# THIRD SEMESTER M.Com. DEGREE (REGULAR/SUPPLEMENTARY) EXAMINATION, NOVEMBER 2022 

[November 2021 session for SDE/Private Students]
(CBCSS)
Master of Commerce
MCM 3E F (01)—INVESTMENT MANAGEMENT
(2019 Admission onwards)
Time : Three Hours
Maximum : 30 Weightage
Part A
Answer any four questions.
Each question carries 2 weightage.

1. What are the different types of portfolio management?
2. How the value of the equity is calculated under Gordon model ?
3. Briefly describe Dow-Jones theory regarding the behavior of stock market prices.
4. Explain Markowitz Model of risk-return Optimization.
5. What are the features of CAPM ?
6. Differentiate the Security Market Line and Capital Market Line.
7. What is Arbitrage Pricing Model ?
( $4 \times 2=8$ weightage)

## Part B

Answer any four questions.
Each question carries 3 weightage.
8. What are the factors affecting investment decisions in portfolio management while selecting the securities?
9. Explain the different types of Risks.
10. A Rs. 100 par value bond bears a coupon rate of 14 percent and matures after five years. Interest is payable semi-annually. Compute the value of the bond if the required rate of return is 16 per cent.
11. Following are the price and other details of three stocks for the year 2011. Calculate the total return as well as the return relative for the three stocks :

| Stock | Beginning price | Dividend Paid | Ending Price |
| :---: | :---: | :---: | :---: |
| A | 30 | 3.40 | 34 |
| B | 72 | 4.70 | 69 |
| C | 140 | 4.80 | 146 |

12. A 10 per cent coupon bond has a maturity of 12 years. It pays interest semi-annually. Its yield to maturity is four per cent per half-year period. What is its duration?
13. Determine the price of 1,000 zero coupon bond with yield to maturity (YTM) of 18 per cent and 10 years to maturity. What is YTM of this bond if its price is 220 ?
14. The following table provides information regarding portfolio return and risk :

| Portfolio | E (R) | $\sigma$ |
| :---: | :---: | :---: |
| 1 | 10 | 4 |
| 2 | 12 | 7 |
| 3 | 13 | 5 |
| 4 | 16 | 12 |
| 5 | 20 | 14 |

a) The treasury bill rate is $5 \%$. Which portfolio is the best?
b) If $\sigma$ is $12 \%$, what would be the expected return?

## Part C

Answer any two questions.
Each question carries 5 weightage.
15. "When someone refers to efficient capital markets, they mean that security or reflect all available information." Discuss.
16. The returns of two assets under four possible states of nature are given below :

| State of nature | Probability | Return on asset 1 | Return on asset 2 |
| :---: | :---: | :---: | :---: |
| 1 | .1 | $5 \%$ | $0 \%$ |
| 2 | .2 | $10 \%$ | $8 \%$ |
| 3 | .3 | $15 \%$ | $18 \%$ |
| 4 | .4 | $20 \%$ | $26 \%$ |

a) What is the standard deviation of the return on asset 1 and asset 2 ?
b) What is the covariance between the returns on assets 1 and asset 2 ?
c) What is the co-efficient of correlation between the returns on assets 1 and 2?
17. The following details are given for X and Y companies' stocks and the Bombay Sensex for a period of one year. Calculate the systematic and unsystematic risk for the companies' stocks. If an equal amount of money is allocated for the stocks what would be the portfolio risk?

|  | X stock | Y stock | Sensex |
| :--- | :---: | :---: | :---: |
| Average Return | .15 | 0.25 | 0.06 |
| Variance | 6.30 | 5.86 | 2.25 |
| B | 0.71 | 0.27 | - |
| Correlation Co-efficient | - | 0.424 | - |

18. Briefly explain the different parameters of security analysis.
( $2 \times 5=10$ weightage)
