MBSC-4.3A

Sl.No. :

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Fourth Semester M.B.A. Degree, Examination, November - 2024
(SLM Scheme) (CBCS)
FINANCE MANAGEMENT
Derivatives (Elective - A)

Time : 3 Hours **Max. Marks : 80**

SECTION - A

Answer any five questions. Each question carries five marks. [5 × 5 = 25]

Q1) What do you mean by forward contract? Mention its features.

Q2) Briefly explain market participants in a futures contracts.

Q3) What do you mean by physical delivery of commodities?

Q4) Briefly explain special applications of options.

Q5) What is risk management? Why is it important?

Q6) Briefly explain trading and settlements.

Q7) What do you mean by put call parity?

SECTION - B

Answer any four questions. Each question carries ten marks. [4 × 10 = 40]

Q8) Discuss Derivatives Market in India.

Q9) Explain the assumptions of Black and Schools model.

Q10) Discuss forward trading and forward markets commission in India.

Q11) Suppose that the spot (zero) rates with continuous compounding are as follows

Maturity (Years)	Rate (% per annum)
1	12.00
2	13.00
3	13.70
4	14.20
5	14.50

Calculate forward interest rates for the second, third, fourth and fifth year.

Q12) A share is currently traded at Rs.78/-. A 3 month futures contract on this share is traded at Rs.80.50. The risk free rate of return continuously compounded is 8% p a. No dividend is expected from the share in the next 3 months. Is there any arbitrage opportunity here? If so explain the process of arbitrage and the profit to be made?

Q13) Companies X and Y have been offered the following rates per annum on a $ 5 million 10 year investment.

	Fixed Rate	Floating Rate
Company X	8%	LIBOR
Company Y	8.8%	LIBOR

Company X requires a fixed rate investment; company Y requires a floating rate investment Design a swap that will net a bank, acting as intermediary 0.2% per annum and will appear equally attractive to X and Y.

SECTION - C

Q14) **Case (Compulsory) :** **[1 × 15 = 15]**

On January 1st 2024, an investor has a portfolio of 5 shares

Security	Price	No. of shares	Beta
A	59.50	5000	1.05
B	81.85	8000	0.35
C	101.10	10000	0.80
D	125.15	15000	0.85
E	140.50	1500	0.75

The cost of capital for the investor is given to be 12.5% p.a. currently the index stands at 9000 with a dividend yield of 5% per annum.

a) Calculate the Beta of his portfolio.

b) If the index futures have a minimum trade requirement of Rs.50/point, obtain the number of contracts of index futures, he needs to sell to get a full hedge till March if current value is 9156.

c) Calculate the theoretical values of futures contract according to the investor for contracts expiring on February and March.

d) Calculate the number of index future contracts the investor should trade if he desires to reduce the beta of portfolio to 0.7 on January 1, 2024 to hedge till March.

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