

[Time: 3.00 Hrs]

[Marks: 75]

Please check whether you have got the right question paper.

Instructions :

1. Q1 (20 marks) & Q8 (15 marks) are compulsory.
2. Attempt Any Four (40 marks) out of Q2, Q3, Q4, Q5, Q6 and Q7.
3. Students have to attempt any four out of the remaining six questions and within each question; students have to attempt any one out of two sub – questions. Each sub – question would carry 10 Marks.
4. Figures to the right indicate full marks.
5. Draw neat diagrams wherever necessary.

Q.1 Read and attempt the following:**(A) Fill in the blanks****10 Marks**

- i. Historical volatility, is also known as _____.
- ii. Implied volatility (IV), is also known as _____.
- iii. _____ is a tool that is used by risk managers to quantify and limit the amount of risk exposure.
- iv. _____ is one of the most well-known stress test methodologies.
- v. The introduction to derivatives explores the concepts of _____, which are financial instruments whose value is derived from another asset.
- vi. Forwards and futures contracts are types of _____ that obligate parties to buy or sell an asset at a predetermined price on a specified future date.
- vii. The mechanics and properties of options include understanding the _____, which represents the right but not the obligation to buy or sell an underlying asset.
- viii. Different option trading strategies can be employed to take advantage of market conditions, such as _____, which involves buying and selling options to profit from price movements.
- ix. An introduction to options would cover essential concepts such as strike price, expiration date, and _____, which affects an option's price.
- x. Effective risk management in derivatives trading involves identifying, analyzing, and mitigating _____ that can impact investment outcomes.

(B) True or false.**10 Marks**

- i. Derivatives are financial instruments whose value is derived from an underlying asset.
- ii. A forward contract obligates the buyer to purchase, and the seller to sell, an asset at a predetermined future date and price.
- iii. Futures contracts are traded over-the-counter and are customizable for specific needs.
- iv. Options provide the holder with the right, but not the obligation, to buy or sell an underlying asset at a predetermined price before or at expiration.
- v. The intrinsic value of an option is the difference between the underlying asset's current price and the strike price.
- vi. A call option gives the holder a right to sell the underlying asset at the strike price.

Q.P. Code: 00005639

- vii. A put option provides the right to buy the underlying asset at the strike price.
- viii. Options are only used for speculative trading and cannot be used for hedging purposes.
- ix. The Black-Scholes model is used for pricing European call and put options.
- x. Delta, gamma, and theta are measures of an option's sensitivity to various factors affecting its price.

Q.2 Attempt any Two of the following:

10 Marks

- i. Who are the key participants involved in derivatives markets, and what roles do they play?
- ii. What functions do derivatives markets serve in enhancing financial stability?
- iii. In what ways can businesses identify and assess potential risks in their industries?

Q.3 Attempt any Two of the following:

10 Marks

- i. What characteristics define a futures contract compared to a forward contract?
- ii. How is open interest measured and why is it important in trading futures?
- iii. What are the main differences between forward contracts and futures contracts?

Q.4 Attempt any Two of the following:

10 Marks

- i. Explain the concept of Delta in options trading. How does Delta affect an options position? Provide examples to illustrate your explanation.
- ii. Define Theta and describe its impact on options pricing.
- iii. How does Theta affect the value of options as expiration approaches? Provide examples to support your answer.

Q.5 Attempt any Two of the following:

10 Marks

- i. Explain in detail binomial option pricing model.
- ii. Discuss acquiring Knowledge of the Option Pricing Theory.
- iii. Write note on DELTA.

Q.6 Attempt any Two of the following:

10 Marks

- i. Differentiate between Gamma Hedging vs. Delta Hedging: .
- ii. Explain in detail Hedging.
- iii. What is Speculation?

Q.7 Attempt any Two of the following:

10 Marks

- i. Explain the three primary shapes of interest rates.
- ii. What is VAR?
- iii. Explain in detail Stress testing and back testing.

Q.8 Write short notes on Any three from the following:

15Marks

- i. Derivatives
- ii. Interest Rate Risk
- iii. Forwards
- iv. Futures
- v. Options
