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| **C:\Users\ADMIN\Desktop\j.png** | **JAIPURIA INSTITUE OF MANAGEMENT, INDORE**  Post Graduate Diploma in Management |
| **Course Title: Fixed Income Securities (Course Code: 40234)**  **Improvement Examination, Term – V (Batch 2021-23) (March 2023)** | |
| **Time Duration: 2 Hours Total Marks: 40** | |

***Instructions*:**

1. *This exam is completely an MS -excel based exam*
2. *No answer sheet will be given*
3. *Students need to submit one excel workbook as an answering script. The workbook will have multiple worksheets.*
4. *Students need to solve each question in a separate worksheet and name the worksheet with ques no.*
5. *No Internet access will be given*
6. *No formula, interest factors tables will be provided*
7. *Students should continually keep saving their work*
8. *Students should save the final excel answer sheet with their name, roll no. and division*
9. *Do not write anything on the question paper apart from your roll no.*

**Q1.** Company A, a British manufacturer, wishes to borrow U.S. dollars at a fixed rate of interest. Company B, a U.S. multinational, wishes to borrow sterling at a fixed rate of interest. They have been quoted the following rates per annum (adjusted for differential tax effects):

|  |  |  |
| --- | --- | --- |
|  | Sterling | US Dollars |
| Company A | 11.0% | 7.0% |
| Company B | 10.6% | 6.2% |

Plan a swap arrangement that will net a bank, acting as an intermediary, 10 basis points per annum, which will be equally attractive to both parties. **(6 Marks)**

Q2 Consider the following Junk bond:

|  |  |  |
| --- | --- | --- |
| **Date** | **Cash Flow** | **Risk-free rate** |
| 05-12-2021 | 8 | 3.60% |
| 05-06-2022 | 8 | 3.90% |
| 05-12-2022 | 8 | 4.20% |
| 05-06-2023 | 8 | 4.25% |
| 05-12-2023 | 8 | 4.60% |
| 05-06-2024 | 8 | 4.71% |
| 05-12-2024 | 8 | 4.85% |
| 05-06-2025 | 108 | 5% |

Illustrate:

1. Risk spread if the bond is trading at 84.43 as of 17th November 2021 **(7 Marks)**
2. Difference in price between risky and risk-free bonds with the same cash flows **(3 Marks)**

**Q3.** Construct an amortization schedule for a housing loan borrower with the following terms:

Home Loan amount INR 15000000

Tenor 120 Months

Effective annual rate 8.5% p.a

**(6 Marks)**

**Q4.** Given:

4-month spot rate 5.6% p.a.

1-month spot rate 5.2% p.a

If FRA is offered at 5.65% p.a, should it be bought or sold from a speculative point of view? **(6 Marks)**

**Q5.** Flex Engineering Ltd. has raised Rs. 550 crores through an issue of non – convertible debentures to finance its expansion and diversification plan at Kopri. These debentures have been assigned an AAA rating by Crisil, meaning the highest safety with respect to repayment of interest and principal. Each NCD has a face value of Rs. 100 with a coupon of 12 percent payable semi-annually. These semi-annual payments will be made on the last working day of September and March each year. The NCDs will be redeemed in three installments viz. 20 percent at the end of the third year, 30 percent at the end of the fourth year, and the balance 50 percent at the end of the fifth year. An investor wants to analyze the worth of the bond from an investment perspective. The NCDs have just begun trading on the wholesale debt segment of the National Stock Exchange and are trading at Rs. 95.75. Based on the above information you are required to contrast between the Current Yield and Duration of the NCD. **(12 Marks)**

**----------------------------------------------End of the question paper---------------------------------------------**