Seat No.: ________ Enrolment No.___________

GUJARAT TECHNOLOGICAL UNIVERSITY
MBA – SEMESTER –III-EXAMINATION – WINTER-2022

Subject Code: 4539222 **Date:31/01/2023**
Subject Name: Financial Derivatives
Time:10:30 AM to 1:30 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.			Marks
Q.1		**Define the following:** (a) Stop loss order (b) In the money option (c) Open Interest (d) Arbitrage (e) Interest rate risk (f) Put buy position (g) Mark to market settlement	**14**
Q.2	**(a)**	"Derivative security is one whose value depends on the underlying asset on which the derivative contract is written" Discuss the statement and discuss.	**07**
	(b)	Discuss the types of traders and trading systems in Indian Derivative Market.	**07**
		OR	
	(b)	What limit order? Explain the difference between a market order and limit order.	**07**
Q.3	**(a)**	Forward contracts are used to hedge future uncertainty. With respect to commodities, when would a party enter into a long forward contract to buy and when would a party enter into a short forward contract to sell? Discuss.	**07**
	(b)	Suppose you buy a futures contract on BSE 30 Sensex futures at 16,500 on March 10. The initial margin is INR 8,500 and the maintenance margin is INR 5,000. At what futures price would you receive a margin call? Margin Multiplier is 10.	**07**
		OR	
Q.3	**(a)**	Define futures contract? Discuss major features of stock index future contracts.	**07**
	(b)	Assume that you enter into a long position in a January gold futures (100 grams) contract at INR 10,079 on October 15, 2007. On January 16, 2008, you decide to close your position when the futures price is INR11,269. One contract is for 10 grams of gold. What is your profit?	**07**

Q.4 (a) Under what circumstances would someone enter into swap contracts and why? Discuss. **07**

(b) A State Bank share is selling at INR 2,500 on January 1. It has a put option with maturity on March 31 with an exercise price of INR 2,700. This option is selling for INR 160. **07**

On February 14, the State Bank share price is INR 2,540. What is its intrinsic value? Is the option in-the-money? Would you exercise this option on February 14? Explain.

OR

Q.4 (a) Write a short note on Binomial options pricing model with its general assumptions **07**

(b) A stock is trading at INR 400, and it has a call and a put option with an exercise price of INR 420 and maturity of three months. The call premium is INR 20 and the put premium is INR 35. Another series of call and put options with an exercise price of INR 390 is available with the same maturity, and the price of a call is INR 36 and the price of a put is INR 28. The contract size is 400. If the stock price at maturity is INR440, **07**

What would be the gains and losses if you enter into a bullish money spread using calls?

Q.5 **CASE STUDY:**

Jet Airways, which commenced operations on May 5, 1993, has established its position as top player in India. The Jet Airways operates a fleet of 85 aircraft. Jet Airways operates 63 destinations both within and outside India. Its major cost is aviation fuel. In addition to fuel costs, other costs include landing costs at various airports and baggage handling costs, remuneration to staff.

The revenue for airlines comes mainly from passenger fares and cargo fares. The passengers comes from various countries and pay their fees in the currency of their own country.

Jet Airways finances the purchases of its airplanes by borrowing money through bond issue across the world markets. The interest payments will have to be paid in the currency in which the bond is issued.

(a) What are the various risks that Jet Airways is facing? Discuss. **07**

(b) How can currency risk be reduced by hedging through what types of derivative contracts? Discuss. **07**

OR

Q.5 (a) Is the decision of borrowing money by Jet Airways through bond issues in different parts of the world appropriate? What risk and uncertainties are involved into this? **07**

(b) How can fuel price risk be reduced by hedging through what types of derivative contracts? Discuss. **07**

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