# Bachelor of Arts Examination, 2023

(3rd Year, 1st Semester)

## ECONOMICS

## [ Financial Economics ]

Time : Two Hours Full Marks : 30

Answer ***Q.no. 1*** and any ***two*** from the rest.

1. State and justify whether the following statements are true, false or uncertain. (any ***four***) 4x2.5=10
   (a) A protective put is similar to writing a covered call.
   (b) Consider a 10-month forward contract on a stock when the stock price is \$50. We assume that the risk-free rate of interest (continuously compounded) is 8% per annum for all maturities. We also assume that dividends of \$0.75 per share are expected after 3 months, 6 months, and 9 months. Then the price of the forward contract will be \$51.14.
   (c) A zero-coupon bond is always sold at a discounted price.
   (d) The long-term interest rates are higher than the short-term interest rates because of inflation premium.
   (e) All efficient portfolios are optimal portfolios.

[ Turn over

2. (a) Is it possible to diversify risk of a portfolio entirely? Explain your answer in the light of Markowitz theory.

   (b) Suppose portfolio P's expected return is 14%, its volatility is 30% and the risk-free rate is 2%. Suppose further that a particular mix of asset i and P yields a portfolio Q with an expected return of 22% and a volatility of 40%. Will adding asset i to protfolio P be beneficial? Explain how.

   (c) Current market price of a share of a company is Rs. 60. Expected dividends for next 2 years from the share is Rs. 3 and Rs. 3.5. Expected price at the end of 2 years is Rs. 80 while the investor's required return is 16%. What is the value of the share and should it be bought at Rs. 60? 3+4+3=10

3. (a) The following information is available about Dnieper Company.

| | |
|---|---|
| Number of shares = 100,000 | Income tax rate = 30% |
| EDIT = $200,000 | Price per share = $4.20 |
| Long-term debt = $1 million | Interest rate on debt = 8% |

   Find its P/E ratio, Interest coverage ratio, and Debt ratio.

   (b) How does the traditional approach to capital structure determine an optimal level of leverage to optimise firm valutation?



   (c) What are turnover ratios?

   (d) What is meant by a "Vanilla" swap? 3+3+2+2=10

4. (a) Consider a US speculator who in February thinks that the British pound will strengthen relative to the US dollar over the next 2 months and is prepared to back that hunch to the tune of 250,000. The two strategies that the speculator can do is (i) purchase 250,000 in the spot market or (ii) take a long position in four CME April futures contracts on sterling where each futures contract is for the purchase of 62,500. What will be the outcome of these two strategies if the current exchange rate is 1.5470 dollars per pound and the April futures price is 1.5410 dollars per pound? How will your result change if the April Futures price is 1.6000 dollars per pound? Assume that initial margin on four futures contracts is $20,000.

   (b) What are the different components of assets and liabilities of a firm?

   (c) How is a Straddle different from a Strangle?

4+4+2=10