

GUJARAT TECHNOLOGICAL UNIVERSITY**MBA - SEMESTER– IV EXAMINATION – WINTER 2019****Subject Code: 3549222****Date: 2-12-2019****Subject Name: Risk Management****Time: 2.30 PM to 5.30 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

Q. No.		Marks
Q.1	Define the following: (a) Good-till-day-order (b) Currency Swap (c) Open Interest (d) Arbitrage (e) Basis Risk (f) Delta (g) Mark to market settlement	14
Q.2	(a) What are derivatives? Explain major types of exchange traded derivative contracts.	07
	(b) “Derivatives are effective risk management tools in market” Explain this statement in light of use of derivatives.	07
OR		
	(b) What is stop loss order? Explain the difference between a market order and limit order.	07
Q.3	(a) What are forward contracts? How forwards contracts are used in commodity market to hedge risk? Explain.	07
	(b) Suppose that on April 1, 2008, you entered into a forward contract to buy 100,000 U.S. dollars at USD 1 = INR 42.2478, for delivery on July 1, 2008. The spot rate on April 1, 2008, is USD 1 = INR 42.1145. On July 1, 2008, the spot rate is USD 1 = INR 42.3245 and the forward rate for delivery (three months later) is USD 1 = INR 42.4223. Did you profit or lose on this transaction? What is the amount of profit or loss made?	07
OR		
Q.3	(a) Differentiate forward with future contracts in detail	07
	(b) Sun TV futures contract has a lot size of 1,000 shares. Assume that you take a short position on 10 Sun TV futures contracts at INR 271.25 at 11 a.m. on September 6. Assume that the initial margin is 10% of the initial contract value and the maintenance margin is 8% of the initial margin. The following table shows the settlement prices on the days of trading between September 6 and September 10. You close out your short position on September 10. Prepare a table showing the daily margin balances in your account.	07

Date	Settlement Values (INR)
September 6	271.25
September 7	273.80
September 8	276.90
September 9	272.50
September 10	272.10

- Q.4** (a) Define and differentiate call option with put option. **07**
 (b) On September 1, call and put options are available on the Bank Nifty index with expiry on September 30. The exercise price of these options is 7,480. On September 1, the Bank Nifty index is at 7,350. The call is priced at INR 100, and the put option is priced at INR 240. The contract multiplier for the Bank Nifty index is 50. If on September 30, the value of the Bank Nifty index is 7,450, what will be the gain or loss for the call option buyer? **07**

OR

- Q.4** (a) Write a short note on Black-Scholes options pricing model. **07**
 (b) On September 1, put options are selling at INR 140 on ICICI Bank shares with an exercise price of INR 800 and an exercise date of October 31. ICICI Bank shares are selling at INR 750 on September 1. The ICICI Bank option contract size is 350 shares. If the share price of ICICI Bank is INR 860 on October 31, what will be the gain or loss for the put option buyer? **07**

Q.5 CASE STUDY:

On January 1, you buy 10,000 shares of Jet Airways at INR 1,000, and you are concerned about a decrease in the price of Jet Airways shares. There is a March futures contract available. The risk-free rate is 6%, and Jet Airways is expected to pay a dividend of INR 90 on January 31. The contract in March matures on March 28.

- (a) Calculate the futures price of Jet Airways on January 1. **07**
 (b) On March 28, Jet Airways shares are selling at INR 976. If you hedge your portfolio with Jet Airways futures and sell your shares on March 28, what will be the realized value of your hedged portfolio? **07**

OR

- Q.5** (a) What is Butterfly spread? When would you enter into butterfly spread position? **07**
 (b) Jet Airways requires 2,000,000 barrels of aviation fuel every month. Since the price of aviation fuel depends on the price of crude oil, Jet Airways faces price risk. At the beginning of each month, Jet Airways goes for a long hedge in crude oil futures contract for 2,000,000 barrels, with expiry by the end of that month. **07**
 i. What is meant by a long hedge?
 ii. What is the purpose of the long hedge undertaken by Jet Airways?
