*Name* : .....

*Roll No.* : .....

*Invigilator's Signature :* .....

**CS / MBA (NEW) / SEM-3 FT & 5 PT / FM-303 / 2010-11**

**2010-11**

# SECURITY ANALYSIS & PORTFOLIO MANAGEMENT

*Time Allotted* : 3 Hours *Full Marks* : 70

*The figures in the margin indicate full marks.*

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

## GROUP – A

## ( Multiple Choice Type Questions )

1. Choose the correct alternatives for any *ten* of the following :

$10 \times 1 = 10$

i) The unsystematic risk is explained by

a) variance of the index

b) unexplained variance of the index

c) explained variance of the index

d) none of these.

ii) Corner portfolio is calculated where a

a) Security enters

b) Security leaves

c) Security enters or leaves

d) Security with high extreme values enters.

iii) Market imperfections may lead to

a) Lower SML b) Higher SML

c) Band of SML d) Non-linear SML.

iv) The stock above the security market line is

a) overpriced b) underpriced

c) appropriately priced d) of high risk.

v) In an arbitrage portfolio, the change in the proportions of different securities will add up to

a) zero b) greater than one

c) less than one d) equal to one.

vi) The growth in book value per share shows the

a) Rise in the share price

b) Increase in the physical asset of the firm

c) Increase in the net worth

d) Growth in reserves.

vii) Government securities are free from

a) Purchasing power risk b) Default risk

c) Reinvestment risk d) Interest rate risk.

viii) Which of the following is not correct ?

a) Elliot Wave Theory says that the stock market follows a repetitive rhythm of a five-wave advance followed by three-wave decline

b) Wave 1, 3 and 5 are corrective waves as they move against the uptrend

c) Waves *A*, *B* and *C* are known as corrective waves

d) Each wave sub-divides into waves of one lesser degree.

ix) The beta of a stock is 1·12 and its covariance with the market is 220. The standard deviation of market returns is

a) 16% b) 14%

c) 12% d) 11%.

x) Which of the following is true when bond prices increase ?

a) Yields to maturity can increase or decrease or remain constant

b) Yields to maturity increase

c) Yields to maturity decrease

d) Yields to maturity remain constant.

xi) If the slope of the Security Market Line is zero, which of the following is / are true ?

a) Risk-free return = Market return

b) Market return = Expected return

c) Expected return = Risk-free return

d) all of these.

xii) Which of the following statements is false ?

a) The required rate of return determines the premium or discount on the bond value

b) If the YTM increases the bond's market price increases

c) The coupon rate affects the YTM

d) If the market price and face value are equal then coupon rate is equal to YTM.

## GROUP – B

### ( Short Answer Type Questions )

Answer any *three* of the following. $3 \times 5 = 15$

2. What do you understand by systematic and unsystematic risks ?

3. What is the difference between 'Security Market Line' and 'Capital Market Line' ?

4. Explain Efficient Frontier Curve.

5. What are the steps involved in portfolio management ?

6. Explain in brief Arbitrage Pricing Theory.

## GROUP – C

### ( Long Answer Type Questions )

Answer any *three* of the following. $3 \times 15 = 45$

7. a) Anil has bought the Everest Company stock that has paid Rs. 3 as dividend per share during the last financial year. He anticipates two situations either a 5% decline in the dividend or 5% growth in the dividend in the next year. His anticipated return is 20%. Fix the price for both the situations.

   b) The Grace & Co. has common shares outstanding in the market with price earnings ratio of 15. The annual expected growth in earnings, dividends and price is 7%. The earnings per share is Rs. 2·5, the dividend payout is 60% and the investor wants to hold the stock for 4 years. The required rate of return is 15%. What would be the present value ? 6 + 9

8. a) What do you mean by 'Optimum Portfolio' ?

   b) Describe Markowitz Portfolio Theory for selection of an optimum portfolio. Give some examples in the context of Indian capital market. 3 + 12

9. Consider the following securities :

| Security | Return | Standard Deviation of return (%) |
|---|---|---|
| *A* | 15 | 14 |
| *B* | 12 | 12 |
| *C* | 17 | 16 |

$r_{AB} = 0 \cdot 11$ $r_{BC} = (-)0 \cdot 11$ $r_{AC} = 0 \cdot 21$

Find out the portfolio return and standard deviation for the following portfolios :

i) A : 50%, B : 25%, C : 25%

ii) A : 25%, B : 50%, C : 25%

iii) A : 25%, B : 25%, C : 50%

Which one has the best risk-return combination ? Why do you say so ? 12 + 3

10. a) Mr. P is considering the purchase of bond currently selling at Rs. 878.50. The bond has 4 years to maturity, face value of Rs. 1,000 and 8% coupon rate. The next annual interest payment is due after one year from today. The required rate of return is 10%.

i) Calculate the intrinsic value (present value) of the bond. Should Mr. *P* buy the bond ?

ii) Calculate the yield to maturity of the bond.

b) Following table provides information regarding the portfolio return risk :

| Portfolio | Expected return | Standard deviation |
|---|---|---|
| 1 | 10 | 4 |
| 2 | 12 | 7 |
| 3 | 13 | 5 |
| 4 | 16 | 12 |
| 5 | 20 | 14 |

The Treasury bill rate is 5%. Which portfolio is the best ?

10 + 5

11. Following is the data regarding six securities :

| Securities | U | V | W | X | Y | Z |
|---|---|---|---|---|---|---|
| Return (%) | 10 | 10 | 15 | 5 | 11 | 10 |
| Risk (%) Standard deviation | 5 | 6 | 13 | 5 | 6 | 8 |

i) Which of the securities will be selected ?

ii Assuming perfect correlation, analyse whether it is preferable to invest 80% in security U and 20% in security W or to invest 100% in Y. 9 + 6

12. Write short notes on any *three* of the following : 3 × 5

a) EVA

b) Portfolio Investment Process

c) Technical Analysis

d) Bond Portfolio Management

e) Risk and Return.

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