Seat No.: ________ Enrolment No.___________

GUJARAT TECHNOLOGICAL UNIVERSITY

MBA - SEMESTER–IV • EXAMINATION–SUMMER • 2015

Subject Code: 2840202 **Date: 13-05-2015**

Subject Name: Risk Management (RM)

Time: 10.30 am - 13.30 pm **Total Marks: 70**

Instructions:

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

Q.1 **(a)** What do you understand by risks and what are different ways of classifying and managing them? **07**

(b) Who are the principal users of the derivatives market? What are their motives and how do they reduce their risk? **07**

Q.2 **(a)** Explain the principles of put-call parity with suitable example. **07**

(b) Explain features/specifications of stock/index futures. Explain applications of index futures. **07**

OR

(b) Company X wishes to borrow U.S. Dollars at a fixed rate of interest. Company Y wishes to borrow Japanese yen at a fixed rate of interest. The amounts required by the two companies are roughly the same at the current exchange rate. The companies have been quoted the following interest rates, which have been adjusted for the impact of taxes: **07**

	Yen	Dollars
Company X	5.0 %	9.6 %
Company Y	6.5 %	10.0 %

Prepare a Currency Swap on the basis of above data.

Q.3 **(a)** What is derivative? Explain features of derivatives. Bring out the differences between the forward, future and options contracts in detail. **07**

(b) Consider a 6 month forward contract on 100 shares with a price of Rs 1000 each. The risk free rate of interest semiannually compounded is 9 % per annum. The share is expected to yield a dividend of Rs.6 in 3 months from now. Determine the value of the forward contract. **07**

OR

Q.3 **(a)** What is a commodity future? How farmers can hedge with the help of commodity futures? Illustrate with example. **07**

(b) Explain Black Scholes model (BSM) for option pricing. Explain assumptions of BSM. **07**

Q.4 **(a)** Explain two ways in which a Bull spread can be created. Include the payoff table for the strategy. **07**

(b) Discuss the meaning of Cost to carry and convenience Yield, and establish relation between Future Price, Spot Price, Cost of Carry and Convenience Yield. **07**

OR

Q.4 **(a)** Explain the Straddle and Strangles Combination Strategy. Also discuss the difference between them. **07**

Q.4	**(b)**	Differentiate between call and put options. What are the rights and obligations of the holders of long and short positions in them?	**07**
Q.5	**(a)**	A stock price is currently Rs.100.Over each of the next two three-month periods it is expected to go up by 10 % or down 10 %.The risk free interest rate is 8 % per annum with continuous compounding. What is the value of a six-month European call option with a strike price of Rs.100? Use risk neutral Valuation.	**07**
	(b)	"The gamma of a portfolio of options on an underlying asset is the rate of change of the portfolio's delta with respect to the price of underlying asset". Explain.	**07**
		OR	
Q.5	**(a)**	Consider a position consisting of a Rs. 3, 00 ,000 investment in asset A and a Rs. 5,00,000 investment in asset B. Assume that the daily volatilities of the assets are1.8 % and 1.2 %,respectively, and that the coefficient of correlation between their returns is 0.3. What is the 5-day 95 % value at risk for the portfolio?	**07**
	(b)	Discuss Initial margin, Maintenance margin and Margin call with the help of an example.	**07**

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