

Question Paper

Financial Management-I (MB2E1): October 2008

- Answer all 72 questions.
- Marks are indicated against each question.

Total Marks : 100

1. Which of the following implies the significant advantage of a public limited company over a proprietorship firm? [<Answer>](#)
- (a) Limited liability
 - (b) Difficulty to transfer ownership interest
 - (c) Limited life
 - (d) Inability to mobilize large funds
 - (e) Fewer government regulations.
- (1 mark)** [<Answer>](#)
2. Which of the following players **cannot** act as a borrower in the call money market? [<Answer>](#)
- (a) Discount and Finance House of India
 - (b) SBI Mutual Fund
 - (c) State Bank of India
 - (d) Securities Trading Corporation of India
 - (e) Reserve Bank of India.
- (1 mark)** [<Answer>](#)
3. Which of the following statements represents the financing decision of a company? [<Answer>](#)
- (a) Procuring new machineries for the R & D activities
 - (b) Recruiting the new employees in order to increase the productivity of the company
 - (c) Adopting state of the art technology to reduce the cost of production
 - (d) Purchasing a new building to expand the business
 - (e) Designing an optimal capital structure by using suitable financial instruments.
- (1 mark)** [<Answer>](#)
4. Which of the following is **not** a feature of certificate of deposit issued by a bank? [<Answer>](#)
- (a) It is a document of title to a time deposit
 - (b) There is no lock-in period for transferring it to others
 - (c) It is not subject to the reserve requirement of the bank
 - (d) It is transferable by endorsement and delivery
 - (e) The maximum maturity period is one year.
- (1 mark)** [<Answer>](#)
5. Which of the following is a sterling denominated foreign bond raised in the United Kingdom domestic securities market? [<Answer>](#)
- (a) Samurai Bonds
 - (b) Yankee Bonds
 - (c) Bulldog Bonds
 - (d) Shibosai Bonds
 - (e) Matador Bonds.
- (1 mark)** [<Answer>](#)
6. Which of the following instruments in the international capital market are fixed-interest securities having a maturity of over one year? [<Answer>](#)
- (a) Commercial Papers
 - (b) Medium-Term Notes
 - (c) American Depository Receipts
 - (d) Treasury Bills
 - (e) Global Depository Receipts.
- (1 mark)** [<Answer>](#)
7. If an amount of Rs.50 crores is borrowed in the call money market, then the interest rate is decided by **(1 mark)** [<Answer>](#)

- (a) The lender
- (b) The borrower
- (c) The Reserve Bank of India as the amount involved is huge
- (d) Negotiation between lender and borrower
- (e) Both lender and borrower but within the maximum limit prescribed by RBI.

[<Answer>](#)

8. M/s. Pee & Cee Ltd., has received the third highest credit rating for its issue of commercial paper. If its fund based working capital limit is Rs.3 crores, and assuming other requirements are met then which of the following is **true**?

- (a) It can issue commercial paper within the maximum limit of Rs.3 crores
- (b) It can issue commercial paper but the amount should not be less than Rs.5 lakhs
- (c) It can issue commercial paper but the amount should be less than Rs.5 lakhs
- (d) It can issue commercial paper to any amount
- (e) It cannot issue commercial paper.

(1 mark)

[<Answer>](#)

9. In the foreign exchange market if an agreement on a transaction took place on July 1, 2008 and the value date is July 3, 2008, then the transaction is said to be a part of the

- (a) Spot market
- (b) Tom market
- (c) Cash market
- (d) Ready market
- (e) Forward market.

(1 mark)

[<Answer>](#)

10. Which of the following situations leads to the increase in volatility in the call money market?

- (a) Reduction in cash reserve ratio
- (b) Prepayment of term loans by a large number of borrowers
- (c) Entry of the financial institutions (FIs) into the market
- (d) Payment of large amount of advance taxes by the banks and FIs
- (e) Decrease in the demand for loanable funds in the economy.

(1 mark)

[<Answer>](#)

11. If the effective rate of interest is 10.25% per annum and the nominal rate of interest is compounded twice a year, then the nominal rate of interest per annum is

- (a) 9.00%
- (b) 10.00%
- (c) 10.50%
- (d) 11.00%
- (e) 12.00%.

(1 mark)

[<Answer>](#)

12. Mr. Sameer is considering investing in the equity shares of Wilson Company. He gathers the following information on the equity shares of the company:

Return on the stock when the market return is zero	4%
Rate of return on the market	12%
Beta of the shares	0.9
Expected Earnings per share next year	Rs.3
Pay-out ratio	60%
Current market price of the share	Rs.40

Mr. Sameer expects the earnings of the company to grow at a constant rate and the pay-out ratio to remain constant.

If the equity share is in market equilibrium, the expected price of the share at the end of five years will be (convert to the nearest integer)

- (a) Rs.72
- (b) Rs.65
- (c) Rs.58
- (d) Rs.45
- (e) Rs.35.

(2 marks)

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

13. Vision Ltd., a Non-Banking Financial Company (NBFC) offers car loans with two different schemes. Scheme A offers 10% discount on down payment of cash. Scheme B asks for a down payment of Rs. 18,000 and a monthly payment of Rs. 4,100 for 5 years.

If the cost of the car is Rs. 2.5 lakhs and the required rate of return is 9%, which of the following

represents the present value of cash inflows of both the schemes?

- (a) Rs.2,50,000; Rs.2,17,000
- (b) Rs.2,25,000; Rs.2,17,000
- (c) Rs.2,25,000; Rs.2,17,182
- (d) Rs.2,25,000; Rs.2,18,582
- (e) Rs.2,35,000; Rs.2,18,500.

14. Kiran Automobiles purchases a machinery for Rs.8,00,000 by making a down payment of Rs.1,50,000 and remainder in equal installments of Rs.1,50,000 for six years. The rate of interest to the firm is

[<Answer>](#)

- (a) 6%
- (b) 8%
- (c) 10%
- (d) 11%
- (e) 14%.

(1 mark)

[<Answer>](#)

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

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

The covariance of market returns with return on the stock is $9.45 (\%)^2$. The risk free rate of return is 6%. According to CAPM, the risk premium for the stock of M/s. Arrow Ltd. is

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

(2 marks)

[<Answer>](#)

16. Which of the following is/are **true** regarding the capital recovery factor?

- I. It is the inverse of the PVIF factor.
- II. It represents the amount that has to be invested at the end of every year for a period of 'n' years at the rate of interest 'k' in order to accumulate Re.1 at the end of the period.
- III. It can be applied to find out the amount to be invested periodically to liquidate a loan over a specified period at a given rate of interest.

- (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>](#)

17. If a borrower promises to repay Rs.21,274 at the end of eight years from now in return for a loan of Rs.2,000 at the end of every year for a period of 8 years, the effective annual interest rate on this loan is

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

(1 mark)

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

18. Which of the following statements is/are **true** with respect to portfolio risk?

- I. The diversifying effect of each additional stock increases with an increase in the number of stocks in the portfolio.
- II. The higher the degree of positive correlation between the stocks, the greater is the amount of risk reduction that is possible.
- III. The portfolio risk will be minimum, if the stocks are perfectly negatively correlated.

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

19. Which of the following is/are **true** regarding variability?

[<Answer>](#)

- I. Higher the range, higher the standard deviation.
- II. Of the two probability series, the one which has the highest mean value, has the highest standard deviation.
- III. Higher the variance, higher the standard deviation.

- (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.

(1 mark)

20. Which of the following relationships is represented by the characteristic regression line (CRL)?

[<Answer>](#)

- (a) The return on the portfolio and the variance of its returns
- (b) The return on the portfolio and the return on the market index
- (c) The return on the portfolio and its beta
- (d) The return on the portfolio and the risk free rate of return
- (e) The return on the portfolio and the market risk premium.

(1 mark)

21. The stock of Golden Technologies Ltd., is currently quoting at Rs.60 per share in the market and it is expected to pay a dividend of Rs.2 per share in the current year. The stock price expected one year hence has the following probability distribution:

[<Answer>](#)

Probability	0.30	0.50	0.20
Price (Rs.)	70	80	90

The expected return from investing in the stock is approximately

- (a) 15%
- (b) 19%
- (c) 23%
- (d) 25%
- (e) 35%.

(2 marks)

22. The current purchase price of a security is Rs.50, the last dividend paid is Rs.2 and the growth rate is 7%. If the required rate of return on security according to CAPM is 10%, then what should be the increase/decrease in the price of the security such that it is at equilibrium?

[<Answer>](#)

- (a) Increase by Rs.21.33
- (b) Decrease by Rs.21.33
- (c) Increase by Rs.15
- (d) Decrease by Rs.30
- (e) Security is already at equilibrium.

(2 marks)

23. An investor has purchased a security that has a beta of 0.6. The investor is expecting this security to provide a return of 12%. If the expected risk free rate is 6% and expected return on the market index is 14%, which of the following is/are **true** according to CAPM?

[<Answer>](#)

- I. The security falls above the SML.
- II. The security is overvalued.
- III. Alpha intercept is positive.
- IV. The security can be purchased.

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

(2 marks)

24. India Investment Fund holds the following portfolio:

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

Stock	Investment (Rs. crore)	Beta
A	200	0.5
B	200	2
C	100	4

The required rate of return on the market is 14% and that of the above portfolio according to CAPM is 20.4%. The fund manager has proposed to sell C for Rs.100 crores and use the proceeds to purchase stock D which has a beta of 3. The required rate of return of the new portfolio according to CAPM is

- (a) 12.8%
- (b) 18.1%
- (c) 18.8%
- (d) 20.2%
- (e) 21.3%

25. 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 were to increase but the risk-free rate remained constant, which of the following would occur? [<Answer>](#)

- (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>](#)

26. Mr. Amit bought 100 equity shares of a company. After a year, he found that the ratio of the price of an equity share at the end of a 1-year period to its price at the beginning of the 1-year period is 5:4. What is the capital gain yield from the equity share?

- (a) 20%
- (b) 25%
- (c) 60%
- (d) 75%
- (e) 80%

(1 mark)

[<Answer>](#)

27. If the beta of a stock is equal to zero, which of the following statements is/are **true** according to CAPM?

- I. Slope of SML is zero.
- II. Required rate of return of the given stock is equal to the risk free rate of return.
- III. Stock will lie on the SML.

- (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>](#)

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

- (a) Each level of EBIT has a distinct DFL
- (b) DFL is undefined at financial breakeven point
- (c) DFL will be negative when the EBIT level goes below the financial breakeven point
- (d) DFL will be positive for all values of EBIT that are above the financial breakeven point
- (e) DTL above breakeven point increases as quantity produced keeps on increasing.

(1 mark)

[<Answer>](#)

29. Which of the following is a key determinant of operating leverage?

- (a) Sales variability
- (b) Physical location of production facilities
- (c) Cost of debt
- (d) Capital structure
- (e) Level of fixed costs.

(1 mark)

30. Other things remaining the same, which of the following will increase the quantity produced at the operating break-even point? (1 mark) [<Answer>](#)

- I. Decrease in the selling price per unit.
- II. Increase in the variable cost per unit.
- III. Decrease in the fixed costs of the firm.

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

31. Pie Ltd., is a pharmaceutical company whose degree of financial leverage is 1.9. The company has a debt of Rs.4 crores on which interest is paid at 8% p.a. It has a preference capital of Rs.4 crore on which preference dividend is payable at 9% p.a. The variable cost to sales ratio is 40% and fixed cost is Rs.1.433 crores. The tax rate is 45%. The sales revenue is approximately

[<Answer>](#)

- (a) Rs.0.593 crores
- (b) Rs.4.780 crores
- (c) Rs.5.820 crores
- (d) Rs.6.170 crores
- (e) Rs.16.02 crores.

(2 marks)

[<Answer>](#)

32. The quantity produced by a firm is 10,000 units, variable cost per unit is Rs.100,000, selling price per unit is Rs.2,50,000 and fixed cost is Rs.30 crore. If EBIT has to increase by 5%, the percentage change in sales should be

- (a) 4%
- (b) 5%
- (c) 5.32%
- (d) 5.5%
- (e) 6.25%.

(2 marks)

[<Answer>](#)

33. The income statement of Indian Cement Company Ltd., is given below:

Particulars	(Rs. in crore)
Sales	22,500
Variable costs	11,200
Fixed costs	5,600
Interest	990
Taxes	1,250
Net profit	3,460

The paid up equity capital of the company consists of 3000 lakh equity shares of Rs.40 each. Further the company has employed preference share capital, which has a book value of Rs.550 crore, and the dividend rate on the same is 20%. It is expected that there will be no change in its capital structure in the near future.

If the company plans to increase its EPS by 25%, the percentage increase in sales will be

- (a) 15.79%
- (b) 12.36%
- (c) 10.04%
- (d) 9.47%
- (e) 8.38%.

(3 marks)

[<Answer>](#)

34. Vipul Auto Ltd., is showing a lower dividend yield and higher price-earning ratio than Vijay Auto Ltd., If EPS, DPS and required rate of return of both the companies are same, then which of the following can be concluded?

- I. Price of Vipul is lower.
- II. There is considerable growth prospect in Vipul.
- III. The investors of Vipul can expect higher capital gains yield than the dividend yield.

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

(1 mark)

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

35. Which of the following statements is/are true regarding 91-day T-bills?

- I. They are also referred to as PSU bonds.
- II. They are issued through auctions conducted by RBI.
- III. They cannot be rediscounted with RBI.

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

36. Which of the following bonds will have the greatest percentage increase in value if all interest rates decrease by 1 percent?

[<Answer>](#)

- (a) 20-year, zero coupon bond
- (b) 10-year, zero coupon bond
- (c) 20-year, 10 percent coupon bond
- (d) 20-year, 5 percent coupon bond
- (e) 10-year, 5 percent coupon bond.

(1 mark)

[<Answer>](#)

37. Which of the following is/are **not true** regarding the dividend ratios?

- I. Dividend yield is always expressed as a percentage of earnings of the company.
- II. Dividend yield is calculated as dividend pay-out ratio divided by the P/E ratio.
- III. It is desirable to invest in a company having a high dividend yield irrespective of its profitability and liquidity.

- (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>](#)

38. A zero-coupon bond that matures 5 years from today has a par value of Rs.2,500 and yield to maturity of 11.5% per annum, what is the current value of the issue?

- (a) Rs. 685
- (b) Rs.1,451
- (c) Rs.1,827
- (d) Rs.2,242
- (e) Rs.2,500.

(1 mark)

[<Answer>](#)

39. Ajanta's stock is currently selling for Rs.11.44. This year the firm had earnings per share of Rs.2.80 and the current dividend is Rs.0.68. Earnings are expected to grow 7% a year in the foreseeable future. The risk-free rate is 10 percent and the expected market return is 14.2 percent. What will be the effect on the price of Ajanta's stock if systematic risk of the stock increases by 40 percent, all other factors remaining constant?

- (a) An increase of Rs.1.14
- (b) A decrease of Rs.0.40
- (c) A decrease of Rs.1.99
- (d) An increase of Rs.0.40
- (e) Remains same.

(3 marks)

[<Answer>](#)

40. Three bonds A, B and C with same coupon rate, par value and maturity have yields to maturity (YTM) of 10%, 8% and 12% respectively. Then which of the following expressions is/are **true** regarding the value of bonds A, B and C?

- (a) $A > B > C$
- (b) $A > C > B$
- (c) $B > A > C$
- (d) $C > A > B$
- (e) $C > B > A$.

(1 mark)

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

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

- I. Increase in the expected dividend payout ratio.
- II. Increase in the cost of equity capital.

III. Increase in the growth rate.

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

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

[<Answer>](#)

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

(1 mark)

[<Answer>](#)

43. Which of the following is **not true** with regard to the multi period valuation model of equity shares?

- (a) There is a pre-specified maturity period
- (b) The value of an equity share is equal to the present value of the dividends over an infinite duration
- (c) The model can be applied to the instances of constant dividends and constant growth in dividends
- (d) The model can also be applied in case of variable growth in dividends
- (e) The model can be applied to find out the fair value of the shares.

(1 mark)

[<Answer>](#)

44. Which of the following is/are **true** with regard to the convertible debentures?

- I. The conversion value is the minimum value of the convertible based on the current price of the issuer's stock.
 - II. In case of optionally convertible debentures, on the exercise of the option of conversion the holder of the instrument has to pay the issuer the specified amount.
 - III. Conversion premium is the difference between the conversion price and the conversion value.
- (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)

[<Answer>](#)

45. When the market is low, which of the following methods of raising capital are preferred?

- I. Initial public offer.
 - II. Bought-out deal.
 - III. Private placement.
 - IV. Rights issue.
- (a) Both (I) and (II) above
 - (b) Both (I) and (IV) above
 - (c) Both (II) and (III) above
 - (d) (I), (II) and (IV) above
 - (e) All (I), (II), (III) and (IV) above.

(1 mark)

[<Answer>](#)

46. Who among the following players in the international capital markets collect the rupee dividends on the underlying shares and repatriate the same to the depository in US dollars/foreign equity?

- (a) Lead Managers
- (b) Underwriters
- (c) Custodians
- (d) Corporate borrowers
- (e) Lenders.

(1 mark)

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

47. Which of the following is a feature of secured premium notes (SPN)?

- (a) It is a kind of non-convertible debenture with an attached warrant
- (b) It is convertible debenture with options
- (c) The warrants attached to the SPN gives the holder the right to apply for one preference share
- (d) It is partly convertible debenture with attached warrants
- (e) It is an example of participating preference shares.

[<Answer>](#)

48. Which of the following is a feature of preference shares?

- (a) Preference-dividend is tax deductible
- (b) Preference share holders shall invariably participate in the surplus
- (c) Voting rights can be given to the preference shareholders in the case of cumulative preference shares
- (d) Perpetual preference share capital will remain with the company forever
- (e) Preference shares are always redeemable.

(1 mark)

[<Answer>](#)

49. Martin & Company Ltd., recently issued 1 right share for every 5 shares held. If the price of the stock at the time of the issue was Rs.56 per share and the price after the rights issue was Rs.54 per share, the subscription price of each right share was

- (a) Rs.36
- (b) Rs.40
- (c) Rs.44
- (d) Rs.46
- (e) Rs.48.

(2 marks)

[<Answer>](#)

50. The least expensive form of financing for the firm is

- (a) Existing common stock
- (b) Preferred stock
- (c) Debenture capital
- (d) New common stock
- (e) Retained earnings.

(1 mark)

[<Answer>](#)

51. The term agency costs in the context of capital structure means

- (a) The commission payable by a company to its purchasing agents
- (b) The commission payable by a company to its selling agents
- (c) The expenses incurred in distribution of the products of the company
- (d) The cost on account of restrictive covenants imposed on a company by its lenders
- (e) The dividends paid by a company to its shareholders.

(1 mark)

[<Answer>](#)

52. When the realized yield approach is applied for finding out the cost of equity capital, one of the implicit assumptions is that

- (a) Retained earnings have no cost
- (b) The equity shareholders require a premium over the return required by bondholders
- (c) The equity shareholders require a premium over the return required by preference shareholders
- (d) The equity shareholders require a premium over the risk-free rate of return
- (e) The equity shareholders will continue to expect the same returns from the share as in the past.

(1 mark)

[<Answer>](#)

53. Crystal Ltd., company wants to expand its business. For which they decided to raise the funds through equity. So, the cost of raising fresh equity

- (a) Is equal to the existing retained earnings
- (b) Can be less or more than the existing cost of retained earnings depending on the market conditions
- (c) Will be more than the existing cost of retained earnings on account of floatation costs
- (d) Depends on the earnings per share of the company
- (e) Is free of cost.

(1 mark)

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

54. Consider the following data for BTC Ltd.:

Earnings Per Share (EPS)	Rs.10
Dividend Payout Ratio	50%
Equity Capitalization Rate	10%
Rate of Return on Investments	12%

If the number of shares outstanding for the firm is 2,00,000, the market value of equity according to

Walter model is

- (a) Rs.1,10,00,000
- (b) Rs.2,20,00,000
- (c) Rs.3,30,00,000
- (d) Rs.4,40,00,000
- (e) Rs.5,50,00,000.

[<Answer>](#)

55. The following details are available regarding the long term sources of finance of M/s.Magnet Enterprises:

Sources of Finance	Range of new financing from the source (Rs. in crores)	Post tax Cost (%)
Equity	0-9	15.00
	9-30	16.50
Preference	0-1	10.00
	1 and above	12.00
Debt	0-18	7.50
	18-40	8.00

The company is considering to expand its operations and requires Rs.50 crores for the same. It is planning to raise funds from these sources in the following proportions:

Equity	30%
Preference	10%
Debt	60%

The weighted marginal cost of capital of new financing in the range of Rs.30 crores - Rs.50 crores is

- (a) 8.95%
- (b) 9.95%
- (c) 10.95%
- (d) 11.95%
- (e) 12.95%.

(3 marks)

[<Answer>](#)

56. The following information is given about the debentures issued by M/s. Alpha Ltd.:

Face Value	=	Rs.1,000
Rate of interest	=	8% p.a.
Amount realized per debenture	=	Rs.900
Corporate tax rate	=	30%

Debenture is redeemable at a premium of 5% after 5 years. The cost of debenture capital is approximately

- (a) 5.2%
- (b) 6.2%
- (c) 7.5%
- (d) 8.8%
- (e) 9.2%.

(2 marks)

[<Answer>](#)

57. BNN Ltd., has the following data:

Market value of equity	Rs.60 lakh
Market value of debt	Rs.40 lakh
Cost of equity	17%
Cost of debt	15%

Assuming that the firm is operating under the regime of no taxes, the net operating income for the firm is

- (a) Rs.13.2 lakh
- (b) Rs.14.2 lakh
- (c) Rs.15.2 lakh
- (d) Rs.16.2 lakh
- (e) Rs.17.2 lakh.

(2 marks)

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

58. Consider the following data of KSN Ltd., and GSN Ltd.

	KSN Ltd. (Rs.)	GSN Ltd. (Rs.)
Net operating income	5,00,000	5,00,000
Interest on debt @ 8%	-	2,40,000
Corporate tax rate	50%	50%

As per the MM Hypothesis,

the value of levered firm exceeds the unlevered firm by

- (a) Rs.15,00,000
- (b) Rs.20,00,000
- (c) Rs.24,00,000
- (d) Rs.25,00,000
- (e) Rs.30,00,000.

59. MSK Ltd., has an equity of Rs.8,40,000 and 15% preference share capital of Rs.6,00,000. The face value of its shares is Rs.10 and market value is Rs.20 and it had posted a profit after tax of Rs.9,00,000 this year. The company paid Rs.3,36,000 by way of equity dividends. If the dividends grow at 5% then the cost of equity according to earning price ratio approach is

[<Answer>](#)

- (a) 25.01%
- (b) 35.61%
- (c) 45.51%
- (d) 50.61%
- (e) 55.01%.

(2 marks)

[<Answer>](#)

60. The cost of which of the following sources of finance can be found out by the bond yield plus risk premium approach?

- (a) Bonds
- (b) Term loan
- (c) Trade credit
- (d) Preference capital
- (e) Equity capital.

(1 mark)

[<Answer>](#)

61. Which of the following is **not** a merit of using book values as weights for calculating the weighted average cost of capital?

- (a) The book value weights are independent of the fluctuations of the market prices
- (b) The calculation of weights is simple
- (c) The book values of the different sources of finance are approximately related to their present economic values
- (d) The book value weights are suitable for a firm whose securities are not traded regularly
- (e) The book value weights are the most suitable for the unlisted firms.

(1 mark)

[<Answer>](#)

62. The following information regarding the equity shares of M/s. Mars Ltd., is given below:

Market Price	=	Rs.58.50
Dividend per share	=	Rs. 5.00
Multiplier	=	7

According to the traditional approach to the dividend policy, the EPS for M/s. Mars Ltd., is

- (a) Rs. 5
- (b) Rs.10
- (c) Rs.15
- (d) Rs.20
- (e) Rs.25.

(2 marks)

[<Answer>](#)

63. Fast Foods posted a net income of Rs.15 million this year. Financial planners at Fast Foods anticipate to have a capital budget of approximately Rs.18 million. The firm also anticipates retaining its target capital structure of 60% equity and 40% debt. If the firm follows a strict residual dividend policy, what is their expected dividend payout ratio?

- (a) 28%
- (b) 36%
- (c) 50%
- (d) 64%
- (e) 72%.

(2 marks)

[<Answer>](#)

64. Which of the following statements is/are **true** with respect to bankruptcy costs?

- I. These costs represent certain restrictions on the firm in the form of some prospective covenants incorporated in the loan contract.
- II. These costs represent a loss, which can be easily diversified away.
- III. The probability of bankruptcy increases at an increasing rate as the debt-equity ratio increases.
- IV. Expected cost of bankruptcy increases as debt-equity ratio decreases.

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

(1 mark)

[<Answer>](#)

65. Floatation cost is associated with

- (a) Cost of existing preference capital
- (b) Cost of term loan
- (c) Cost of existing debenture capital
- (d) Cost of external equity
- (e) Cost of retained earnings.

(1 mark)

[<Answer>](#)

66. Which of the following is/are the limitation(s) of Walter's model?

- I. Exclusive financing by retained earnings make the model suitable only for all equity firms.
- II. In case of high investments the return on investment will not be constant.
- III. The business risk of the firm has a direct impact on the value of the firm, thus cost of equity capital cannot be constant.

- (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>](#)

67. The following information is collected from the annual report of Wilson Ltd.:

Net profit	Rs. 6.00 crore
Dividend pay out ratio	40 percent
Number of outstanding shares	60,00,000
Equity capitalization rate	12 percent
Rate of return on investment	16 percent

What is market price per share according to Walter's model on dividend policy?

- (a) Rs. 40
- (b) Rs. 60
- (c) Rs. 80
- (d) Rs.100
- (e) Rs.120.

(2 marks)

[<Answer>](#)

68. Which of the following statements is **false** regarding assumption made under the Modigliani and Miller approach for dividend policy of a firm?

- (a) Existence of perfect capital markets
- (b) Non-existence of differential tax rates for the dividend income and capital gains
- (c) Constant investment policy of the firm
- (d) Existence of floatation and the transaction costs
- (e) Non-influence of single investor on the share value.

(1 mark)

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

69. Oswal Industries Ltd., has 80,000 shares outstanding. The current market price of each share is Rs.75. The company expects a net profit of Rs.12,00,000 during the year and it belongs to a risk class for which the approximate capitalization rate has been estimated to be 20%. The company is considering dividend of Rs.10 per share for the current year. According to the Modigliani and Miller model, how many new shares must the company issue if the dividend is paid and the company needs Rs.28,00,000 for an approved investment expenditure during the year?

- (a) 12,000 shares
- (b) 18,000 shares
- (c) 20,000 shares
- (d) 24,000 shares
- (e) 30,000 shares.

70. The dividend payout ratio of a firm is 40%. The firm follows traditional approach to dividend policy with a multiplier of 6. The P/E ratio of the firm is

[<Answer>](#)

- (a) 4.4
- (b) 5.2
- (c) 6.7
- (d) 8.1
- (e) 9.5.

(1 mark)

71. Biogenics Ltd., has paid a dividend of Rs.3.50 per share on a face value of Rs.10.00 in the financial year ended 31st March, 2008. The relevant data regarding the company and the market are as under:

[<Answer>](#)

Current market price of share	=	Rs.75
Growth rate of earnings and dividends	=	7.5%
Beta of share	=	0.95
Average market return	=	12.5%
Risk free rate	=	6%

The intrinsic value of the stock is

- (a) Rs. 60.00
- (b) Rs. 80.48
- (c) Rs. 89.00
- (d) Rs. 94.26
- (e) Rs.104.25.

(2 marks)

72. Consider the following data regarding the bonds issued by Xeta Ltd., on July 15, 2006 to be redeemed on July 15, 2013:

[<Answer>](#)

Face value of the bond	Rs.100
Issued at a discount of	10%
Redeemable at a premium of	10%
Interest payable semi-annually	8% p.a.
Current market price as on July 15, 2008	Rs.95

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

- (a) 9.27%
- (b) 10.90%
- (c) 12.24%
- (d) 12.66%
- (e) 13.55%.

(2 marks)

END OF QUESTION PAPER

Suggested Answers

Financial Management-I (MB2E1): October 2008

ANSWER

REASON

1. A A public limited company is said to be in a significant advantage owing to its limited liability. If the company turned to an insolvent one, the members don't have any further liability to bail out whereas in a proprietorship firm, the liability of the owner is unlimited. However, for a public limited company, the ownership can be easily transferred and resources can be mobilized. Moreover it has unlimited life. The governmental regulations for a public limited company are more than applicable to a partnership firm. Hence (a) is true. But for a proprietorship company, these advantages

are not available.

2. B All the participants in the call money market are split into two categories. The first comprises the entities who can borrow as well as lend in the market and the second comprises only lenders i.e. the participants in the second category cannot borrow in the call money market. RBI, DFHI, STCIL and commercial banks belong to the first category and all the financial institutions and mutual funds belong to the second. Hence, (b) cannot borrow in the call money market.
3. E An optimal capital structure can satisfy the return expectations of the stakeholders at a lower cost that will result in share price of the company to a healthier one. It is a financing decision. While the cases mentioned in the other alternatives are the investment decisions as these may bring return to the company over a period of time.
Hence (e) is the answer.
4. C Certificate of deposit (CD) is a financial instrument where an investor has to invest a certain sum to get a fixed amount (principal and accrued interest) on maturity at the contracted rate. So it is similar to a time deposit. CDs are transferable simply by endorsement and delivery by the holder without any restriction, whereas its maturity period ranges from 15 days to one year. But as it is a liability to the issuing banks, CDs are also subjected to the reserve requirements of the bank. Hence (c) is not a feature of CDs.
5. C Bulldog bonds are sterling denominated foreign bonds, which are raised in the United Kingdom domestic securities market. Hence option (c) is the correct choice. Samurai bonds are bonds issued by non-Japanese borrowers in the domestic Japanese markets. Yankee bonds are US dollar denominated bonds issued by foreign borrowers in the US domestic markets. Shibosai Bonds are Yen denominated privately placed bonds issued in the Japanese Markets. Matador bonds are foreign bonds issued in Spain.
6. B Medium-Term Notes (MTNs) are defined as sequentially issued fixed-interest securities which have a maturity of over one year. It enables an issuer to issue Euronotes for different maturities, from one year up to the desired level of maturity.
Hence (b) is the correct choice.
Commercial Papers are short-term, unsecured promissory notes issued by well known companies that are financially strong and carry a high credit rating.
American Depository Receipts (ADRs) are dollar denominated negotiable certificates and they represent a non-US company's publicly traded equity.
Treasury Bills are short-term instruments issued by the government. Global depository receipts are negotiable instruments which represents publicly traded local currency equity share.
Hence, options (a), (c), (d) and (e) are false.
7. D In the call money market day-to-day surplus funds of banks are traded. The call loans are of very short term in nature and any amount of money can be lent or borrowed at a convenient interest rate, which is acceptable to both the lender and the borrower and there is no maximum ceiling on the interest rate. Hence, in the given case, though the amount is huge, the interest is decided by the lender and the borrower and RBI has no role in the interest determination. The correct answer is (d).
8. E Commercial papers are short-term, unsecured promissory notes issued at a discount to face value by well-known companies that are financially strong and carry a high credit rating. As per the guidelines, any company wishing to raise money through CP has to fulfill the following requirements:
i. The tangible net worth of issuing company should not be less than Rs.4 crores.
ii. The fund based working capital limit should not be less than Rs.4 crores
iii. The company should obtain the second highest credit rating from one of the approved credit rating agencies.
iv. Board resolution authorizing the issue is required.
Of the above, in the given case, the company has not met (ii) and (iii). Hence, it cannot issue commercial paper of any amount. Hence, (a), (b) and (c) are not correct. (d) is also not correct because the condition (ii) will be met but the condition (iii) will not be met.

Hence, the answer is (e).

9. A If the delivery takes place on second business day after the agreement or transaction takes place it is called 'spot market'. If the delivery date is next working day it is called 'TOM market'. If the agreement to buy & sell is agreed upon and executed on same day it is called Ready market (transaction) or cash transaction. If the delivery takes place at a specified future date it is referred as forward market. The duration of the same varies Hence the answer is (a).

10. D The volatility in the call money market increases with the reduction of the liquidity in the market. It generally comes down with the following reasons:

- Increase in cash reserve ratio (CRR)
- Larger amount borrowed by several borrowers following an increase in demand for the loanable funds
- Withdrawal of funds by the banks and financial institutions suddenly to meet their respective corporate requirements

Payment of a large amount of advance taxes by the banks and FIs will lead to the reduction in liquidity in the system thereby increases the volatility in the call money market. Hence, option (d) is the answer.

11. B

$$0.1025 = \left(1 + \frac{r}{2}\right)^2 - 1$$

$$\text{or } 1.1025 = \left(1 + \frac{r}{2}\right)^2$$

$$\therefore 1 + \frac{r}{2} = \sqrt{1.1025} \quad \text{or } r = (\sqrt{1.1025} - 1) \times 2 = 0.10 \text{ i.e. } 10\%$$

12. B According to the single-index model,

$$R_i = \alpha + \beta R_m$$

$$\Rightarrow = 0.04 + 0.9 \times 0.12 = 14.8\%$$

As the shares are said to be in equilibrium,

$$\frac{D_1}{P_0} + g = R_i$$

$$= \frac{3 \times 0.6}{40} + g = 0.148$$

$$0.045 + g = 0.148$$

$$g = 0.103$$

$$\text{MP at the end of 5 years} = \frac{D_6}{k - g} = \frac{3 \times 0.6 \times (1.103)^5}{0.148 - 0.103} = \text{Rs. } 65.30$$

13. C PV of cash inflows in case of scheme A
= (Rs. 2.5 lakh - Rs. 2.5 lakh * 10%) = Rs. 2.25 lakh

PV of cash inflows in case of scheme B
= 18,000 + PVIFA_(k,60) * 4,100
(Where, k = (1.09)^{1/12} - 1 = 0.0072 i.e., 0.72%)
= 18,000 + 48.581 * 4,100
= 18,000 + Rs. 19,9182.10 = Rs. 2,17,182.10

Hence, option (c) is the answer.

14. C The firm pays Rs.1,50,000 out of total cost of Rs.8,00,000 immediately. So the amount Rs.6,50,000 remains outstanding which is paid by way of annuity of Rs.1,50,000 for 6 years.

$$\text{Rs. } 6,50,000 = \text{Rs. } 1,50,000 * \text{PVIFA}_{(r,6y)}$$

$$\frac{6,50,000}{r}$$

$$PVIFA_{(r,6y)} = 1,50,000 \quad PVIFA_{(r,6y)} = 4.333$$

$$PVIFA_{(10\%,6y)} = 4.355$$

In PVIFA table, value of 4.333 for 6 years is found nearer at 10% column. So, the effective rate of interest is 10% approximately.

15. B Risk premium = $\beta(R_m - R_f)$

Probability	k_m	$(k_m - \bar{k}_m)$	$(k_m - \bar{k}_m)^2 \cdot p$
0.30	9	0.25	0.01875
0.35	5	-3.75	4.92187
0.15	10	1.25	0.23437
0.20	14	5.25	5.5125
	$\bar{k}_m = \sum k_m P = 8.75$		10.6875

$$\frac{\text{Cov}(k_A, k_m)}{\text{Var}(k_m)} = \frac{9.45}{10.6875} = 0.884$$

Hence, option (b) is the correct choice.

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

16. C Capital recovery factor is the inverse of the PVIFA factor. It can be applied to find out the amount that can be withdrawn periodically for a certain length of time, if a given amount is invested today. Hence statement III is true and the answer is (c).

17. A The effective annual interest is the value of 'r' in the following:

$$2000 FVIFA_{(r,8)} = 21,274$$

$$FVIFA_{r,8} = 10.637$$

$$\text{At } r = 8\%, \text{ L. H. S.} = 10.637$$

Hence, $r = 8\%$.

18. C The amount of risk reduction depends on the degree of correlation between the stocks. The portfolio risk will be minimum if the stocks are perfectly negatively correlated. Hence, statement III is correct.

Lower the degree of positive correlation, greater is the amount of risk reduction that is possible. Hence, statement II is incorrect.

Statement I is incorrect as the diversifying effect of each additional stock diminishes with increase in number of stocks. Hence, (c) is the answer.

19. C Standard deviation, a measure of dispersion around the expected (or average), is the square root of the variance of the rates of return. If the variance is higher, the standard deviation will also be higher. Hence, III is true and the answer is (c).

Range is referred as the difference between the highest and lowest values. Standard deviation may be the highest, irrespective of the range being the lowest or highest. Hence, I is not true. Highest mean does not mean that it should have highest standard deviation. Hence, II is also not true.

20. B The equation for the Characteristic Regression Line (CRL) is given as:

$$K_j = \alpha_j + \beta_j k_m + e_j$$

The CRL is plotted by plotting K_j along the Y-axis and K_m along X-axis.

21. E Expected price = $\sum x_i p_i$

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

$$\text{Hence, expected price} = 70 \times 0.3 + 80 \times 0.5 + 90 \times 0.2 = \text{Rs. } 79$$

The expected one year return is calculated as

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

$$\text{Expected return} = \frac{(79 + 2) - 60}{60} \times 100 = 35\%.$$

22. A

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

$$P_0 = \frac{2(1.07)}{0.10 - 0.07} = \frac{2.14}{0.03} = 71.33$$

Therefore the increase in the price of the security = $71.33 - 50 = \text{Rs.}21.33$.

23. D

$$R_i = R_f + \beta(R_m - R_f)$$

$$R_i = 6 + 0.6(14 - 6) = 10.8\%$$

As the required return from the stock is lower than the actual return produced by the stock, the stock is undervalued, will fall above the SML and will have positive alpha. Hence the stock can be purchased and the answer is (d).

24. C

$$\text{Weighted beta} = (200 \times 0.5 + 200 \times 2 + 100 \times 4) / 500 = 1.8$$

$$\text{Required rate of return according to CAPM} = R_f + \beta(R_m - R_f)$$

$$= R_f + 1.8(14 - R_f) = 20.4$$

$$\Rightarrow R_f + 25.2 - 1.8 R_f = 20.4 = 0.8 R_f = 4.8$$

$$R_f = 6\%$$

$$\text{New weighted Beta} = (200 \times 0.5 + 200 \times 2 + 100 \times 3) / 500 = 1.6$$

$$\text{New required rate of return} = 6 + 1.6(14 - 6) = 18.8\%.$$

25. B

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

26. B

$$\text{Capital gain yield from an equity share} = \frac{P_1 - P_0}{P_0} \times 100$$

$$= \left(\frac{P_1}{P_0} - 1 \right) \times 100 = \left(\frac{5}{4} - 1 \right) \times 100 = 25\%$$

Therefore, option (b) is the correct answer.

27. B

$$\text{According to CAPM, required rate of return} = R_f + \beta(R_m - R_f)$$

Where R_f is the risk-free rate of return, β is the Beta of the stock and R_m is the market return. If Beta is equal to zero, required rate of return is equal to risk-free rate of return. Hence, (II) is true.

In the SML equation, slope is measured by $R_m - R_f$ and the Beta of the stock is not relevant to find the slope of SML. Hence, (I) is not true. A stock whether it will lie below or above the SML depends on whether the stock's required rate is more than or less than the expected rate of return. It is immaterial whether the Beta is equal to zero or not. Hence, (III) is not true and the answer is (b).

28. E

If the level of output is greater than the overall break-even point, then the DTL will be positive. DTL decreases as Q increases and reaches a limit of 1. Hence, (e) is not correct and the rest are correct.

29. E

DOL determines the change in the EBIT with change in sales. It is determined by the level of fixed costs.

30. D

$$\text{The quantity produced at operating break-even point is computed as } \frac{F}{(S - V)}$$

where F represents the fixed costs of the firm

S represents the selling price per unit.

V is the variable cost per unit.

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

Other things remaining the same, increase in the variable costs will decrease the

denominator, hence it will increase the quantity produced at operating break-even point. Hence, II is correct and III is not correct.

Other things remaining the same, increase in the selling price per unit will increase the denominator, hence it will decrease the quantity produced at operating break-even point. Hence, I is correct and the answer is (d).

$$31. \quad C \quad \begin{aligned} \text{EBIT} &= S(P - V) - F \\ &= 0.6S - 1.433 \end{aligned}$$

$$\text{Again DFL} = \frac{\text{EBIT}}{\text{EBIT} - I - \frac{D_p}{(1-t)}}$$

$$1.9 = \frac{0.6S - 1.433}{0.6S - 1.433 - 0.32 - 0.655}$$

$$1.14S - 4.575 = 0.6S - 1.433$$

$$0.54S = 3.142$$

$$S = \text{Rs.5.82 crores.}$$

$$32. \quad A \quad \begin{aligned} \text{DOL} &= \frac{Q(S - V)}{Q(S - V) - F} = \frac{10,000(2,50,000 - 1,00,000)}{10,000(2,50,000 - 1,00,000) - 30,00,00,000} \\ &= \frac{15,00,000,000}{12,00,000,000} = 1.25 \end{aligned}$$

The percentage increase in EBIT

$$\frac{\Delta \text{EBIT}}{\text{EBIT}} = \text{DOL} \times \frac{\Delta S}{S}$$

$$\text{Hence, percentage increase in sales should be} = \frac{5}{1.25} = 4\%$$

$$33. \quad C \quad \begin{aligned} \text{DOL} &= \frac{Q(P - V)}{Q(P - V) - F} = \frac{QP - QV}{QP - QV - F} \\ &= \frac{22,500 - 11,200}{22,500 - 11,200 - 5,600} = \frac{11,300}{5,700} = 1.982 \end{aligned}$$

$$\text{DFL} = \frac{\text{EBIT}}{\text{EBIT} - I - \frac{DP}{(1-t)}}$$

$$\begin{aligned} \text{EBIT} &= \text{Net profit} + \text{Taxes} + \text{Interest (or)} Q(P - V) - F \\ &= 3,460 + 1,250 + 990 \text{ or } 22,500 - 11,200 - 5,600 \\ &= \text{Rs.5,700 crores} \end{aligned}$$

$$\text{Interest} = \text{Rs.990 (given) crore}$$

$$\text{Tax rate (t)} = \frac{\text{Taxes}}{\text{Pr ofit before tax}} = \frac{1,250}{3,460} = 36.12\% \text{ (approx.)}$$

$$\text{Preference dividend (Dp)} = 550 \times .20 = \text{Rs.110 crs}$$

$$\therefore \frac{D_p}{(1-t)} = \frac{110}{0.6388} = \text{Rs.172.197 crs}$$

$$\therefore \text{DFL} = \frac{5,700}{5,700 - 990 - 172.197} = \frac{5,700}{4,537.803} = 1.256$$

$$\text{Degree of total leverage (DTL)} = \text{DOL} \times \text{DFL} = 1.982 \times 1.256 = 2.489$$

$$DTL = \frac{\text{Percentage change in EPS}}{\text{Percentage change in sales revenue}}$$

$$\therefore \text{Percentage change in sales revenue} = \frac{\text{Percentage change in EPS}}{DTL}$$

Give : Desired increase in EPS = 25%

$$\therefore \text{Required increase in net sales} = \frac{25}{2.489} = 10.04\% \text{ (approx.)}$$

34. C EPS, DPS and required rate of return being the same, low dividend yield and high P/E ratio implies that there is considerable growth prospects in Vipul. Hence, II is correct. As the growth rate increases, the expected return depends more on the capital gains yield and less on the dividend yield. Hence, III is correct. As growth prospects are higher the price of Vipul should be higher. Hence, I is not correct and the answer is (c).
35. D Treasury bills are also referred to as gilt securities. PSU bonds are the securities issued by the public sector entities. Hence, I is not true. 91 days Treasury bills are issued by auctions conducted by RBI. Hence, II is true. RBI neither rediscounts nor participates in auctions of these T-Bills. Hence, III is also true and the answer is (d).
36. A For zero-coupon bonds, duration will be the maturity. Longer the term to maturity, higher will be the price change. Of the 20-year zero coupon bond and 10-year zero coupon bond, price change is higher in case of 20 year bond. Smaller the coupon rates, higher is the price change with a change in YTM. Hence, of (a), (c) and (d), the change in price is higher in case of (a).
37. E Dividend yield is the dividend per share divided by market price per share. It can also be calculated as dividend pay out ratio divided by P/E ratio. A company must be liquid and profitable to pay consistent and adequate dividends. Hence, II is correct and I and III are not true.
38. B Value of zero coupon bond = $\frac{2,500}{(1.115)^5} = \text{Rs.}1,450.60 = \text{Rs.}1,451.$
39. C $k_e = R_e + \beta_j(R_m - R_f)$
 Old $k_e = 0.10 + \beta_j(0.142 - 0.10) = 0.10 + 0.042\beta_j$
 $P = \text{Rs.}0.68(1.07)/(0.10 + 0.042\beta_j - 0.07) = \text{Rs.}11.44$
 $\beta_j = 0.80$
 New $k_e = 0.10 + 0.8(1.4)(0.142 - 0.1) = 0.147$
 $P = \text{Rs.}0.68(1.07)/(0.147 - 0.07) = \text{Rs.}9.45$
 A decrease of $\text{Rs.}(11.44 - 9.45) = \text{Rs.}1.99$ a share.
40. C According to the bond value theorems, price of the security and the yield to maturity are inversely related. As YTM increases, other things remaining constant, the value of the bond decreases. Hence, in the given question the value of bond B will be greater than the value of bond A which is greater than the value of bond C. Hence, the answer is (c).
41. D Expected Price-earning ratio is computed as $\frac{\text{Expected Dividend payout ratio}}{\text{Cost of capital} - \text{growth rate}}$
 From the above equation, we can conclude that increase in the expected dividend payout ratio and increase in the growth rate will lead to increase in Expected Price-earning ratio. Hence statements I and III are correct. Therefore, option (d) is the answer.
 Increase in the cost of capital will decrease the Expected Price-earning ratio.
 Hence, (II) is incorrect.
42. B In the intrinsic value formula the face value of the bond is multiplied with the factor $PVIF(r,n)$. The factor $PVIF(r,n)$ decreases as the number of years to maturity increases, other things remaining the same. Hence, other things remaining the same, the present value of the face value of the bond decreases as the number of years to maturity increases. Therefore alternative (b) is not true. All other alternatives are true.

43. A There is no pre-specified maturity period in the multi-period valuation model of equity shares; cash flows over an infinite duration are considered.
44. D The conversion value represents the market value of the convertible if it were converted into stock. This is the minimum value of the convertible based on the current price of the issuer's stock. Hence, I is true. Conversion premium is the difference between the conversion price and the conversion value. Hence, III is also true and the answer is (d).
Whether it is optionally convertible debenture or compulsorily convertible debenture, whether it is fully convertible or partially convertible debenture, on conversion cash is not involved. It is merely, the old security is exchanged for the appropriate number of new securities is issued in turn. Hence, II is incorrect.
45. C When the market is low, public issue and rights issue may not be successful. Of the given methods of private placement and bought out deal should be preferred. Of the two, bought out deal is the most preferred because the sponsor or the merchant banker who is involved in the deal takes up the issue with an intention of offloading to the public at a later stage when the market picks up.
46. C Custodians hold the underlying shares and collect rupee dividends on the underlying shares and repatriate the same to the depository in US dollars/foreign equity.
Hence (c) is the answer.
Lead managers undertake activities like preparation of offer circular, marketing the issues etc.
Underwriters of the issue bear interest rate or market risks moving against the issuer before they have placed bonds or depository receipts.
47. A SPN is a kind of non-convertible debenture with an attached warrant. It is neither a convertible or partly convertible debenture nor any option can be attached to it. The warrants attached to the SPN does not gives holders the right for the preference shares. It is also not an example of participating preference shares. Therefore only option (a) is correct. Rest are incorrect.
48. D Preference shareholders have preference over equity shareholders on the post tax earnings of the firm. Preference dividends are not tax deductible. Voting rights can not be given to the cumulative preference shares. Preference shares (except participating preference shares) do not participate in the surplus. Preference shares can be redeemable or irredeemable. Perpetual preference share capital will remain with the company forever. Thus only option (d) is correct. Rest are incorrect.
49. C
$$\frac{NP_0 + S}{N + 1}$$
Ex-rights value of share =
Where N, P₀ and S have their usual meanings
Given:
N = 5
P₀ = Rs. 56 per share
Ex-rights price = Rs. 54 per share
$$\therefore 54 = \frac{5(56) + S}{5 + 1}$$
or S = 54 (6) – 56 (5)
or S = Rs. 44 per share.
50. C The debt capital is the cheapest source of financing but it should be used within reasonable limits.
51. D Agency cost are cost on account of restriction imposed by creditors on the firm in the form of some protective covenants. Commission payable by the company to its purchasing and selling agents, the expenses incurred in distribution of the products of the company, or the dividends paid by the company does not come under the agency cost.
52. E In the realized yield approach one of the implicit assumptions is that the equity shareholders will continue to expect the same returns from the share as in the past. Hence option (e) is the correct answer.

53. C The cost of raising fresh equity involve the flotation cost which increases its cost more than the cost of retained earnings. So it is not equal to the existing cost of retained earnings. It is not free of cost, and it does not depends on the earning per share of the company.

Hence (c) is the correct answer.

54. B According to Walter model = $\frac{D}{K_e} + \frac{r(E - D) / K_e}{K_e}$

$$= \frac{5}{0.10} + \frac{0.12(10 - 5)}{(0.10)^2}$$

$$= 50 + 60$$

$$= 110$$

∴ Market value of equity = $110 \times 2,00,000$

$$= \text{Rs. } 2,20,00,000$$

55. C Calculation of breaking point

Source of finance	Cost %	Range of new financing (Rs. In crores)	Breaking point (Rs. In crores)	Range of total new financing (Rs. In crores)
Equity	15.00	0-9	9/0.3 = 30	0-30
	16.50	9-30	30/0.3 = 100	30-100
Preference	10.00	0-1	1/0.1 = 10	0-10
	12.00	1 and above	-	10 and above
Debt	7.50	0-18	18/0.6 = 30	0-30
	8.00	18-40	40/0.6 = 66.67	30-66.67

Range of total new financing (Rs. In crores)	Source of finance	Proportion	Cost %	Weighted Cost %
0-10	Equity	0.3	15.00	4.5
	Preference	0.1	10.00	1
	Debt	0.6	7.50	4.5
10-30	Equity	0.3	15.00	4.5
	Preference	0.1	12.00	1.2
	Debt	0.6	7.50	4.5
30-66.67	Equity	0.3	16.50	4.95
	Preference	0.1	12.00	1.2
	Debt	0.6	8.00	4.8
66.67-100	Equity	0.3	16.50	4.95
	Preference	0.1	12.00	1.2

Therefore,

weighted marginal cost of capital

$$= 0.3 \times 16.50 + 0.1 \times 12 + 0.6 \times 8 = 4.95 + 1.2 + 4.8 = 10.95\%$$

56. D
$$\frac{i(1-t) + \frac{f-p}{n}}{\frac{f+p}{2}}$$

$$= \frac{80(1-0.30) + \frac{1050-900}{5}}{\frac{1050+900}{2}}$$

$$= \frac{56+30}{975} = 8.8\%$$

57. D Overall capitalization rate = Net operating income/market value of the firm

$$K_0 = k_d (B/B+S) + K_e (S/B+S)$$

$$= 0.15 (40/100) + 0.17(60/100)$$

$$\begin{aligned}
&= 0.06 + 0.102 \\
&= 0.162 \\
\text{Net operating income} &= k_0 \times \text{market value of the firm} \\
&= 0.162 \times 100 \\
&= 16.2 \text{ lakh}
\end{aligned}$$

So option (d) is the answer.

58. A As per the MM Hypothesis, the value of levered firm exceeds the unlevered firm by the amount of tax shield.

$$\begin{aligned}
&\frac{2,40,000}{0.08} = \text{Rs.}30,00,000 \\
\text{Amount of debt} &= \\
\text{Tax shield} &= B(t) \\
&= 30,00,000 \times 0.50 \\
&= \text{Rs.}15,00,000.
\end{aligned}$$

59. D Number of equity shares of the company = $\text{Rs.}8,40,000/10 = 84,000$.
Preference dividend paid = $15 \times 6,00,000/100 = \text{Rs.}90,000$
Earnings per share = $\text{Net profit} - \text{Preference dividend}/\text{no of equity shares}$
= $\text{Rs.}9,00,000 - \text{Rs.}90,000/84,000$
= $\text{Rs.}8,10,000/84,000 = \text{Rs.}9.64$

$$\begin{aligned}
\text{Accord into earnings price ratio approach cost of equity} &= E_1/P \\
&= E_1 = \text{Earnings per share for the next year} \\
P &= \text{Market price per the share} \\
&= E_1 = E(1+g) = 9.64(1+0.05) = 10.122
\end{aligned}$$

$$\text{Cost of equity} = 10.122/20 = 0.5061 = 50.61\%$$

60. E The bond yield plus risk premium approach is used to find out the cost of equity capital. It is illogical to apply for finding out the cost of bonds because the basis of this approach is the yield or cost of the bond itself. The cost of preference capital is found out by discounting the preference dividends and redemption value, and the cost of term loan is found out by adjusting the nominal interest cost for tax. Generally there are no explicit costs associated with trade credit and there is no logical connection between the cost of trade credit and bond yields.
61. C The book values of the different sources of finances may not be related to their current economic values e.g. the land price may appreciate, the machine may become obsolete, etc. The reasons stated in the other options are the advantages of using book values as the basis of the weights for the calculation of the cost of capital.

62. B According to the traditional approach

$$P = m \left(D + \frac{E}{3} \right)$$

$$58.50 = 7 \left(5 + \frac{E}{3} \right)$$

$$\text{or, } 5 + \frac{E}{3} = 8.35$$

$$\text{or, } \frac{E}{3} = 3.35$$

$$\text{or, } E = 10.05 = \text{Rs.}10$$

63. A Capital budget = Rs.18 million
Debt equity ratio = 40:60

$$\text{Therefore debt} = 18 \times \frac{40}{100} = \text{Rs.}7.2 \text{ million}$$

Rest capital budget = Rs.18 million – Rs.7.2 million
= Rs.10.8 million
Net income = Rs.15 million
Therefore residual dividend = Rs.15 – 10.8 = Rs.4.2 million

$$\frac{\text{Rs.4.2 million}}{\text{Rs.15million}} = 28\%$$
Dividend payout ratio =

64. B Agency costs (not bankruptcy costs) represent certain restrictions on the firm in the form of some prospective covenants incorporated in the loan contract. Statement (I) is wrong. The probability of bankruptcy for a levered firm is higher than for an unlevered firm. Beyond a threshold level, the probability of bankruptcy increases at an increasing rate as the debt-equity ratio increases. This means that the expected cost of bankruptcy increases when the debt-equity ratio increases. Investors expect a higher rate of return from a firm, which is faced with the prospect of bankruptcy, as bankruptcy costs represent a loss, which cannot be easily diversified away. Therefore statement (III) is true, and statements (I), (II) and (IV) are wrong. Hence (b) is the correct answer.

65. D Cost of external equity comes into picture, when there are certain floatation costs involved in the process of raising equity from the market.

66. E All the given statements are limitations of Walter’s model.

67. D Walter’s model on dividend capitalization states that:

$$P = \frac{D}{K_e} + \frac{r(E - D) / K_e}{K_e}$$

Here, the earnings per share for the company = Rs.6,00,00,000/60,00,000 = Rs.10 and the amount of dividend paid per share = Rs.10 × 40 percent = Rs.4.00 per share.

Therefore, we have, E = Rs.10, D = Rs.4, r = 16 percent and $K_e = 12$ percent.

So, the market price per share, according to Walter’s model is given as:

$$P = \frac{4}{0.12} + \frac{0.16(10 - 4) / 0.12}{0.12} = 33.33 + 66.67 = \text{Rs.100}$$

Hence, the required market value of the share as per Walter’s model will be = Rs.100.

68. D **Miller and Modigliani Model:**

Assumptions:

- The first assumption is the existence of a perfect market in which all investors are rational. In perfect market condition there is easy access to information and the flotation and the transaction costs do not exist. The securities are infinitely divisible and hence no single investors in large enough to influence the share value.
- Secondly, it is assumed that there are no taxes, implying that there is no differential tax rate for the dividend income and the capital gains.
- The third assumption is a constant investment policy of the firm, which will not change the risk complexion nor the rate of return even in cases where the investments are funded by the retained earnings.

Finally, it was also assumed that the investors are able to forecast the future earnings, the dividend and the share value of the firm with certainty. This assumptions was however, dropped out of the model.

69. E As per MM model, the current market price of the share, P_0 is

$$P_0 = \frac{1}{1 + k_e} (D_1 + P_1)$$

Step 1: Since the firm pays a dividend of Rs.10, the price at the end of year 1, P_1 is

$$75 = \frac{1}{1 + 0.2} (10 + P_1)$$

$$P_1 = (75 \times 1.2) - 10$$

$$P_1 = \text{Rs. } 80$$

Step 2: Amount to be raised by the issue of new shares:

$$n_1 P_1 = I - (E - nD_1)$$

$$n_1 \times 80 = 28,00,000 - (12,00,000 - 80,000 \times 10)$$

$$80n_1 = 24,00,000$$

$$n_1 = 24,00,000 / 80 = 30,000$$

The company has to issue 30,000 new shares.

70. A According to the Traditional approach

$$P = m \left(D + \frac{E}{3} \right)$$

where symbols are in their standard use

Substituting the values, we get

$$P = 6 \left(0.40E + \frac{E}{3} \right) = E(2.4 + 2)$$

$$\therefore \frac{P}{E} = 4.4$$

71. B Intrinsic Value, $P_0 = \frac{D_1}{k - g}$

Using CAPM

$$K = R_f + \beta(R_m - R_f) = 6 + 0.95(12.5 - 6) = 12.175\%$$

$$P = \frac{3.5 \times 1.075}{0.12175 - 0.075} = \text{Rs. } 80.48$$

72. B The YTM is the value of 'i' in the following:

$$95 = 4PVIFA_{i,10} + 110PVIF_{i,10}$$

$$\text{At } i = 5\%, \text{ RHS} = 98.428$$

$$\text{At } i = 6\%, \text{ RHS} = 90.82$$

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

$$= 5.45$$

$$= 10.9\% \text{ (approximately)}$$

Hence, the answer is (b).

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