**MBSC-3.3A**

**Sl. No.**

# III Semester M.B.A. Degree Examination, October/November - 2025

## Elective-A: Finance

## MANAGEMENT

## Security Analysis and Portfolio Management

## (CBCS, SLM Scheme)

**Time : 3 Hours** **Maximum Marks : 80**

### SECTION - A

**Answer any Five questions. Each question carries 5 marks.** **(5×5=25)**

**1.** Define investment management and explain its importance in financial planning.

**2.** A bond with a face value of Rs. 1,000 pays a coupon of 8% annually and has 5 years to maturity. If the required rate of return is 10%, what is the approximate price of the bond?

**3.** An investor holds a portfolio consisting of two stocks:

Stock A: Weight 70%, Expected Return 14%, Standard Deviation 10%
Stock B: Weight 30%, Expected Return 8%, Standard Deviation 5%

Correlation between Stock A and B is 0.4

Calculate:

a) Expected portfolio return.

b) Portfolio standard deviation (risk)

**4.** Given three portfolios with the following expected returns and risks (standard deviation):

Portfolio X: Return 10%, Risk 8%
Portfolio Y: Return 12%, Risk 12%
Portfolio Z: Return 14%, Risk 20%

Which portfolios lie on the efficient frontier? Why?

**5.** Explain the relationship between bond price and yield. What happens to bond prices when interest rates rise?

**[P.T.O.**

**6.** Write a note on the uses of Technical Analysis.

**7.** Explain CAPM in detail.

## SECTION - B

**Answer any Four questions. Each question carries 10 marks. (4×10=40)**

**8.** Describe the primary objectives of investment management and how they influence investment decisions and portfolio construction.

**9.** An investor buys a stock at Rs. 250 per share, receives a dividend of Rs. 15 during the year, and sells the stock at Rs. 280 after one year. Further, a bond with a face value of Rs. 1,000 pays a 10% annual coupon and matures in 4 years. If the market interest rate is 12% and A bank lends Rs. 5 crore for 90 days at a MIBOR rate of 7.8% p.a. Calculate the interest payable at the end of the period. Calculate the total return on the stock, price of the bond using the present value method and the interest payable at the end of the period.

**10.** Given three portfolios:

| Portfolio | Expected Return | Standard Deviation (Risk) |
|---|---|---|
| X | 10% | 6% |
| Y | 12% | 10% |
| Z | 15% | 18% |

a) Which portfolios lie on the efficient frontier? Explain your reasoning.

b) How does Markowitz's portfolio theory guide optimal asset allocation in this context?

**11.** Explain random walk theory and its implications for technical analysis and trend-watch investors. How does this theory relate to the weak form of the Efficient Market Hypothesis?

**12.** A 5-year bond with a face value of Rs. 1,000 pays 8% coupon annually. The market interest rate is 10%. Calculate the price of the bond assuming:

a) Interest is paid once per year (annual payment)

b) Interest is paid twice per year (semi-annual payment)

Show the discounted cash flow calculation for both cases and explain the effect of payment frequency on the bond price.

**13.** Describe key performance evaluation models used to assess portfolio returns and risk-adjusted performance.

## SECTION - C

**Case (Compulsory).** **(1×15=15)**

**14.** Mr. Sharma, a 45-year-old investor, has accumulated Rs. 5 crore in wealth and approached a portfolio manager to build and manage his investment portfolio. His key objectives are capital preservation, reasonable growth to support his children's education and retirement, and moderate risk tolerance. Mr. Sharma has a medium to long investment horizon of 10-15 years. He currently has exposure primarily in equity but lacks diversification and a structured risk management approach. The portfolio manager is tasked with designing an optimal diversified portfolio for Mr. Sharma. The process involves assessing his risk profile, analyzing his current holdings, and constructing a portfolio aligned with his objectives. Over time, the manager is also expected to evaluate portfolio performance critically and make adjustments against market changes and evolving objectives.

**Questions:**

a) Explain how diversification reduces portfolio risk and why it is important in Mr. Sharma's portfolio?

b) Using CAPM, describe how the expected return of assets is calculated and applied to portfolio selection.

c) What is the role of indifference curves in portfolio optimization and how do they aid in determining Mr. Sharma's optimal portfolio?

d) Outline the key steps in the portfolio investment process and their relevance to tailored portfolio management.

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