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, December 2017 – January 2018

Trimester V – PGDM 2016-18

Financial Derivatives

ET_PG_FD_0301

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

INSTRUCTIONS: Attempt any SIX questions including Q1 which is compulsory.

Q 1 **a)** Answer the followings in *not more than 30 words*.

- i) Theta and Vega in Option Greeks
- ii) Out of the money (OTM) call and put options.
- iii) Backwardation in futures.
- iv) European Option.
- v) Basis Swap.
- vi) Initial and Maintenance margins.
- vii) Intrinsic value and Time value.
- viii) Non-Deliverable Forwards **16**

b) A call option at a strike of Rs.176 is selling at a premium of Rs.18. At what price will it break even for the buyer of the option? Show it graphically. **2**

c) Shitij is bearish about ABC Ltd.and sells ten one-month ABC Ltd. futures contracts at Rs.3,96,000. On the last Thursday of the month, ABC Ltd. closes at Rs.410. What profit or loss does he make? (Assume one lot = 100). **2**

Q 2 The following data is given

Current Stock Price = Rs 90, Strike price = Rs 80, Maturity= 3 Months,

Risk free rate of return= 8% and Volatility of return = 25%

a) Find out the value of the call option using Black and Scholes Model. **6**

b) Find out the intrinsic value and time value of the call option. **2**

c) Calculate value of put option using put call parity. **2**

Q 3 Option premium depends on a number of factors. Explain the effect of each on call and put option premium. **10**

Q 4 **a)** The risk free rate of interest is 7% per annum with continuously compounding and the dividend yield on the stock index is 3.2% per annum. The current value is of the index 5000. What is the six month futures value? **5**

b) The interest rates in Switzerland and US are 3% p.a. and 5% p.a. respectively, with continuous compounding. The spot rate of the Swiss Franc is \$ 0.6500. The futures price is \$0.6600 for 2 months. What arbitrage opportunity does this create? **5**

Q 5 **a)** Differentiate between forwards and futures. Explain how future trading takes cares of default risk. **5**

b) What is a bull spread strategy? Draw profit/loss profiles for bull spread using vector position method. Also show the resultant payoff value (table). When is this strategy used? **5**

Q 6 Explain the mechanics of trading, clearing and settlement in futures market in India. **10**

Q 7 "Since 2003, when commodity futures trading were permitted, commodity futures market in India has experienced an unprecedented boom in terms of the number of modern exchanges, number of commodities allowed for derivatives trading as well as the value of futures trading in commodities." In the light of the above statement, discuss the reforms, growth and impediments of commodity futures market in India. **10**

Q 8 It is usually said that the exotic financial instruments like Credit Default Swaps (CDS) also have contributed for the crisis in addition to low-interest Federal Reserve's monetary policy and the existence of US government guarantees on behalf of government-sponsored enterprises such as Fannie Mae and Freddie Mac. Describe how Credit Default Swaps (CDS) contributed to crisis and led to world financial markets contagion in 2008. **10**

Q 9 Zeny and Peny are in the same line of business and compete with each other. They both are in need of funds and are exploring the markets for raising money. Zeny wants loan at floating while Peny wants loan at fixed rate. The survey in the lending market has offered them the following rates:

Company	**Fixed Rate**	**Floating Rate**
Zeny	9%	MIBOR+30bp
Peny	10.5%	MIBOR+70bp

Answer the following questions

a) Can Zeny and Peny benefit from the situation? If yes, how and by how much they can be benefitted? **3**

b) What would be the cost of funds for each if the bank is involved as intermediary and wants 5bp from each of the firm? Assume that each firm shares remaining profit equally. **7**

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