

2014

M B A

3rd Semester Examination

PORTFOLIO MANAGEMENT

[Specialisation : FINANCIAL MANAGEMENT]

PAPER — F 305

Full Marks : 100

Time : 3 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Write the answers to Questions of each Half in separate books.

(First Half)

(Marks : 50)

1. Answer any four questions of the following : 5×4
- (a) "Portfolio evaluation provides a feed back Mechanism for improving the entire portfolio Management Process" Explain. 5
- (b) Calculate the expected return and variance of a Portfolio comprising two securities, assuming that the Portfolio Weights are 0.75 for security X and 0.25 for security Y. The expected return for security X is

(Turn Over)

18% and its standard deviation is 12%, while the expected return and standard deviation for security Y are 22% and 20% respectively. The correlation between the two securities is 0.6.

- (c) Distinguish between the feasible set of portfolios and the efficient set of portfolios.
- (d) Write a note on the systematic risk associated with a security.
- (e) The probabilities and associated return of a security are as under.

Return (%)	Probability
50	.10
30	.20
10	.40
-10	.20
-30	.10

Calculate the risk of the security.

- (f) Write a note on Sharpe Single Index Model.
2. Answer any *two* questions of the following : 10×2
- (a) The data for three stocks are given. The data are detained from correlating returns on these stock with the return on the market index.

Stock	α_i	β_i	Residual variance (%) (α^2_{ei})
P	-2.1	1.6	14
Q	1.8	0.4	8
R	1.2	1.3	18

Which single stock would an investor prefer to own from a risk-return view point if the market index were expected to have a return of 15% and a variance of return of 20% ?

- (b) Consider a portfolio composed of five securities. All the securities have a beta of 1.0 and unique or specific risk (Standard deviation) of 25%. The portfolio distributes weight equally among its component securities. If the standard deviation of the market index is 18%, calculate the total risk of the portfolio.
- (c) From the following information compute the Alpha (α), Beta (β) and Variance to (σ^2), Systematic Risk and Unsystematic Risk for the stock

Day	Stock (Y)	Market Index (X)
1	1361.35	15289
2	1492.55	16217
3	1495.6	16087
4	1440.8	16016
5	1526.35	16371
6	1430.15	15644
7	1421.35	15627
8	1481.95	15750
9	1521.65	15833
10	1482.9	15343

[Internal Assessment : 10 Marks]

(Second Half)

(Marks : 50)

3. Answer any *four* questions of the following : 5×4
- (a) Write a short note on Exchange Traded Mutual Funds (ETFs)
 - (b) Write a short note on Capital Market Line (CML)
 - (c) Mention the factors that affect the portfolio rebalancing and revision process of investors.
 - (d) Narrate the assumptions of Capital Asset Pricing Model ?
 - (e) Discuss in brief the structure of a mutual fund organization.
 - (f) Discuss the different constraints in portfolio revision.
4. Answer any *two* questions from the following : 10×2
- (a) (i) Discuss and identify which of the securities are overpriced and underpriced on the basis the following information and plotting on the Security Market Line (SML) :

Stock	Beta	Current Price (P_0)	Expected Price (P_1)	Expected Dividend (D_1)
A	.70	25	26	1
B	1.00	40	42	.50
C	1.15	33	37	1
D	1.40	64	66	1.10

The risk free rate of return is 5%. The expected return of the market portfolio is 9%.

- (ii) If a portfolio is constructed using equal proportion of the four securities listed above, calculate the portfolio return and portfolio beta.

7+3

- (b) (i) Discuss the Markowitz Mean-variance rule. Using that concept, discuss the term efficient frontier.
- (ii) Explain the Jensen's measure for portfolio evaluation.

(3+4)+3

(c) (i) What do you understand by passive portfolio revision strategy?

(ii) Mr. Alokesh is an active investor looking for opportunities to gain maximum returns. However, his past experience shows that often his timing of investment is incorrect. Therefore, he adopts a $\pm 6\%$ constant rupee plan. His initial portfolio is composed of Rs. 5,00,000 divided in the ratio of 1 : 3 between aggressive and defensive securities. The former is composed of 5000 shares of PQ Ltd. You are required to guide him relating to portfolio revision if the share price changes as follows :

Day 1 : Rs. 23.00

Day 2 : Rs. 23.80

Day 3 : Rs. 27.00

Day 4 : Rs. 25.00

5+5

[Internal Assessment : 10 marks]
