

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
MBA– SEMESTER –IV -EXAMINATION – WINTER-2023

Subject Code:3549222

Date: 04-12-2023

Subject Name: Risk Management

Time:02:30 PM TO 05:30 PM

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Use of simple calculators and non-programmable scientific calculators are permitted.

Q. No.	Question Text and Description	Marks
Q.1	Definitions / terms / explanations / short questions based on concepts of theory/practical (a) Forward Contract (b) Hedger (c) Swap (d) Stop loss order (e) Out of Money option (f) Over the Counter (g) Exchange Traded Fund	14
Q.2	(a) Discuss the types of traders in futures markets with suitable examples.	07
	(b) Illustrate 'in-the-money' and 'out-of-the-money' positions in both call option and put Option.	07
OR		
	(b) 'Future contracts are obligations, whereas options are rights'. Do you agree?	07
Q.3	(a) Highlight the various functions of derivatives.	07
	(b) What are the major stock indices in India? Discuss in detail about the Sensex and S& P CNX Nifty Indices?	07
OR		
Q.3	(a) Write down the functions of clearing members.	07
	(b) Briefly discuss the factors affecting option value.	07
Q.4	(a) Explain the various types of margins.	07
	(b) What do you mean by 'binomial'? Explain with suitable example the application of Binomial model for the valuation of options.	07
OR		
Q.4	(a) Briefly discuss the role of SEBI in the Indian Derivatives Market?	07
	(b) Write down the recommendations covered by J.R. Varma committee report.	07

Q.5**CASE STUDY:**

XYZ Investment Bank is a global financial institution that provides a range of services to clients, including trading in financial derivatives such as options. The bank is exposed to market risk due to fluctuations in the prices of the underlying assets, which can impact the bank's financial performance. To manage this risk, the bank has developed a range of options trading strategies that are designed to generate profits while managing risk effectively. These strategies include delta-hedging, gamma-scalping, and volatility trading.

Delta-hedging involves buying or selling the underlying asset in proportion to the options positions held by the bank to maintain a neutral delta, which is the ratio of the change in the price of the option to the change in the price of the underlying asset. Gamma-scalping involves trading the underlying asset to maintain a neutral gamma, which is the rate of change of delta with respect to changes in the price of the underlying asset. Volatility trading involves buying or selling options in anticipation of changes in the implied volatility of the underlying asset, which can impact the value of the options.

The bank uses sophisticated risk management tools and techniques to monitor and manage its exposure to market risk, including Value-at-Risk (VaR) models, stress testing, and scenario analysis. Overall, the bank's options trading strategies have helped to manage market risk effectively and generate profits for the bank while minimizing exposure to potential losses.

- (a) What options trading strategies has XYZ Investment Bank developed to manage market risk, and how do they work? **07**
- (b) What risk management tools and techniques does the bank use to monitor and manage its exposure to market risk, and how effective are they? **07**

OR

- Q.5** (a) What challenges does the bank face in trading options, and how does it address these challenges? **07**
- (b) What lessons can other investment banks learn from XYZ Investment Bank's experience in trading options to manage market risk, and how can they develop effective options trading strategies to manage risk in their own operations? **07**
