

GUJARAT TECHNOLOGICAL UNIVERSITY

MBA - SEMESTER-IV • EXAMINATION-SUMMER • 2015

Subject Code: 840203

Date: 18-05-2015

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) Explain carefully the difference between heading, speculation and arbitrage **07**
(b) Discuss assumptions of the Black-Scholes Model **07**
- Q.2** (a)(i) Consider a four-month forward contract to buy a zero-coupon bond that will mature one year from today. The current price of the bond is Rs. 930. Assume that risk free rate of interest continuously compounded is 6% p.a. Calculate the delivery price of the contract if negotiated today? **3.5**
(a)(ii) Consider a ten month forward contract on a stock with a price of Rs. 50. Assume risk free rate of interest continuously compounded is 8% p.a. also assume that dividend of Rs. 0.75 per share are expected after three months, six months and nine months. Calculate the forward price of the share? **3.5**
(b) Distinguish Between forward and future contract **07**
- OR**
- (b) What are the types of margins levied in the cash market segment? **07**
- Q.3** (a) List and explain the factors affecting the stock option price. **07**
(b) Briefly explain the importance of put-call parity in options pricing. **07**
- OR**
- Q.3** (a) Explain two ways in which a bear spread can be created. **07**
(b) Define four different types of derivatives **07**
- Q.4** (a) What is implied volatility! How can it be calculated? **07**
(b) Explain in-the-money, at-the-money and out-of the money call and put. **07**
- OR**
- Q.4** (a) Gold futures contract size 100 ounces, Current futures price is \$500 per ounce. Assume initial margin is \$3,000 per contract and maintenance margin is \$2,000 per contract. Next eight days futures prices are 494, 494, 488, 490, 491, 474, 475, and 474. Calculate margins requirements and marking to market. **07**
(b) (i) A stock is prevailing at Rs. 80.00. A call with strike of Rs. 85 and maturity after 2 months is selling for Rs. 2.00. Find out the price of the put with exercise price of Rs. 85 and expiry of 2 months assuming the risk-free interest rate of 6% and no dividend on the stock for next two months. **3.5**
(ii) A stock is selling for Rs. 500. If the risk-free rate of interest is 10% p.a. continuously compounded, then at what minimum price a call with strike price of Rs. 500 maturing 2 months later would sell for Rs. **3.5**
- Q.5** (a) Describe the contract for interest rate futures and its features introduced in India. **07**
(b) Explain the terms: (a) Ask rate (b) Bid rate (c) Interest rate parity (d) Basic swap (e)Counterparty risk (f) Equity swap (g) Interest rate Swap **07**
- OR**
- Q.5** (a) Explain the differences of forward/futures and options **07**
(b) What are exotic options and why are they popular? **07**
