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Your Roll No.....

Sr. No. of Question Paper : 2094
Unique Paper Code : 12487907
Name of the Paper : Investment & Risk Management
Name of the Course : B.A. (Hons.) Business
Economics, 2018 (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 all questions.
 3. Question 1 & 2 carries 10 marks each, Question 3 carry 15 marks and Question 4 & Question 5 carries 20 marks each.
 4. (Use of non scientific calculator è' tables and Annuity Tables is allowed. If any assumptions are made while attempting a problem, the same must be stated clearly)
1. (i) Security F has an expected return of 12% and a standard deviation of 9% p.a. Security G has an expected return of 18% and a standard deviation of 25% p.a.

P.T.O.

(a) What is the expected return on a portfolio composed of 30% of security F and 70% of security G?

(b) If the correlation coefficient between the returns of F and G is 0.2, what is the standard deviation of the portfolio?

(1+2=3)

(ii) 'Harry Markowitz pioneered the study of portfolio theory through his analysis of portfolios.' Comment, explaining the various stages in his model of portfolio selection. (7)

OR

(i) 'Capital Market Line is different from Security market Line in a number of ways.' Explain giving points of differences and diagrams. (6)

(ii) Assume a world with homogeneous expectations (i.e., everybody agrees on expected returns and standard deviations). In this world the market portfolio has an expected return of 12% and a standard deviation of 10 percent. The risk-free asset has an expected return of 5%. Using CML determine :-

(a) What should be the expected return of the portfolio given the standard deviation of 7%?

- (b) What should the standard deviation of the portfolio if it has an expected return of 20%? (2+2=4)
- (i) The current price of XYZ stock is Rs. 80. Dividends are expected to grow at 5% indefinitely and the most recent dividend was Rs. 2.75. What is the required rate of return on XYZ stock? (2)
- (ii) A Ltd. recently paid an annual dividend of Rs. 2. Investors believe that dividends will grow at 20% next year, 12% annually for the two years after that, and 6% annually thereafter. Assume the required return is 10%. What is the current market price of the stock? (8)

OR

- (i) Explain the concept and significance of Price-Earnings (PE) ratio. How can this ratio be used for equity valuation? Explain. (5)
- (ii) XYZ Ltd plans to retain and reinvest all of their earnings for the next 15 years. At the end of year 16, the firm will begin a program of paying a Rs. 30 per share dividend every year. The dividend will not subsequently change. Given a required return of 18%, what should the stock sell for today? (5)

P.T.O.

3. (i) Explain the following concepts :

(a) Tracking Error

(b) Sortino Ratio

(c) M^2 Ratio

(6)

(ii) Information about three mutual fund schemes X, Y and Z are available :

Mutual Fund	Actual Return (%)	Beta	Standard Deviation (%)
X	14	0.7	21
Y	26	1.20	30
Z	19	1.15	27

The return on market index is 22% and standard deviation of returns on market index is 25%. The risk free rate is 5%. Calculate the following ratios and rank the mutual funds.

(a) Sharpe ratio for all the funds and market index.

(b) Treynor ratio for all the funds and market index.

(c) Jensen's ratio for all the funds and market index.

(9)

4. (i) A 11% bond of the face value Rs. 1000 matures in 10 years. The prevailing market rate for a similar bond is 12%. Calculate the price at which the bond should be available today assuming payments are made annually. Also calculate the bond price if coupon payments are made semi annually. (6)
- (ii) 'Bond immunization matches the duration of liabilities and assets.' Explain the strategy of bond immunization with an example.

OR

Explain the various types of risks that are relevant to investment in bonds. (6)

- (iii) The following particulars are available regarding a Government Bond which is selling in the market :

Face Value 100, Coupon 9% p.a, Maturity Period: 2 years, YTM: 6%, Bond pays interest semi annually. Compute the following :

(a) Bond duration

(b) New duration if the YTM changes to 8%. (8)

P.T.O.

5. (i) The ruling price of the stock be Rs. 40 and let the option on that stock be available at a price of Rs. 35. It is assumed that the share can take only two values on the expiry of the option i.e. Rs. 60 or Rs. 30. You have to find out the option premium (a) if the option is a call option (b) it is a put option. The risk free rate is 5% p.a. (8)
- (ii) An investor buys a share of Rs. 100 and simultaneously buys a put option @ premium of 16 (exercise price is Rs. 110). Determine the net profit/loss to this investor if the price on the expiry of option is (a) Rs. 80 (b) Rs. 100 (c) Rs. 110. (6)
- (iii) Show with your own illustration how the concept of 'Mark to Market' is applied to stock futures.

OR

Explain and illustrate Straddle and Spread options strategy. (6)