Your Roll No................

Sr. No. of Question Paper : **8108**

Unique Paper Code : 12487907

Name of the Paper : Investment & Risk Management

Name of the Course : **B.A. (Hons.) Business Economics, 2017 (CBCS)**

Semester : V

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. Attempt **any five** questions.

3. **All** questions carry equal marks.

4. (Use of non scientific calculator é' tables and Annuity Tables are allowed. If any assumptions are made while attempting a problem, the same must be stated clearly)

1. (a) A Company has issued a bond (Face Value Rs. 100) bearing 10% interest and maturity of 7 years at par. Required rate of return of the bond investors is 12%. Find out market price, duration and modified duration of the bond. How these would change if the maturity period increases to 15 years?

P.T.O.

(b) A 30 years 8% Coupon bond is selling at Rs. 1000 [YTM] = 7%]. The modified duration of the bond is 11.26 years, bond convexity being 212.4. You are required to calculate the change in price of bond if it is given that yield rises from 7% to 10% Show the solution.

    (i) Without Convexity

    (ii) After incorporating convexity   (7,8)

2. (a) Following Information is available on Portfolio 'A' and Market 'M'. Determine whether the portfolio has beaten the market. Use Sharpe, Treynor, Jensen, Information, Sortino and M^2 Ratios.

	Portfolio A	Market M
Average Return	30%	20%
Beta	1.1	–
Std Error of Unsystematic Risk	10%	0
Std Deviation of Returns	40%	30%
Std Deviation of positive returns	38%	32%
Std Deviation of negative returns	30%	24%
Risk free rate of return	4%	

    (9)

(b) What do you understand by the following terms:

    (i) Fund of Funds

    (ii) Portfolio Rebalancing

    (iii) Exchange Traded funds   (6)

(a) Can we consider Capital Market Line to be a Line of Capital Allocation. What is the rationale behind Capital Market Line to be a straight line?

(b) Mr. X has constructed an equally weighted portfolio of Security I & II, the correlation between them is 0.4

	Security I	II
Expected Return	12%	15%
Standard Deviation	17%	25%

Find out the expected return and standard deviation of the portfolio. Determine the change in the weights of I & II if he wants to minimize the risk of the portfolio. Further he wants to sell off one of the securities and replace it with Security III. What criteria should he follow while constructing his new portfolio?

(c) Show that the present value of a stock is nothing but present value of perpetual stream of dividends.

(5,5,5)

(a) Determine at what level Mr. A should buy the call option on a stock if the following information is available :

Current Price of Stock in the Market : Rs. 25, Exercise Price : Rs. 28. Time left to the maturity of the call : 0.3 years, Risk free interest : 10% p.a, Standard

P.T.O.

deviation of the stock : 0.3 Use Black Scholes formula to calculate the premium on call.

(b) Explain the Put Call Parity Equation.

(c) Explain the term "Random Walk Hypothesis". (7,5,3)

5. Write short note **on any three** of the following :

   (i) Tactical Asset Allocation

   (ii) Bond Immunization through Duration Matching

   (iii) Weak Form of Market Efficiency

   (iv) Technical Analysis

   (v) Single Index Model'   (5×3=15)

6. (a) Explain the call option terms 'at the money, in the money & out of the money'. Do these terms apply to all type of options including put options.

(b) What is NAV of a fund? Can the NAV of a fund be negative.

(c) What is Efficient Frontier? Clearly show the impact of superimposing Efficient frontier on Capital Market Line.   (6,4,5)