[This question paper contains 4 printed pages.]

Sr. No. of Question Paper : 153 **Roll No............**

Unique Paper Code : 101403

Name of the Course : **BFIA**

Name of the Paper : Security Analysis and Portfolio Management

Semester : IV (2014)

Duration : 3 Hours

Maximum Marks : 75

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Answer any **FIVE** questions.
3. Attempt all parts of a question together.

1. (a) What is return from price convergence and how it is calculated ? (3)

   (b) What do you understand by marketability ? Is it possible that a security has marketability but lacks liquidity ? (4)

   (c) Can the beta of a security be negative ? (2)

   (d) A risky portfolio is made up of 2 stocks as follows :

	Weight age	Expected Return	Variance
X	60%	15%	0.01
Y	40%	10%	0.0081

Correlation coefficient between X and Y is +1.

Risk free rate = 5%. The manager wants a portfolio with 11% return. How much should he invest in risk free asset and risky portfolio ? What is the risk of this new portfolio ? (6)

2. (a) What is a yield curve ? What are the various shapes yield curve can take ? Briefly explain the preferred habitat theory. (6)

(b) Why is convexity an important measure to consider while calculating the change in bond price ? Calculate change in bond price if yield changes by ±3% and modified duration is 3.65 and convexity is 208.12. (6)

(c) What is the difference between systematic and unsystematic risk ? (3)

3. (a) Calculate the intrinsic value of the share using the following information :

Current Earning Per Share	Rs. 4
Annual Dividend Growth for Year 1-4	18%
Annual Dividend Growth for Year 5+	6%
Retention Ration	60%

The firm's beta is 0.90, risk free rate is 4% and the market risk premium is 8%. (6)

(b) What is the relationship between PVGO, ROE and cost of equity (ke) ? Also, reason out when PVGO can be maximum ? (4)

(c) Based on the following information calculate Price/Earnings for the firm :

Cost of Equity = 12%

PVGO = 20

Expected earnings per share = Rs. 5 (3)

(d) For a distress firm which equity valuation method would you recommend ? (2)

4. (a) How is industry analysis conducted using Porter's Five Forces Model ? (6)

(b) Explain **two** of the following : (4)

(i) Dow Theory

(ii) Advances and declines

(iii) Head and shoulders

(c) Is the Single Index Model better than Markowitz's Model ? Calculate the standard deviation of stock A and B using the Single Index Model :

Stock	Beta	Firm Specific Residual Risk (σe)
A	0.8	30%
B	1.2	40%

The Market index has a standard deviation of 22% and risk free rate is 8%. (5)

5. (a) Highlight the difference between CAPM and Arbitrage Pricing Theory. (5)

(b) Derive the equation of the security market line if the following stocks lie on it :

Stock A has a beta 1.2 and return 11%

Stock B has a beta 0.8 and return 9% (4)

(c) Which of the following bonds will have longer duration in each case :

(i) 8% coupon bond with 11 years to maturity or 8% coupon bond with 15 year to maturity ?

(ii) 8% coupon bond with 11 years to maturity or 10% coupon with 11 years to maturity ? (4)

(d) Explain the relationship between bond price and time to maturity. (2)

6. (a) What are the various portfolio revision techniques ? (6)

(b) What do you understand by Bond Swaps ? (3)

(c) The table shows the performance of mutual fund XYZ and market index :

	Annual Average Return (%)	Standard Deviation of returns (%)	Beta
XYZ	15%	6%	0.3
Market Index	25%	15%	1
Risk free rate	6%		

Calculate Treynor, Sharpe and Jensen performance measures.

Comment on the performance of XYZ compared to the index, using all the three measures and suggest possible reasons for conflicting results, if any. Which performance measure is generally preferred ? (6)