

**GUJARAT TECHNOLOGICAL UNIVERSITY****M.B.A. - SEMESTER – V (Evening) • EXAMINATION – WINTER 2012****Subject code: 840203****Date: 31-12-2012****Subject Name: Risk Management****Time: 10:30 am – 01:30 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)** Discuss each of the following type of traders in a derivatives market : hedgers, speculators and arbitrageurs. **07**
- (b)** What are derivatives? Why are futures and options termed as derivatives? **07**
- Q.2 (a)** Explain major indices in the Indian capital market. **07**
- (b)** Explain meaning of risk and types of business risk. **OR 07**
- (b)** Explain meaning of forward contract and features of forward contract. **07**
- Q.3 (a)** Explain options and types of options **07**
- (b)** Discusses spreads and combinations of spread. **07**
- OR**
- Q.3 (a)** Share X is currently available at Rs. 100. The risk free rate of interest is 8% per annum compounded continuously. What should be the ideal contract price of one-month futures contract? **07**
- (b)** Consider the following data about calls on share X : **07**
- | Option | Exercise price rs. | Stock price rs. | Call option price |
|--------|--------------------|-----------------|-------------------|
| 1      | 70                 | 72.50           | 7.75              |
| 2      | 75                 | 72.50           | 2.50              |
- Classify each of the above options and show their intrinsic values and time values.
- Q.4 (a)** B bought a put option contract of 1200 shares of 's' with exercise price of rs. 266.25 and paid a premium of rs. 2.30 per share. Three days later he decided to exercise the contract when the market price of 's' was rs. 260.55 per share. Calculate the profit/loss of B. **07**
- (b)** Calculates the total premium required to buy put option contracts for hedging a portfolio valued at rs. 20,28,720 and having a beta value of 0.92, using the following data : **07**
- |                       |                                |
|-----------------------|--------------------------------|
| Exercise value = 1240 | Price of an option = rs. 48.40 |
| Lot size = 100        | Put delta = -0.428             |
- OR**
- Q.4 (a)** Explain black and scholes model and also state assumptions underlying of black and scholes model. **07**
- (b)** Write a note about forward rate agreements. **07**
- Q.5 (a)** Explain interest rate swap and currency swap. **07**
- (b)** Write about functions, misuses and criticism of derivatives. **07**
- OR**
- Q.5 (a)** A mutual fund is holding bonds worth rs.5 crore. YTM's in next 3 months are expected to rise. The portfolio of bonds has duration of 6.63 years. Futures contract on notional 10-year, 7% semi-annual GoI security is trading at rs.104.34. The CTD GoI security is expected to have duration of 7.72 years. How many contracts should the mutual fund trade to hedge against the risk of rising yields? Assume that the YTM's of the CTD bond and the portfolio are same. **07**
- (b)** Write a note on put call parity. **07**

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