BA (Honours) Examination 2024

Semester VI

Economics

Course DSE 3

(Group B: Financial Economics)

Time 3 hrs | Full Marks 60

Questions are of value as indicated in the margin

Answer ***any four*** questions

1. (a) What are Treasury Bills?
   (b) Why are the rate of interest on Treasury Bills typically very low?
   (c) Explain the main objectives of the Central Bank in buying and selling Treasury Bills

   3 +3 + 9

2 (a) Distinguish between a Coupon Bond and a Zero Coupon Bond.
   (b) Calculate the present value of a 5 year Coupon Bond with a Face Value of Rs.50000/-and coupon rate of 6% if the current market interest is 8%.
   (c) How is the present value affected if the market interest rate goes upto 9%.

   3+ 8 + 4

3. (a)Discuss some of the factors that affect the demand and supply of bonds.
   (b)How does a business cycle expansion affect the rate of interest through change in the demand and supply of bonds?

   6 + 9

4. (a) Explain what you mean by the Term Structure of Interest Rates.
   (b) Consider the Expectations Theory of Term Structure. The one-year interest rates over the next four years are expected to be 6%, 7%, 8%, and 9% respectively. Given this information, what are the interest rates on a two-year bond and a four-year bond?

   4 + 11

5. (a) Briefly discuss the Markowitz model.
   (b) Solve the Markowitz problem with 2 assets where $\overline{r_1} = 15, \overline{r_2} = 12, \sigma_1 = 20, \sigma_2 = 18, \sigma_{12} = .02$.
   (c) Can you find the minimum variance problem of this portfolio

   3 + 9 + 3

6. (a) Explain (without proof) what you mean by the One Fund Theorem
   (b) In this context discuss what you mean by the Capital Market Line.
   (c) Can you find the equation of the Capital Market Line

   6 + 6 + 3

7. (a) State and Prove the Capital Asset Pricing Model.
   (b) Suppose the risk free rate of return be 8% and the market portfolio have an expected rate of return of 12% and a standard deviation of 15%. Consider an asset that has a covariance of 0.045 with the market. Find the asset β and the expected return of the asset.

   10 + 5

8 (a) Show that a risk neutral insurance company will set an "actuarily fair" premium in a perfectly competitive insurance market?
   (b) Will it continue to do so if the insurance market is imperfectly competitive?
   (c) If the premium rate is "actuarily fair" show that the consumer will buy "full insurance"

   6 + 2 + 7