PGDM / IB Batch 2021-23

Fixed Income Securities

DM / IB- 413

Trimester – IV, End-Term Examination: September 2022

Time allowed: 2 Hours Max Marks: 40

Roll No: ___________

Instruction: Students are required to write Roll No on every page of the question paper, writing anything except the Roll No will be treated as **Unfair Means.** In case of rough work please use answer sheet.

Make assumptions wherever necessary and write them down at the end of solution.

Sections	**No. of Questions to attempt**	**Marks**	**Marks**
A	4 Questions	5 Marks each	4*5 =20
B	Compulsory Case Study	20 Marks	20
		Total Marks	**40**

SECTION A

A 1a. A bond that has a coupon of 14% and a par value of Rs.100 is callable at the end of three years at a premium of 10%. It matures in six years and pays coupons semi-annually. The market price is Rs.109. Given this data, compute yield to call? (CO 2)

OR

A 1b. 5-year, 9% corporate bond with a Face Value Rs. 1,000 and interest payable semi-annually matures after 6 years. The bond is available at a yield to maturity of 7%. If the record date for the last coupon has just passed, at what value 50 bonds of the corporate are likely to be quoted in the market? (CO 2)

A 2a. A Portfolio Manager is considering buying two bonds. Bond A matures in three years and has a coupon rate of 10% payable semi-annually. Bond B, of the same credit quality, matures in 10 years and has a coupon rate of 12% payable semi-annually. Both Bonds are priced at par. Which Bond would you recommend to the Portfolio Manager? (CO 3)

OR

A 2b. Explain Duration with the help of an example. How Macaulay Duration is different from Modified Duration. (CO 3)

A 3a. Explain the interest rate swap agreement with the help of an example. (CO 4)

OR

A 3b. Explain the role of credit rating agencies in the bond market. (CO 4)

A 4a. A 8% bond (F.V 1000/-) has a maturity of 30 years with YTM of 9%.It is currently traded at Rs 897.26/-. The duration of a bond is 11.37 yrs. Find out the modified duration. What will be the change in price if the yield increases to 9.2%? (CO1)

OR

A 4b. Explain clean price and dirty price mechanism in Bond Trading. (CO1)

SECTION B

CASE STUDY (20 Marks)

On April 1, 2019, ABC Ltd plans to issue a 10% coupon, 10-year bonds of face value INR 100 for INR 100 million on October 1, 2019, to finance its expansion project. The cost of debt for the company is 10%. On April 1, September futures with expiry on September 30 are available on 7% coupon GOI securities with maturity on sept 30, 2021. The yield on GOI securities is 8%. The company is concerned that the interest rate may increase /decrease before September and would like to protect this possible increase / decrease in interest rate.

Below are the two scenarios:

I. Assume that the interest rate increases by 100 basis points for the company and the yield on the GOI securities increases by 80 basis points.
II. Assume that the interest rate decreases by 100 basis for the company and the yield on the GOI securities decreases by 50 basis points.

a. Explain interest rate futures. How forwards are different from futures contract.
b. What is the fair price of September futures on 1 April?
c. Show how ABC Ltd. protects itself from interest rate fluctuations.
d. Will your answer differs in both the scenarios. Show all relevant calculations

(CO3)
