Roll No. ____________________

(Do not write anything on question paper except Roll No.)
[This paper consists of TWO Pages]

Jagan Institute of Management Studies

End-Term Examination, September, 2016
Trimester IV – PGDM 2015-17

Financial Derivatives
ET_PG_FD_0110

Time: 3 Hrs. *M. Marks: 70*

INSTRUCTIONS: Attempt all questions. All questions carry equal marks.

Q 1 Comment on *any* ***TWO*** of the following statements:

a) Arbitrage is an imperfect hedge with a guaranteed profit built into it.
b) Exchange traded derivatives are liquid and have low transaction cost.
c) American call options, which are deep in money, must be exercised on or before the maturity date.
d) The intrinsic value of the option is greater than or equal to zero. **14**

Q 2 Distinguish between futures and forward contracts. Outline their uses in respective situations for hedging exposures on financial assets.

OR

Explain the pay-off of the bear spread, butterfly spread and strangle strategy with the help of illustrative diagrams. **14**

Q 3 A European call option on NIFTY with exercise price of 6135 has remaining maturity of two months. The current value of NIFTY is 6002, the risk-free rate is 6% p.a., and the volatility of the index is 12% p.a. The annualized dividend yield on NIFTY during the life of the option is 2%. You are required to calculate the value of the European call option on NIFTY.

OR

State the various types of option Greeks illustrating their uses. **14**

Q 4 The stock of a company is currently quoted in the market at Rs.250. The price of the stock is expected to go up or down by 15% in next one year and by 10% in the second year. The risk -free interest rate in the economy is 7%. Using two-step Binomial Model, find out the price of a 2-year American put option on the company's stock with strike price of Rs.275.

OR

Elucidate the concept of swaps giving examples. Swaps are also called as series of Forward rate Agreements? Why? **14**

Q 5 **a)** Compute the price of a 3-month futures contract on S&P CNX Nifty, if the index provides a dividend yield of 1.25% per annum, current value of Nifty is 4150, and the continuously compounding risk-free interest rate is 8.75% per annum.

b) Distinguish between backwardation and contango. What implications they carry for future spot market?

OR

The Mesa Rosa Tortilla Company is a large producer of tortilla chips whose main ingredient is corn. The demand for Mesa Rosa corn chips is seasonal with the largest demand occurring mid- November through the end of December. Production schedules require acquisition of 25 thousand bushels of corn in late September to meet the holiday season demand. Mesa Rosa management is concerned about the possibility that a rise in the price of corn between now and September could hurt profitability. Corn must be acquired at a price of $2.25 per bushel or less to ensure profitability. The September corn futures contract (5,000-bushel quantity) is selling for $2.11 per bushel. What can Mesa Rosa do to ensure its profitability? What risks does Mesa Rosa face in acquiring corn by its taking delivery of the futures contract? How should Mesa Rosa acquire the corn it needs? If the September spot price turns out to be $3.15 per bushel, show Mesa Rosa's transactions in the corn cash and futures markets and calculate its net wealth change. **14**

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