

# International Islamic University Chittagong

## Department of Business Administration

SSE: Autumn'2022

Course code:FIN-2301

Time: 2.5 hours

**Program: BBA**

Course Title: Principles of Finance

Full Marks: 50

Answer any of the **Five (5)** questions from question number 1 to 7.

- Q1 a Explain the following statement: "An asset held as part of a portfolio is generally less risky than the same asset held in isolation." CLO 5 2
- b Draw Security Market line (SML) and Capital market line (CML) showing risk and return relationship of individual stock and Portfolio stock. CLO 5 3
- c Stock X has an expected return of 12 percent, a beta coefficient of 1.1, and a standard deviation of expected returns of 25 percent. Stock Y has an expected return of 12.5 percent, a beta coefficient of 1.2, and a standard deviation of expected returns of 35 percent. The risk-free rate is 7 percent, and the market risk premium is 6 percent. CLO 5 5
- a. Calculate each stock's coefficient of variation.
- b. Which stock is riskier for diversified investors?
- c. Calculate each stock's required rate of return.
- d. On the basis of the two stocks' expected and required returns, which stock would be most attractive to a diversified investor?
- e. Calculate the required return of a portfolio that has \$10,000 invested in Stock X and \$5,000 invested in Stock Y.
- f. If the market risk premium increased to 6 percent, which of the two stocks would have the largest increase in their required return?
- Q2 a. What applications of time value of money are there in Bangladesh's banking industry? CLO 6 2
- b. You are thinking about buying a car, and a local bank is willing to lend you \$20,000 to buy the car. Under the terms of the loan, it will be fully amortized over 5 years (60 months), and the nominal rate of interest will be 12 percent, with interest paid monthly. What would be the monthly payment on the loan? What would be the effective rate of interest on the loan? CLO 6 4
- c. John Roberts has \$42,180.53 in a brokerage account, and he plans to contribute an additional \$6,000 to the account at the end of every year. The brokerage account has an expected annual return of 10 percent. If John's goal is to accumulate \$200,000 in the account, how many years will it take for John to reach his goal? CLO 6 4
- Q3 a. A 10-year, 10 percent annual coupon bond, with a par value of \$1,000, may be called in 4 years at a call price of \$1,050. The bond sells for \$1,080. (Assume that the bond has just been issued.) CLO 7 7
- a. What is the bond's yield to maturity?
- b. What is the bond's current yield?
- c. What is the bond's capital gain or loss yield?
- d. What is the bond's yield to call?
- b. Describe the difference between the yield to maturity and the yield to call. CLO 7 3
- Could the current yield exceed the total return?

- Q4 a. Define stock. Explain what is meant by “terminal (horizon) date” and “horizon (terminal) value.” CLO 7 3
- b. A stock is trading at \$80 per share. The stock is expected to have a year-end dividend of \$4 per share ( $D_1 = \$4.00$ ), which is expected to grow at some constant rate  $g$  through out time. The stock’s required rate of return is 14 percent. If you are an analyst who believes in efficient markets, what would be your forecast of  $g$ ? CLO 7 3
- c. Harrison Clothiers’ stock currently sells for \$20 a share. The stock just paid a dividend of \$1.00 a share (i.e.,  $D_0 = \$1.00$ ). The dividend is expected to grow at a constant rate of 10 percent a year. What stock price is expected 1 year from now? What is the required rate of return on the company’s stock? CLO 7 4
- Q5 a. Unitech Corporation is expanding rapidly, and it currently needs to retain all of its earnings, hence it does not pay any dividends. However, investors expect Unitech to begin paying dividends, with the first dividend of \$1.00 coming 2 years from today. The dividend should grow rapidly — at a rate of 40 percent per year — during years 3, Years 4 and 5. After Year 5, the company should grow at a constant rate of 7 percent per year. If the required return on the stock is 12 percent, what is the value of the stock today? CLO 5 5
- b. Assume that it is now January 1, 2002. On January 1, 2003, you will deposit \$1,000 into a savings account that pays 8 percent. CLO 6 5
- a. If the bank compounds interest annually, how much will you have in your account on January 1, 2006?
- b. What would your January 1, 2006, balance be if the bank used quarterly compounding rather than annual compounding?
- c. Suppose you deposited the \$1,000 in 4 payments of \$250 each on January 1 of 2003, 2004, 2005, and 2006. How much would you have in your account on January 1, 2006, based on 8 percent annual compounding?
- d. Suppose you deposited 4 equal payments in your account on January 1 of 2003, 2004, 2005, and 2006. Assuming an 8 percent interest rate, how large would each of your payments have to be for you to obtain the same ending balance as you calculated in part a?
- Q6 a. Explain various right and privileges of common stock holder in a corporation. CLO 7 3
- b. Define preferred stock. What are the types of preferred stock? Explain in brief. CLO 7 3
- c. What do you mean by lease financing? Explain various types of lease financing available in a financial market. 4
- Q7 Write short notes on the following CLO 5 10
- a) Warrant and convertibles.
- b) CAPM Model.
- c) Zero coupon Bond and Junk Bond.
- d) Ordinary annuity and annuity due.
- e) Off balance sheet items.