1512N996

Candidate's Seat No:____

MBA in DM Sem.-3 Examination
Derivative & Risk Mgmt.
December-2025

Time : 2.30 Hours] **[Max.Marks : 70**

Instructions: Use of non-programmable scientific calculator is allowed.

Q.1 [A] Explain the difference between speculation, arbitrage, and hedging with reference to derivatives. [07]

Q.1 [B] What are the instruments traded in derivatives market? Give their feature. [07]

Q.2 [A] An investor is holding the following portfolio of shares: [10]

Share	Market value (₹)	Beta (β)
X	5,00,000	1.2
Y	6,00,000	1.3
Z	12,00,000	1.6

At present, NIFTY Futures are trading at 4,600 and one contract comprises of 50 units. Design a hedging strategy for the investor who wants to have an effective β of 1.2 or 1.7. Also verify the result if the market goes down by 3% during the Futures period.

Q.2 [B] "Naked exposure in derivative market can be extremely risky unless it is a hedge against a holding." Explain and elucidate the concept of hedging in the light of this statement. [04]

OR

Q.2 [A] A commodity is priced higher in the spot market than in the futures market. Explain how reverse cash-and-carry arbitrage can be executed. [07]

Q.2 [B] Write a short note on Hedging . [07]

Q.3 [A] A trader holds a long call option with: [07]
Delta = 0.65
Gamma = 0.04
Theta = –5
Vega = 12
Explain what each Greek tells the trader about the risk of this option.

Q.3 [B] Explain the concept of Put–Call Parity. [07]

OR

Q.3 [A] Explain the concept of moneyness of an option. How is moneyness defined for call options and put options? [07]

Q.3 [B] Explain the relationship between trading volume and open interest in futures and options markets. How do both indicators help in analyzing market activity? [07]

Q.4 A trader creates a long call butterfly spread using three strike prices on Stock X. [14]
Current stock price = ₹240
The trader executes the following option positions:

- Buy 1 Call with strike ₹230 at a premium of ₹18
- Sell 2 Calls with strike ₹240 at a premium of ₹10 each
- Buy 1 Call with strike ₹250 at a premium of ₹5

Requirements:

P.T.O

1. Calculate the net premium paid to set up the butterfly spread.
2. Prepare the payoff table for stock prices at expiry ranging from ₹220 to ₹260 in steps of ₹10.
3. Determine the following:
   a) Maximum Profit
   b) Maximum Loss
   c) Breakeven Points
4. Explain in one line when a butterfly spread is profitable.

OR

Q.4 A trader expects the price of Stock A to rise moderately over the next month. The stock is currently trading at ₹520. [14]
To benefit from the expected upside while reducing cost, the trader sets up a Bull Call Spread using the following options:

- Buy 1 Call with strike ₹520 at a premium of ₹28
- Sell 1 Call with strike ₹560 at a premium of ₹12

Requirements:

1. Calculate the net premium paid for the bull call spread.
2. Prepare the payoff table at expiry for stock prices ranging from ₹500 to ₹600 in steps of ₹20.
3. Compute the following:
   a) Maximum Profit
   b) Maximum Loss
   c) Breakeven Point
4. Explain in one sentence why traders use a bull call spread instead of buying a single call option.

Q.5 Attempt any two out of the following: [14]

1. Differentiate between a fixed rate and a floating rate.
2. Forward rate agreement
3. Currency derivative