Subject	DERIVATIVES AND RISK MANAGEMENT		
Roll No.		Marks	60 Marks
Total No. of Questions		Duration	3 Hours
Total No. of printed pages	2	Date	29.10.2018

Q1) 20 Marks (Compulsory)

a) A farmer has grown rice on his field and is anticipating the crop to be harvested in three months' time. The current spot price of rice is 20 Rs per kg. The total quantity of rice that the farmer is expecting to extract out of the fields is 100000 kg. The farmer wants to hedge the risk against a fall in the price of rice and book profits. So the farmer decides to get into the future contract. Formulate the strategy by entering into a future contract.(10 marks)

b) Global market is consolidating after hitting the oversold zones and a similar trend is observed in nifty. The index could test the area of 10800 to 10850. Even bank nifty looks stronger than the nifty. Explain option strategy in the current scenario. (5 marks)

c) An investor got into a long futures contract on a commodity with future price of Rs. 6 per kg and the contract is for 5000 kg. The initial margin is 10% and the maintenance margin is 5%.Analyse the case if the closing prices are as given below

Day	1	2	3	4	5	6	7	8	9	10
Closing Price	6.00	6.10	6.05	6.26	6.10	6.75	6.92	6.56	6.78	6.68

(5marks)

Attempt Any FOUR from the Remaining SIX Questions

Q2) *Any two from (a) or (b) or (c) ——————— (5x2) = 10 Marks*

a) Evaluate the arbitrage opportunity in put call parity equation for option contract?

b) What does it mean that the delta of an option is 0.7? How can a short position in 1000 option be made delta neutral when the delta of each option is 0.7?

c) An investor sells a call European call option with strike price K and maturity T and buys a put with same strike price and maturity. Describe the investors' position.

Q3) *Any two from (a) or (b) or (c) ——————— (5x2) = 10 Marks*

a) Explain the basic features of strangle and straddle and compare with example .

b) Hedging is to provide insurance against adverse fluctuations in the price movements. Do you agree? Discuss the statement with the help of suitable examples.

c) Explain Binomial option pricing models with examples. Examine the variables needed in this model to calculate the option price.

Q4) *Any two from (a) or (b) or (c) ——————— (5x2) = 10 Marks*

a) Discuss the procedure for calculating the value of call option as per Black Scholes model.

b) Illustrate with the help of an example how a non direction strategy of an option can be exercised?

c) Classify the various settlement mechanism used in the stock market with example ?

Q5) *Any two from (a) or (b) or (c) ——————— (5x2) = 10 Marks*

a) Using a diagrammatic representation explain the trading cycle in the stock market?

b) Distinguish between the volatility smile and term structure of volatility?
c) Classify the various option Greeks and how they can be used in formulation of option strategies?

Q6) *Any two from (a) or (b) or (c)* ——————— *(5x2) = 10 Marks.*
a) Classify the various method of calculation of historical volatility.
b) Discuss the main characteristics of currency futures.
c) Compare and contrast the covered call and protective put option strategy?

Q7) *Any two from (a) or (b) or (c)* ——————— *(5x2) = 10 Marks*
a) Suppose that you write a put contract with a strike price of Rs. 40 and an expiration date in 3 months. The current stock price is Rs. 41 and the contract is on 200 shares. What have you committed yourself to? Determine gain or loss?
b) Compare the situation in which back testing and stress testing is used with examples ?
c) Examine thetaxation aspect of derivatives trade?