

2010

**MASTER OF BUSINESS ADMINISTRATION**

**[Third Semester Examination]**

*(Portfolio Management)*

**[Specialisation : *Financial Management* ]**

**PAPER – F 305**

*Full Marks : 100*

*Time : 3 hours*

*The figures in the right-hand margin indicate 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**

*( Turn Over )*

## FIRST HALF

[ Marks : 50 ]

1. Answer any *four* of the following : 5 ×

- (a) The average market price and dividend per share of Asian CERC Ltd. for the past 6 years are given below :

| <i>Year</i> | <i>Average market price<br/>(Rs.)</i> | <i>Dividend per share<br/>(Rs.)</i> |
|-------------|---------------------------------------|-------------------------------------|
| 2010        | 168                                   | 3.0                                 |
| 2009        | 149                                   | 2.7                                 |
| 2008        | 127                                   | 2.3                                 |
| 2007        | 103                                   | 2.5                                 |
| 2006        | 92                                    | 2.0                                 |
| 2005        | 78                                    | 1.8                                 |

Calculate the average rate of return of Asian CERC Ltd's share for the past 6 years.

- (b) Write a note on 'Purchasing Power Risk' associated with a security.

(c) If a stock with a higher risk factor is combined with a stock with a lower risk factor, the total risk will always increase.  
Comment.

(d) The selection of portfolio depends on the various objectives of investor. Elucidate.

(e) The returns of a security for the past six years are given below :

| <u>Year</u> | <u>Security Return %</u> |
|-------------|--------------------------|
| 2006        | 9                        |
| 2007        | 5                        |
| 2008        | 3                        |
| 2009        | 12                       |
| 2010        | 16                       |

Calculate the risk of the security.

(f) Write a note on diversification.

2. Answer any *two* of the following : 10 × 2

(a) Calculate portfolio risk from the following information :

The portfolio is consisting of 4 securities. The investor holds these securities in the following proportions :

$$x_A = 0.25, x_B = 0.4, x_C = 0.15, x_D = 0.2.$$

The stand-alone risk associated with these securities are : 4%, 8%, 20% and 10%, respectively for securities *A*, *B*, *C* and *D*. The correlation co-efficients among security returns are :  $r_{AB} = 0.4$ ,  $r_{AC} = 0.5$ ,  $r_{AD} = 0.3$ ,  $r_{BC} = 0.6$ ,  $r_{BD} = 0.8$  and  $r_{CD} = 0.7$ .

- (b) Suppose an investor has specific amount of money to invest and that can be allocated in any proportion between the securities. Security *X* has an expected rate of return of 5% and standard deviation of returns of 4%. While for security *Y*, the expected return is 8% and the standard deviation of return is 10%. Show graphically, the relationship between expected returns and risk for varying degree of correlation (Graphical expression must be supported by mathematical calculation).

- (c) (i) Explain the 'Sharpe Index Model'.
- (ii) Draw the utility curves for risk-loving, neutral and risk-averse investors. 6 + 4

[*Internal Assessment* : 10 Marks]

## SECOND HALF

[ *Marks* : 50 ]

3. Answer any *four* of the following: 5 × 4
- (a) Discuss in brief the structure of a mutual fund organization.
- (b) Explain the concept of a formula plan. What are its assumptions?
- (c) What do you mean by an active and passive investor in the context of portfolio revision?
- (d) Explain the application of Capital Asset Pricing Model in portfolio management.

(e) Do all mutual fund schemes have the same objective? Explain.

(f) Describe in brief Jensen's performance measure with the help of a diagram.

4. Answer any *two* of the following : 10 × 2

(a) (i) What do you understand by a Capital Market Line? Discuss.

(ii) Security Market Line is a concept that can be used to determine over-valued and under-valued securities. Explain. 5 + 5

(b) Discuss in detail the case of efficient frontier with riskless lending and borrowing. 10

(c) (i) An investor, Mr. Himesh, has an initial portfolio of Rs. 5,00,000 which has been equally divided into defensive and aggressive portfolio. The aggressive portfolio consists of 5000 shares. He has fixed his

( 7 )

revision point at +/- 5%. How will he revise his portfolio applying the constant rupee plan if the share price changes as follows :

Day 1 Rs. 88, Day 2 Rs. 97, Day 3 Rs. 108,  
Day 4 Rs. 98 ?

- (ii) What are the different levels at which portfolio evaluation can be done?      6 + 4

[*Internal Assessment* : 10 Marks]

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