Time: 2:30 Hours | Marks:75

Q1A) **Match the Columns (any 8 out Of 10)** 8 marks

1. Clearing House	a. Perfect hedging
2. Time to expiry	b. Price mismatch
3. Option pricing	c. Standardised format
4. Forward contract	d. Theta
5. Arbitrage	e. Neutral option strategy
6. Short Put	f. Risk management practice
7. Crude derivatives	g. NSCCL
8.Future contract	h. Black-Scholes Model
9. Position Limit	i. Commodity contracts
10. Short Straddle	j. Bullish option Strategy

Q1B) **True or False (any 7 out Of 10)** 7 marks

1. If the balance falls below maintenance margin, then client needs to restore the balance back to the initial margin level.
2. Self clearing member is also a Trading member.
3. The binomial option pricing model is a continuous time model.
4. American option can be exercised at any time up to the expiration date.
5. If traded futures price is less than theoretical future price then short the future contract.
6. Nifty 50 futures monthly contracts expire on the last friday of the expiry month.
7. Future buyers have unlimited profits, limited losses.
8. OTC contracts are subject to credit risk.
9. Leveraged investment is not possible in derivatives markets.
10. In case of interest rate swaps, fixed interest obligation is swapped for floating rate interest and vice versa.

Q2 A Explain the role of Hedgers, Speculators, Arbitrageurs in derivatives market. 8 Marks

Q2 B Explain in detail the various functions of derivatives. 7 Marks

OR

Q2 P What is Binomial Option Pricing Model (BOPM)? 8 Marks

Q2 Q What are J. R. Varma committee recommendations for risk containment in derivatives market in India? 7 Marks

Q3 A How Spot price, strike price, time to expiry, volatility and interest rate affects option price? 8 Marks

Q3 B ABC Brokerage house is bullish on banking sector, so they are recommending to buy 20 near month bank nifty future contract at Rs.50,500. Lot size of bank nifty future contract is 15 units. How much profit/loss did we make if contract expires at 49,850. Support your answer with Payoff diagram. 7 Marks

OR

Q3P What are the features of future contract? Differentiate between forwards and future. 8 Marks

Q3 Q Mr.Iyer is bearish on Reliance Ltd., so he decided to short 10 contracts of Reliance Ltd. at Rs.2800. Lot size is 250. What will be possible gain/loss if reliance contract expires at 2600 or 2700 or 2800 or 2900 or 3000.Draw payoff diagram. 7 Marks

Q4 A USA Fed bank reduced interest rate by 50 basis point, so traders are bullish on Nifty 50. What would be possible reward or loss if traders initiate one month long call position of 40 contracts at 25,000 strike with premium of Rs.100 per unit. Lot size is 25 and possible expiries are as follows. 8 Marks

Possibility	Spot at expiry
A	24800
B	24900
C	25000
D	25100
E	25200

Support your answer with payoff table & payoff diagram.

Q4 B Explain the following derivatives terminologies: 7 Marks

1.Cost of Carry 2. Mark to Market Margin 3. Time value of an option 4. Delta

OR

Q4P The share of APQ Ltd. is currently available for Rs.600. Expected underlying asset price one year from now will be either up by 40% or down by 35%. The risk-free interest rate is 20%. Exercise price of call option is Rs.700. Calculate call option price of today using single period binomial model. 8 Marks

Q4 Q Ms. Rose sold one Put option contract of GAIL Ltd. October 2024, at a strike price of Rs.250 & at a premium of Rs.50. Lot size is 4575 units. If Gail Ltd. expires at 300 then calculate amount of profit/loss and draw a payoff diagram. 7 Marks

Q5 A Explain clearing mechanism of derivatives in India in detail. 8 Marks

Q5 B What are reasons for wide participation into Index Future in India? 7 Marks

OR

Q5 **Write Short Notes On (any 3)** 15 Marks

1 Long Hedge
2 Long Strangle
3 Contract specification of Bank Nifty
4 Gamma
5 Value at Risk (VaR)

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