Seat No.: ________ Enrolment No.___________

GUJARAT TECHNOLOGICAL UNIVERSITY

MBA – SEMESTER 4 – EXAMINATION – WINTER 2018

Subject Code:2840202 **Date:07/12/2018**
Subject Name: Risk Management
Time:02:30pm To 05:30pm **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) Multi choice Questions: **6**

1. _________provide the right to purchase a given no. of shares at a specified price on or before specified time.
   - A. Puttable Bonds B. Warrants
   - C. Callable Bonds D. ESOP
2. IMM began under CME in which year?
   - A. 1710 B. 1919
   - C. 1972 D 1973
3. Identify the moneyness of option from below situation:
   Put option with strike price – 100 Rs. Market Price- 70 Rs.
   - A. ITM- 30 Rs. B. ATM
   - C. OTM- 30 Rs. D. Can’t be determined
4. Which is not the approach to Risk Management?
   - A. Selective Hedging B. Do Nothing
   - C. Cover Everything D. None of the above
5. The Full form of IMM is?
   - A. Indian Monetary Markets B. Interest rate Monetary Mechanisms
   - C. International Monetary Markets D. International Monetary Mechanisms
6. Which is not the assumption of Black Scholes Model?
   - A. American Exercise Style B. Presence of taxes
   - C. Both A and B D. Normally Distributed data

Q.1 (b) Explain the terms: **04**

1. VAR
2. Non- Deliverable Forwards
3. Credit Derivatives
4. Margin

Q.1 (c) Explain various types of orders in detail. **04**

Q.2 (a) Explain the role of SEBI in regulation of Derivative market **07**

(b) On September 1, Ashok Leyland shares are selling at Rs. 40.35. Ashok Leyland futures have a contract size of 9550. The September futures expiring on September 28 are priced at Rs. 41.25 and the October futures expiring on October 26 are priced at Rs. 41.54. The initial margin requirement is5 % of the contract value. On September 28, the shares of Ashok Leyland are selling at Rs. 41.83 **07**

1. If you buy one September contract, what is the value of the contract?
2. How much money do you need to post as the margin?
3. What would be the amount of cash settlement for September contract?

OR

(b) Following data are available for call option on a hypothetical stock, find Intrinsic Value and Time Value for both the options: **07**

	Option 1	Option 2
Exercise Price (Rs.)	80	85
Spot Price (Rs.)	83.5	83.5
Premium (Rs.)	6.75	2.5

Q.3 **(a)** Differentiate Interest Rate and Currency Swaps **07**

(b) Assume that stock is currently priced at Rs. 1200. There exist a call option with an exercise price of Rs. 1240 and an expiry of 90 days. At the end of 90 days , the stock price can either increase by 8% or decrease by 3% . If the risk free rate is 6%, calculate the price of the Call by using the binomial options pricing model. **07**

OR

Q.3 **(a)** Explain various stock indices of the world. **07**

(b) Apply Black scholes model to calculate call premium from the below data: **07**

- Current Market price= Rs 50
- Annual Volatility is 30%
- Risk free ROI= 10%
- Time =3 months
- Exercise price = Rs. 40

Q.4 **(a)** Explain the classification of options in detail. **07**

(b) Rupee / Yen Spot 0.4002 **07**

F_{12} 0.388874

Rf for Japan is 6%

Rf for India is 3%

Investment of 1 Lakhs Yen / P.a.

Where will you invest – India or Japan?

OR

Q.4 **(a)** Explain the Cost of Carry model with illustration of your own. **07**

(b) Assuming that spot price of cardamom is Rs. 714 per kg. If financing costs are 10% per annum with continuous compounding what should be the price of 3 month futures contract on cardamom? If warehousing and Insurance cost are placed at 1% per annum, what would be the fair value of the 3 – month futures contract? **07**

Q.5 Company A which has borrowed from the market on floating rate basis at MIBOR + 25 basis points has to pay to lenders at a floating rate . Further company considers that interest rate would rise in future in the view of rising interest rate it would like to have a liability i.e. fixed in nature rather than being variable, therefore it decided to enter into swap with a bank paying fixed 8.5% and receiving MIBOR + 30 basis point. Show the swap arrangement and interpret it. **14**

OR

Q.5 A Merchant , wants to buy 5 cashew contracts on march 5 at 5600Rs each. Initial Margin is 5.5% of contract value. Contract size is 50 cartons. The variation margin is Rs. 50, 000. Prepare Margin Account for merchant. **14**

March	Future Price (Rs.)
5	5600
6	5650
7	5675
8	5610
9	5570
12	5520
13	5400
14	5480
15	5570
16	5650

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