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Reg. No. | | | | | | | | | |

# III Semester M.B.A. (Day and Eve) Degree Examination June/July - 2024

## MANAGEMENT

## Investment Analysis and Portfolio Management

**(CBCS Scheme - 2019 Onwards)**

**Paper : 3.2.1**

**Time : 3 Hours** **Maximum Marks : 70**



### SECTION - A

Answer **any five** of the following questions. Each question carries **5** marks. **(5×5=25)**

1. Define Risk. Distinguish between systematic and unsystematic risk.
2. How is the Intrinsic value of shares determined using the Fundamental Analysis?
3. State the Prospect theory of Behavioral Finance. How is it useful?
4. The expected returns under different business cycles for two Firms-Alpha Utility and Alpha Technology that belong to the same group, Alpha Industries are given below:

| State of economy | Return on Alpha Utility | Return on Alpha Technology | Probability in % |
|---|---|---|---|
| Recession | 6.50 | -11.50 | 0.25 |
| Normal | 11.75 | 15.00 | 0.45 |
| Boom | 15.45 | 35.00 | 0.30 |

Which of the two firms is likely to give a better average return? Which of the two firms is riskier?

5. Two assets *S* and *T* have the following risk and **returns**.

**Std Deviation *S* =25** **$E(R_s)$ = 20 per cent**

**Std Deviation *T* =25** **$E(R_r)$ = 15 per cent**

**$r_{sr}$=-0.3**

Determine the risk and return for the portfolio of assets *S* and *T* with the following weights, using markowitz assumption.

| *Portfolio* | *Weight S* | *Weight T* |
|---|---|---|
| *A* | 90 per cent | 10 per cent |
| *B* | 10 per cent | 90 per cent |
| *C* | 50 per cent | 50 per cent |

**[P.T.O.**

6. Rank the three funds given below with the help of Treynor and Sharpe index.

| *Growth Fund* | *Return(%)* | *Beta* | $\sigma$ (%) |
|---|---|---|---|
| $X$ | 15 | 1.5 | 12 |
| $Y$ | 17 | 1.6 | 14 |
| $Z$ | 13 | 0.75 | 11 |
| $R_f$ | 9 | | |

Is there any difference in the ranking according to those measures? If so why?

7. The risk-free rate of return is 9 per cent, the expected return on NSE-Nifty is 20 per cent. and the variance of the index is 25 per cent. Portfolio return is 15 per cent. Estimate the risk of it. If the investor borrows 25 per cent funds at risk free rate of return, will be the return and risk of the portfolio using CML.

## SECTION - B

Answer **any three** of the following questions. Each question carries **10** marks.

**(3×10=30)**

8. Explain the process of investment in detail and distinguish it from speculation.

9. Explain Arbitrage prong theory and also. Give requirements of building an Arbitrage portfolio with example.

10. The following information has been extracted from the stock exchange:

| **Stock** | **Expected Return As per Group 1** | **Beta as per group 2** |
|---|---|---|
| A | 13.35 | 0.65 |
| B | 15.00 | 1.12 |
| C | 12.60 | 1.31 |
| D | 16.60 | 1.68 |
| E | 21.50 | 1.11 |
| F | 25.50 | 1.38 |
| G | 32.50 | 1.19 |
| H | 26.60 | 1.41 |
| I | 12.80 | 0.80 |
| J | 13.10 | 0.76 |
| K | 6.85 | 0.65 |
| T-Bills | 6.65 | |
| Index | 16.95 | |

**[P.T.O.**

(a) Find the SML equation. And identify the overpriced, rightly priced and underpriced securities assuming betas arrived by Group 2 are correct.

(b) State the importance and practical applicability of SML Equation.

**11.** The one period rates of return on stock B and the market portfolio for a 20 year period are given below:

| Period | Return on stock B(%) | Return on Market Portfolio (%) | Period | Return on stock B(%) | Return on Market Portfolio (%) |
|---|---|---|---|---|---|
| 1 | 15 | 9 | 11 | -2 | 12 |
| 2 | 16 | 12 | 12 | 12 | 14 |
| 3 | 10 | 6 | 13 | 15 | -6 |
| 4 | -15 | 4 | 14 | 12 | 2 |
| 5 | -5 | 16 | 15 | 10 | 8 |
| 6 | 14 | 11 | 16 | 9 | 7 |
| 7 | 10 | 10 | 17 | 12 | 9 |
| 8 | 15 | 12 | 18 | 9 | 10 |
| 9 | 12 | 9 | 19 | 22 | 37 |
| 10 | -4 | 8 | 20 | 13 | 10 |

a. What is the beta for stock B?

b. What is the characteristics line for stock B?

## SECTION - C

**Compulsory:** **(1×15=15)**

**12.** Determine the optimum portfolio from the following data:

| Security | Return in % | Beta of Security | Unsystematic Risk ($\sigma_{ei}^2$) |
|---|---|---|---|
| 1 | 15 | 1 | 50 |
| 2 | 17 | 1.5 | 40 |
| 3 | 12 | 1 | 20 |
| 4 | 17 | 2 | 10 |
| 5 | 11 | 1 | 40 |
| 6 | 11 | 1.5 | 30 |
| 7 | 11 | 2 | 40 |
| 8 | 7 | 0.8 | 16 |
| 9 | 7 | 1 | 20 |
| 10 | 5.6 | 0.6 | 6 |

The risk - free rate of return is 5% and variance market is 10%.

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