JAIPURIA INSTITUTE OF MANAGEMENT, NOIDA

PGDM / PGDM (M) / PGDM (SM)

FIFTH TRIMESTER (Batch 2020-22)

END TERM EXAMINATIONS, January 2022

Set-2

Course Name	**Fixed Income Securities**	Course Code	**FIN503**
Max. Time	**2 hours**	Max. Marks	**40 MM**

NSTRUCTIONS:

1. Attempt all questions.
2. Qs to be attempted on Excel with separate sheet for each Qs.
3. Videos must be kept on. Use of earphones/headphones/phones is prohibited.
4. Any two or more sheets with similar answer will be considered to be adoption of unfair means.
5. Excel files to be saved as per your name and roll number.
6. Ensure to upload your excel files on the moodle within the time limit.
7. Do not send your excel sheet by email.

Please Answer all the Questions. Show detailed working with appropriate narration without which marks will not be awarded.

CLO 2, CLO 3 BT Level V

1. A)The current yield curve for a zero coupon bonds is as follows :

Maturity (Years)	YTM
1	10%
2	11%
3	12%

a) Determine 1X1 FRA and 2X1 FRA (that is, implied 1 year forward rates).
b) Assume that the pure expectation hypothesis of the term structure is correct, determine what will be the YTM on 1 year zero coupon bonds next year ?
c) Determine What should be the current price of a 3 year maturity bond with a 12% coupon paid annually?

B) If the 3 month (91 days) Libor rate is 4% and the 6 month (183 days) rate is 5%, what should be 3X6 FRA Marks 7 + 3.

CLO 2, PLO 3 BT Level V

2. a) Find the duration of a 6% coupon bond (face value 100) making semi annual coupon payment if it has 3 years until maturity and has a YTM of 8%. Determine the duration of a zero coupon bond, other things remaining same. Which bond has a higher duration risk ? Justify.

b) A 9 year bond has a yield of 10% and duration of 7.194 years. If the market yield changes by 50 basis point determine the % change of bond price.

Marks 8 + 2

CLO 4. PLO 3 BT Level V

3. Company X and Y have been offered the following rates per annum on Rs.5 crore rupee loan for 5 years

Firm	Fixed Rate	Floating Rate
Company X	6%	Libor +0. 05%
Company Y	7.25%	Libor + .45%

X needs a floating rate loan Y needs a fixed rate loan. Justify a deal as an investment banker (for which you will be paid 0.04%) so that it can be attractive for both X and Y. Marks 10

CLO 4. PLO 6 BT Level V

4. a) George Cachill – a portfolio manager has identified three 5 year annual coupon bonds issued by a sovereign government. The three bonds have identical characteristics, except that -Bond A is an option- free bond, Bond B is callable at par in 2 years and 3 years from today (Bermudan), Bond C is puttable at par 2 years from today. **With explanations** you are to determine -

A. Relative to the value of Bond A, the value of Bond B is:
   i) Lower
   ii) the same
   iii) higher.
B. Relative the value of bond B, the value of bond C is :
   i) Lower
   ii) the same
   iii) higher.

C. Under a steeply upward sloping yield curve scenario, Bond C will most likely:

i) be called by the issuer
ii) be put by the bondholders
iii) mature without exercise of any of the embedded option.

b) In a highly interest volatility scenario what should be the right choice of investment so far as mutual fund is concerned of a risk averse senior citizen preferring liquidity in case of medical emergency. Discuss from type, duration and convexity angle.

Marks 6+4