</u>
Cash from operations:	65,000

Opening Balance	10,000
Cash from operations	65,000
Increase of loan from bank	10,000
Increase in creditors	4,000
Decrease in stock	10,000
Sale of machine	5,000
Sources	1,04,000

$$\text{Depreciation} = \text{Rs.}40,000 + \text{Rs.}3,000 - \text{Rs.}25,000 = \text{Rs.}18,000$$

Hence, option (a) is the answer.

69. Answer : (a)

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Reason: Future Value of Rs 75,000 after 20 years at the rate of inflation of 4%

$$\text{FV} = 75,000 \times \text{FVIF}(4, 20) = \text{Rs } 1,64,334$$

Future value of Rs 2,00,00 after 20 years @7%

$$\text{FV} = 2,00,000 \times \text{FVIF}(7, 20) = \text{Rs } 7,73,937$$

He wants to withdraw, or have payments of Rs.1,64,334 per year for 25 years, with the first payment made at the beginning of the first retirement year. So, we have a 25-year annuity due with A= Rs1,64,334, at an interest rate of 7 percent.

$$\text{Present value of this annuity on his retirement} = 1,64,334 \times \text{PVIFA}(7, 25) \times (1 + k) = \text{Rs } 2,049,138$$

$$\text{He must save enough to accumulate } 20,49,138 - 7,73,937 = \text{Rs } 12,75,201$$

Then Rs.12,75,201 is the FV of a 20-year ordinary annuity. The payments will be deposited in the bank and it will earn 7 percent interest.

$$A \times \text{FVIFA}(7, 20) = 12,75,201$$

$$A = \text{Rs } 31105.90$$

70. Answer : (d)

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Reason : New sales = 25 (1.3) = Rs.32.5 lakhs

$$\text{NPM} = \frac{4}{25} = 16\%$$

$$\text{New PAT} = 32.5 \times 0.16 = \text{Rs.}5.2 \text{ lakhs}$$

$$\text{Dividends} = 30\% \text{ of } 5.2 = \text{Rs.}1.56 \text{ lakhs}$$

$$\text{Retained earnings} = \text{Rs.}3.64 \text{ lakhs}$$

$$\text{Increase in borrowings} = 3.64 \times 1.75 = \text{Rs.}6.37 \text{ lakhs}$$

Hence, option (d) is the answer.

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