MBSC-4.3A

Sl. No.

IV Semester M.B.A. Degree Examination, May/June - 2026
MANAGEMENT
Finance (Elective - A)
Derivatives
(CBCS, SLM Scheme)

Time : 3 Hours **Maximum Marks : 80**

SECTION - A

Answer any Five questions. Each question carries Five marks. (5×5=25)

1. Discuss the key features of derivative instruments that distinguish them from traditional financial products.
2. Explain the major factors affecting the growth of financial derivatives in India.
3. Explain the benefits of trading in futures contracts.
4. Explain the concept of margin requirements in futures trading with an example.
5. Distinguish between the payoff positions of a buyer and seller of a call option.
6. The spot price of the asset is Rs. 100. The time to delivery in the forward contract is 6 moths and the annual risk free rate is 5%. What will be the forward price of the security/asset?
7. Explain the relationship between futures prices, forward prices and spot prices.

SECTION - B

Answer any Four questions. Each question carries Ten marks. (4×10=40)

8. Compare Over-the-Counter (OTC) derivatives with Exchange-Traded Derivatives (ETD) in terms of features, benefits and risks.
9. Discuss the different types of risks faced by participants in the derivatives market and how facilitators help in managing these risks.
10. What is hedge ratio? Explain its significance and types with illustrations.
11. Mr. Madan has shorted five copper futures at an exercise price of Rs. 325 per kg. The initial margin of the contract is 15% and the maintenance margin is 80% of initial margin. The future prices for the first five days of the contract are given below.

Day	1	2	3	4	5
Settlement Prices (Rs./ kg)	330.50	327.70	338.20	335.10	340.75

Prepare a margin account of the investor assuming that all margin calls are honored immediately and lot size of the contract is 1000 kg.

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12. Calculate the pay-off of a Put Option Buyer (long put) at expiration and draw a pay-off diagram from the following information:

Underlying Asset	TCS Share
Type of Option	Put Option
Style of Option	European
Position	Long
Exercise Price	Rs. 170 per share
Option Premium	Rs. 10 per share
Spot Prices per share at Expiration (Rs.)	130,140, 150, 160, 170,180, 190

13. From the following information, calculate Call Option value and Put Option value using Black-Scholes Option Pricing Model:

Current market Price	Rs. 100 per share
Exercise Price	Rs. 80 per share
Volatility of share price	30%
Risk-free Interest Rate	10% p.a.
Time to Expiration	3 months

SECTION - C

14. Case (Compulsory) **(1×15=15)**

An investor is analyzing the stock of a company that is currently trading at Rs. 50 per share. Based on market estimates, it is expected that over the next 3 months, the stock price could either rise by 20% or fall by 20%.

The investor is considering trading in options on this stock and wants to use the Binomial Option Pricing Model (BOPM) to evaluate the fair value of options. The prevailing risk-free rate of interest in the market is 8% per annum.

He identifies a European call option and a put option on this stock, each with an exercise price of Rs. 50 and a maturity of three months.

As a financial analyst, you are required to assist him in determining:

a) The value of the call option using the risk-neutral method under a single- period binomial model.

b) The value of the put option under the same assumptions.

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