BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION SP/2025)

CLASS: IMsc **SEMESTER : VI**
BRANCH: CQEDS **SESSION : SP/2025**

SUBJECT: ED321 FINANCIAL ECONOMICS

TIME: 02 Hours **FULL MARKS: 25**

INSTRUCTIONS:
1. The question paper contains 5 questions each of 5 marks and total 25 marks.
2. Attempt all questions.
3. Provide formulas wherever required.
4. The missing data, if any, may be assumed suitably.
***5*. Tables/Data handbook/Graph paper etc., if applicable, will be supplied to the candidates**

			CO	BL
Q.1(a)	What do you mean by "no-arbitrage" condition?	[2]	1	1
Q.1(b)	Define "principle of risk aversion" with an example.	[3]	1	1
Q.2(a)	Suppose you have invested some amount say, A. The amount A grows with an interest rate of 12%. In how much time the amount A will be doubled?	[2]	1	2
Q.2(b)	What is "effective interest rate? Calculate the effective interest rate for an annual rate of return of 8% compounded quarterly.	[3]	1	3
Q.3(a)	An 8% bond with 18 years to maturity has a yield of 9%. What is the price of this bond?	[2]	1	2
Q.3(b)	Find the price and duration of a 10-years, 8% bond that is trading at a yield of 10%.	[3]	1	2
Q.4(a)	Suppose that there are two assets with $E(r_1) = 0.12$, $E(r_2) = 0.15$, $\sigma 1 = 0.20, \sigma 2 = 0.18, \text{and } \sigma 12 = 0.01$. A portfolio is formed with weights $w_1 = 0.25$ and $w2 = 0.75$. Calculate the mean and variance of the portfolio.	[3]	2	2
Q.4(b)	Find the standard deviation (σ) of the portfolio.	[2]	2	2
Q.5	Assume that the expected rate of return on the market portfolio is 23% and rate of return on T-bills is 7%. The standard deviation of the market is 32%. Assume that the market portfolio is efficient. What is the equation of the capital market line? Now if an expected return of 39% is desired, what is the standard deviation of this position?	[5]	2	3

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