GUJARAT TECHNOLOGICAL UNIVERSITY
MBA SEMESTER- III - EXAMINATION-SUMMER-2024

Subject Code: 1539504   **Date: 29/04/2024**
Subject Name: Financial Derivatives
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.**

			Marks
Q.1		Define the following:	**14**
	(a)	Market Order	
	(b)	Spread	
	(c)	Call	
	(d)	Volume	
	(e)	Hedging	
	(f)	Out the money Option	
Q.2	(a)	Derivative security is one whose value depends on the underlying asset on which the derivative contract is written" Discuss.	**07**
	(b)	Discuss the trading , clearing & settlement process in the derivative segment.	**07**
		OR	
	(b)	Write a note on : Financial Derivatives regulatory framework.	**07**
Q.3	(a)	Commodity Forwards, Commodity Futures, Stock futures, Index futures & Interest rate forwards. Compare & Contrast.	**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 future (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)	Explain two ways in which a Bull spread can be created. Include the payoff table for the strategy.	**07**
	(b)	Using the following data, calculate the values of call and put option using black and Scholes model:	**07**

Current price of the share   Rs. 486
Exercise price   Rs. 500

Time to expiration	65 days'	
Standard deviation	0.54	
Continuously compounding rate of interest	9% p.a.	
Dividend expected	Nil	

OR

Q.4 **(a)** Explain various Greek letters in Options. **07**

(b) On January 1, Ramesh Jewellers estimates that they would **07** require 250Kgs of silver on March 1. The spot price of the silver on January 1 is Rs. 26,500 and futures are available on silver with a contract size of 30kgs. The price of February Futures with a contract size of 30Kgs. The price of February futures with a delivery on February 25 is Rs. 27,230 and the price of March Futures with delivery on March 28 is Rs. 28,320. The standard deviation of spot price changes is 940 and the standard deviation of futures price changes is also 940. The correlation of the price changes is 1. Calculate the result of hedging using appropriate futures which would be best suited according to his requirement of delivery time. How should Ramesh Jewellers hedge the price risk?

Q.5 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 come 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 **07** types of derivative contracts? Discuss.

OR

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

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

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