[This question paper contains 4 printed pages.]

403 *Your Roll No...........*

BFIA / IV Sem. – 2012

FINANCIAL AND INVESTMENT ANALYSIS

Paper 403

Security Analysis & Portfolio Management

Time : 3 hours *Maximum Marks : 75*

(Write your Roll No. on the top immediately on receipt of this question paper.)

Attempt **all** *questions.*

1. (a) Which of the following will have longer duration – a 5% coupon bond with 10 years to maturity or a 5% coupon bond with 12 years to maturity ?

   (b) When a bond sells at a premium to par value what is the relationship between its coupon, current yield and yield to maturity ?

   (c) What does a point and figure chart have on the X and Y axis ?

   (d) Which form of the efficient market hypothesis refutes technical analysis ?

(e) An eight year zero coupon bond bought today is to be sold after two years. If yields in the economy rise after two years will realised yield be more or less than expected at the time of purchase ?

(f) What is the indicator of size of the company ? (6)

2. Explain the Capital Market Line and Security Market Line using Diagrams and equations. (9)

3. (i) Write short notes on the following technical indicators

(a) Moving averages

(b) ROC

(c) RSI (6)

(ii) List two initiatives each of Fiscal and Monetary policy and their expected impact on the economy. (3)

4. Forecasted dividends for the next three years are Rs. 1.6, Rs. 1.9 and Rs. 2 per share and are expected to grow at a constant rate of 5% thereafter. Risk free rate is 4% and market risk premium according to CAPM is 5% and Beta of the firm is 1.2. Use the required rate of return on the share according to CAPM as the discount rate and calculate the fair price of the share according to the dividend discount model. (6)

5. An investor needs Rs. 10 lakhs after 2 years and is considering the following bonds :

A has 4 years to maturity, 7% coupon B has 1 year to maturity, 6% coupon. Both have yield to maturity of 10%. What do you advise ? (9)

6. Explain the following using diagrams and equations

(a) Characteristic Line

(b) Security market line (9)

7. (i) Briefly explain any **two** of the following portfolio optimisation models :

(a) Geometric mean

(b) Safety first

(c) Stochastic Dominance (6)

(ii) Explain runs tests for testing the Efficient market hypothesis. (3)

8. An investor with an initial portfolio of Rs. 10 lakhs is following a constant ratio formula plan and invests in an index fund and zero coupon bonds. The movement of the index and yields in the economy are as follows

Beginning of	Index Value	Bond Yields (Bonds maturing at end of sixth year)
Year 1	4000	10%
2	5000	8%
3	4500	8%

(a) What would his investments be at the beginning of each year if he wants 50% in each. (6)

(b) What are the advantages & disadvantages of constant formula plans. (3)

9.

Stock	Alpha	Beta	Variance of Residual
A	–2	1.5	4
B	8	–0.2	0
C	0	0.8	15

Market return = 10 and standard deviation = 5.

Risk free rate = 5.

(a) Calculate risk and return for a portfolio of 50% of A and 25% each of B&C according to the market model.

(b) Sketch the characteristic Line for A.

(c) What does residual variance 4 for A and 15 for C signify ? (9)