JAIPURIA INSTITUTE OF MANAGEMENT, NOIDA

PGDM / PGDM (M) / PGDM (SM)

FIFTH TRIMESTER (Batch 2020-22)

END TERM EXAMINATIONS, January 2022

Set-1

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

INSTRUCTIONS:

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 :

CLO 2, PLO 3 BT Level V

1.An analyst needs to assign a value to an illiquid 4 year, 4.5% annual coupon payment corporate bond. The analyst identifies two corporate bonds that have similar credit quality. One is 3 year 5.50 annual coupon payment bond priced at 1007.500 of par value, and the other is a five year 4.50% annual coupon bond priced at 104.750 par 100 of par value. Using matrix pricing, determine the estimated price of the illiquid bond per 100 of par value.

Marks 10

CLO 2, PLO3 BT Level V

2. Ms Kalpna is a fixed income portfolio manager who works with large off shore institutional clients. Kalpana talks to John – CFO of an US based hospital conglomerate to discuss management of the fund's approximately $100 million bond portfolio. The current treasury bond yield is given in table below. John says – 'There is a large spread between 2 year and 10 year yield. The portfolios would be expected to experience a higher return over a 10 year horizon by buying 10

year treasury, rather than buying 2 year treasury and reinvesting the proceeds into 2 year treasury at each maturity date(current practice)'.

Maturity (year)	Yield %	Maturity (year)	Yield %
1	2	6	4.15
2	2.90	7	4.30
3	3.50	8	4.45
4	3.80	9	4.60
5	4.00	10	4.70

a. Comment and decide whether Jon's observation is correct based on pure expectation hypothesis
b. John discusses with Kalpana about alternative theories of term structure of interest and gives her the following information about US treasury market

Maturity (Years)	2	3	4	5	6	7	8	9	10
Liquidity premium (%)	0.55	0.55	0.65	0.75	0.90	1.10	1.20	1.50	1.60

Use this additional information and the liquidity preference theory to determine what the slope of the yield implies about the future expected short term interest rates.

Marks 7+3 =10

CLO 4, PLO 3 BT Level V

3 The following two government securities were trading in the NSE in January 2019 :

Bond	Maturity period January of	Coupon Rate (%)	Yield (%)
G-Sec A	2026	7.59%	7.52%
G sec B	2028	7.17%	7.59%

a) Assuming yearly coupon payment determine the price of the bonds using excel
b) How do you explain and analyze the difference in the yields of the two bonds
c) Determine the duration of both the bonds.
d) Determine, what would be the price of the of both the bonds if yield increases by 1%.

Marks 10.

CLO 4. PLO 6 BT Level V

4. a) Judge why bond investors love convexity from the standpoint of risk ?

b) A recent report in the financial daily observes as under –

" Bonds fell to a pre-pandemic low when sensex surged over 1%.....
The cost of borrowing for the government as reflected in the yield of 10 year bond rose to more than the home loans offered by the most of the banks to a two year high of 6.59%. The 6.59% yield on 10 year bond is the highest since Jan 31, 2020. Sentiment in the bond market has changed after the RB I has become a net seller of the bond. – a move earlier seen aimed at supporting measures to normalize the excess liquidity pumped help market during pandemic ….."

Answer and explain the following :

1) When the bonds fall how it impacts yield (YTM) ?
2) From above do you think that home loan interest is likely to rise in future ? If Yes then why.
3) From above explain how the central bank intervene in the matter of money supply through bond sale and repurchase during recession.
4) How the RBI turning into a net seller of bond impacts money supply and interest rate ?

Marks 10