

This question paper contains 6 questions. **All questions to be answered in the main answer sheet. Prepare a table for Multiple Choice Questions.**

1. Multiple Choice Questions [22\*1.5 Marks – No negative marking.]

1. The risk-adjusted discount rate of a project is superior to the firm's weighted average cost of capital because of which of the following **most** unconventional reason:
  - a. Some investments with internal rates of return more than the firm's WACC may be acceptable, and some investment with an internal rate of return less than the firm's WACC should be rejected.
  - b. Some investments with internal rates of return less than the firm's WACC may be acceptable, and some investment with an internal rate of return greater than the firm's WACC should be rejected.
  - c. Some investments with internal rates of return more than the firm's WACC may be acceptable, and some investment with an internal rate of return more than the firm's WACC should be rejected.
  - d. Some investments with internal rates of return less than the firm's WACC may be acceptable, and some investment with an internal rate of return less than the firm's WACC should be rejected.
2. Using average cost of capital as discounting rate for project evaluation suffers from which possible shortcoming:
  - a. Basing decision based on WACC may not always be in the best interest of principals and agents
  - b. It is a complex procedure to implement
  - c. Its reliability in evaluating alternative projects is not questionable
  - d. The cash flow and risk estimation procedure requires inputs from various departments and not from a specific unit
3. It is unusual for a firm to have operating leverage less than equal to 1 because:
  - a. In general it is rare for a firm to avoid fixed operating costs
  - b. Fixed cost are usually greater in magnitude than variable costs
  - c. A firm has control over variable cost but not over fixed cost
  - d. A firm attempts to magnify use of fixed cost to take advantage of operating leverage
4. The degree of financial leverage is undefined:
  - a. For an unlevered firm
  - b. When earnings per share equals earnings before interest and taxes
  - c. When Tax rate is 0%
  - d. Both b and c
  - e. When earnings before interest and taxes equals fixed financial expenses
5. A financial manager attempting to maximise shareholder's wealth will generally choose one of the following:
  - a. Adopt LIFO for estimating cost of inventory consumed
  - b. Adopt FIFO for estimating cost of inventory consumed
  - c. Reduce inventory consumption to minimize cost of inventory consumed
  - d. Increase inventory consumption to maximize sales turnover
6. As number of stocks increase in a portfolio, in general:
  - a. Systematic risk declines linearly
  - b. Unsystematic risk declines linearly
  - c. Systematic risk declines non-linearly
  - d. Unsystematic risk declines non-linearly
7. Which of the following would you consider as contrary to good corporate finance practice:
  - a. Redo the budget whenever the operating environment changes
  - b. Assign decision rights to the people who have the right skills
  - c. Work to set reasonable stretch targets
  - d. Set low expectations and benchmarks such that they are easy to achieve and thus would impress shareholders
  - e. If multiple members of the top management team are responsible for communicating with the market, their message should be mutually be consistent – to reduce noise

8. A corporation in which you are a shareholder files for bankruptcy, its liabilities exceed its assets by \$10 million. If you hold 5% stake in this company you will be obliged to pay \_\_\_\_\_ for settlement (firm is in 30% tax bracket):
- \$0.335 million
  - \$0.5 million
  - \$0.165 million
  - \$0.665 million
  - None of the above
9. You want to buy an annuity that will pay you Rs 10,000, per year for next 10 years. You expect annual interest rate to be 10% during that period. The maximum price you would be willing to pay is closest to:
- Rs 60,000
  - Rs 100,000
  - Rs 140,000
  - Rs 40,000
  - Rs 80,000
10. If the interest rate is positive, which of the following annual income stream should you prefer?
- Rs 400; Rs 300; Rs 200; Rs 100
  - Rs 250; Rs 250; Rs 250; Rs 250
  - Rs 100; Rs 200; Rs 300; Rs 400
  - Any of the above since they all sum to Rs 1,000
  - Depends on the level of interest rate
11. You will prefer to purchase a bond that:
- Sells at discount to its present value
  - Sells at premium to its face value
  - Sells at YTM that is greater than the coupon rate of the bond
  - Sells at discount to its face value
  - Information is not adequate to make decision in this case
12. If you invest Rs 400 every day in a recurring deposit for next 30 years by the end of term you will have (approximately) \_\_\_\_\_ if the interest you can earn on deposit is compounded annually at 9% (assume 360 days in a year):
- Rs 10 lakhs
  - Rs 50 lakhs
  - Rs 1.8 crore
  - Rs 2.2 crore
  - Rs 2.6 crore
13. Which of the following would not improve the current ratio?
- Borrow for short-term to finance additional fixed assets
  - Issue long-term debt to buy inventory
  - Sell common stocks to reduce current liability
  - Liquidate fixed assets to reduce accounts payable
  - Purchase marketable securities rather than investing in fixed assets
14. If the gross profit margin is unchanged while the net profit margin declined over the same period you would suspect that:
- The cost of goods sold has increased
  - Firm changed a lower rate of depreciation compared to last year
  - Firm paid less dividends
  - The firm retired existing debt this year and thus did not get any tax shield
  - The firm's sales increased and it paid higher taxes than last year
15. If a firm repurchases 50 percent of its outstanding shares in the open (secondary) market the result would be:
- A decline in its assets
  - A decline in EPS
  - An increase in cash
  - An increase in number of stockholders
  - None of the above
16. Which of the following does the term Corporate Social Responsibility (CSR) relate to:
- Environmental practice

- b. Ethical conduct
  - c. Human rights and employee relations
  - d. Community investment
  - e. All of the above
17. If the firm is repurchasing its stock it signals:
- a. Management believes that stock is undervalued
  - b. Management believes that stock is overvalued
  - c. Rate of inflation is low in the economy
  - d. Management is not certain and confident about the use of funds in new projects
  - e. None of the above
18. If a firm moves from all equity to a levered firm, generally its (OL = operating leverage; FL = financial leverage):
- a. OL will increase
  - b. FL will decrease
  - c. OL will decrease
  - d. OL and FL both will increase
  - e. None of the above
19. A financing project has an initial cash inflow of \$42,000 and cash outflows of \$15,600, \$22,200, and \$18,000 for Years 1 to 3, respectively. If the required rate of return is 13 percent the manager should:
- A. Accept
  - B. Reject
  - C. Indifferent due to break-even
  - D. None of the above
20. A proposed project costs \$300 and has cash flows of \$80, \$200, \$75, and \$90 for Years 1 to 4, respectively. Because of its high risk, the project has been assigned a discount rate of 16 percent. In dollars, how much will this project return in today's dollars for every \$1 invested?
- A. \$1.01
  - B. \$0.99
  - C. \$1.05
  - D. \$0.95
  - E. \$1.03
21. If a project has a net present value equal to zero, then:
- A. the initial cost of the project exceeds the present value of the project's subsequent cash flows
  - B. the internal rate of return exceeds the discount rate
  - C. the project produces cash inflows that exceed the minimum required inflows
  - D. any delay in receiving the projected cash inflows will cause the project's NPV to be negative
  - E. the discount rate exceeds the internal rate of return
22. For investment projects, the internal rate of return (IRR):
- A. rule indicates acceptance of an investment when the IRR is less than the discount rate
  - B. is the rate generated solely by the cash flows of the investment
  - C. is used primarily to rank projects of varying sizes
  - D. is the rate that causes the net present value of a project to equal the project's initial cost
  - E. can effectively be used to compare all types of projects

2. [15 Marks] A company is expecting EBIT of Rs. 5,00,000 per annum on investment of Rs. 10,00,000. The company can raise this amount by either equity shares capital or 12% preference share capital or 10% debentures. Both debt and preference shares are issued at par value. The company is considering the following financing patterns:

1. 10,00,000 through issue of Equity Shares for Rs 100 per share;
2. 5,00,000 by issue of Equity Share Capital and remaining 5,00,000 by issue of 10% Debentures (at face value of Rs 100);
3. 5,00,000 through Equity Shares and 2,50,000 through 12% Preference Share Capital and remaining 2,50,000 through 10% Debentures (both debentures and preferred shares are issued at par = Rs 100)

4. 5,00,000 through 10% Debt and 2,50,000 through Equity Shares and remaining 2,50,000 through 12% Preference Share Capital. (10% and 12% are coupons and dividends paid by debentures and preference shares respectively).

Find out the best financing mix assuming 50% tax rate.

3. [8 Marks] ABC Ltd is considering a project that has three-year life and costs \$1,200 for acquiring the fixed asset. It would save \$360 per year in operating costs and increase revenue by \$200 per year. It would be financed with a three-year loan with the following payment schedule (the annual rate of interest is 5%):

Payment	Interest	Repayment of Principal	Balance
440.65	60	380.65	819.35
440.65	40.97	399.68	419.67
440.65	20.98	419.67	0
Total	121.95	1,200	

If the company has a 10% after-tax weighted average cost of capital, has a 40% tax rate, and uses straight-line depreciation, what is the net present value of the project?

4. [20 Marks] The president and CFO of ABC Ltd. are having a disagreement about whether to use market value or book value weights in calculating the WACC. Company's recent balance sheet shows a total of noncallable \$45 million long-term debt with a coupon (annual) rate of 7.00%, Face value Rs 100, maturity 5 years and currently trading at Rs 102.75. This debt currently has a market value of \$50 million. The company has 10 million shares of common stock, and the book value of the common equity (common stock plus retained earnings) is \$65 million. The most recent dividend paid by the company was Rs 0.8. The company's market price two years back was \$ 18.75. Its most recent price recorded is \$21.87. The company is considered to be stable and has been growing at a constant growth rate, which is expected to continue for the foreseeable future. As per CAPM the required return on stockholders' equity is 14.00%, and the firm's tax rate is 40%. The CFO thinks the WACC should be based on market value weights, but the president thinks book weights are more appropriate.

A. Calculate the difference between these two approaches to WACCs and state which one the company should use.

B. What is the cost of equity implied in the market price?

5. [6 Marks] Use below details to answer the questions that follow:

Funds available Rs 1,000,000. Assume 0% idle cash in the portfolio.

Correlation coefficient of Asset A and B = 0.45                      Standard deviation Asset A = 15%

Standard deviation Asset B = 17%                      Standard deviation of Market = 13%

Expected return on Asset A = 18%                      Expected return on Asset B = 22%

Correlation between Asset A and Market = 0.75      Correlation between Asset B and Market = 0.93

Expected return on Market = 13%

a. Identify the stock most desirable based on unsystematic risk. Justify.

b. Identify the stock most desirable based on systematic risk. Justify.

6. [8 Marks] Graphically demonstrate the Fisher Separation theorem for the case where an individual ends up lending in the financial markets. Label the following points on the graph: initial wealth,  $W_0$ ; optimal production/investment ( $P_0, P_1$ ); optimal consumption  $C_0^*, C_1^*$ ; present value of final wealth  $W^*$ . You may use multiple graphs for illustration if needed.

\*\*\*\*\*