Seat No.: ________ Enrolment No.___________

GUJARAT TECHNOLOGICAL UNIVERSITY

MBA (INTEGRATED) – SEMESTER – 08 - EXAMINATION – SUMMER – 2017

Subject Code:4180507 **Date:01/06/2017**

Subject Name: Risk Management

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.**

Q.1 **(a)** What are derivatives? What are different underlying assets on which derivatives exist? **07**

(b) There are so many types of risk associated with the business – Elaborate the sentence with suitable examples. **07**

Q.2 **(a)** Sachin Tendulkar upon his retirement in three months' time would receive Rs.24 lakh as superannuation benefits, 50% of which he intends to invest in shares of SBI. The current market price of the SBI share is Rs.1200, with a beta of 1.05. The market is currently rising and is expected to remain upbeat. The current level of the market is 9200, while three months' futures contract on NIFTY sells for 9260, with a lot size of 20. Sachin Tendulkar worried that he would only be able to buy a much smaller number of shares when he actually gets the funds, compared to what he can hope to buy now. What strategy can you suggest to him? Examine your recommended strategy if the market rises by 10% in three months' time. **07**

(b) A call option with an exercise price of Rs.72 due to expire is selling at Rs. 2.25. The underlying share is selling in the market at Rs.76. How can an arbitrageur benefit in this scenario, assuming that contract settlement would be through physical delivery? **07**

OR

(b) A forward contract on 200 shares, currently trading at Rs.112 per share, is due in 45 days. If the annual risk-free rate of interest is 9%, calculate the value of the contract price. How would the value be changed if a dividend of Rs.4 per share is expected to be paid in 25 days before the due date? **07**

Q.3 **(a)** Discuss the various factors affecting the prices of options. **07**

(b) Explain Exotic Options. Mention various types of exotic options. **07**

OR

Q.3 **(a)** Rakesh Jhunjhunwala decides to create a Bull Spread by way of buying a put option on share "D B Reality" at an exercise price of Rs.90 for Rs.5 and sell/write an identical put option at a exercise price of Rs.100 for Rs.8. Find out how much profit/loss he will make in each of the following conditions. **07**

(i) On settlement day, the price of the underlying stock is Rs.85 per share.
(ii) On settlement day, the price of the underlying stock is Rs.96 per share.

(iii) On settlement day, the price of the underlying stock is Rs.110 per share.

(b) Explain Credit default swap with a suitable example. **07**

Q.4 **(a)** Explain the principles of put-call parity with suitable example. **07**

(b) "Option writer has limited profit and unlimited losses whereas option buyer has limited losses and unlimited profits." critically evaluate the statement. **07**

OR

Q.4 **(a)** Consider the following information with regard to a call option on the stock of Punjlloyd company, find the value of call and put option. **07**

Current price of the share	=	Rs.120
Exercise Price	=	Rs.115
Time to expiration	=	3 months
Standard deviation	=	0.6
Continuously compounded rate of interest	=	10% p.a.

(b) Explain the following terms: **07**

1) Cross Hedging
2) Open Interest and Volume
3) Calendar Spread
4) Perfect Hedge & Imperfect Hedge
5) OTC Market
6) Arbitrage
7) Rolling Hedge

Q.5 **(a)** What do you mean by Swap? Explain with suitable example how one can reduce their interest cost through interest rate swap. **07**

(b) Explain various Greek Letters. **07**

OR

Q.5 **(a)** The price of Suzlon shares at the NSE is Rs.15 as on 6th January 2015, while a three-month futures contract on Suzlon is being traded at Rs.22. If one can borrow at 12% and Suzlon is not paying any dividend in the next three months, is there an arbitrage opportunity available in the prices ruling in the spot market and futures market? If so, how can a profit be made? Assume the size of the futures contract to be 5000 shares. **07**

(b) Company A, which has borrowed from the market on floating rate basis at MIBOR+25 bps. It pays to its lenders at floating rate. Further, the company considers that interest rates would rise in future. In view of rising interest rates it would like to have liability that is fixed in nature rather than variable. Therefore, it decides to enter into a swap with the bank paying fixed 8.50% and receiving MIBOR+30 bps. What is the result of this swap? **07**

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