K J Somaiya Institute of Management Studies and Research

Batch: PGDM IB - Trimester IV - Batch 2018-20

Subject: Derivatives and International Commodity Markets

Date : 13th Sept, 2019 Marks : 50 Time: 3 hrs

Note: Q1 is Compulsory; Attempt any three from the rest.

1. Write short notes on the following (Any four) Marks 20

a) Factor affecting option pricing
b) Put- call paity
c) Difference between Future and option
d) Bear's Spread strategy
e) Selling call option vs buying Put option with Pay off diagram

2. Answer both the questions (5x2=10)
a) What are different types of bullish strategy? Explain any two bullish strategies with example and payoff diagram.
b) The Spot price of ABC ltd is Rs 50 per share. Call options with exercise price Rs 54 and 60 for two months to expiry are being traded at a premium of Rs5 and Rs 2 per share respectively. Using these information a bull's spread is created. Show the payoff graph when moves in the range of Rs52 and Rs 66 with a tick size of Rs 2.

4. Answer both the questions (5x2=10)
a) When investors buy a call options? Draw the payoff diagram of buying a call option.

b) On 4th June 2011, Raman buys five lots of "CE, Tata Motors (250), and Rs 1090, July "option through his broker at a premium of Rs 13 per share. The spot price of Tata Motors on 4th June was Rs 1059 .Subsequently following prices were observed by him.

Date	Closing spot price of Tata Motors	Premium
08/06/2011	1070	17
12/06/2011	1085	24
16/06/2011	1100	35
28/06/2011	1050	11
06/07/2011	1120	56
16/07/2011	1165	85
22/07/2011	1200	118
28/07/2011	1229	139

If Raman square up one lot of this option on 12th June and further one lot is squared up on 28th June and the rest of the lots are exercised by him on the expiry, i.e 28th July2011, and then calculate pay off for Raman.

5. A crude oil producer takes a long put option at a strike price of USD 89 and a short call position at USD 94 on a nominal volume of 10000 barrel for month. The Long put premium is equal to short call premium. The spot price is WTI crude oil spot price prevailing on the last day of month. Find out the pay off as well as plot a graph from this collar strategy for Spot price range of USD 80 to USD 105. Marks 10

6. Current Market price of "jeera" is Rs 100 per kg and an option with exercise price of Rs 120 for a call option with twelve month to expiration is to be valued. It is expected that the spot price of "Jeera" at the end of twelve months from now might increase by 60% of the current spot price or it might decline by 20% of the current spot price. If the risk free rate of interest is 10% p.a. Find out price of call option, also find price of Put option using Put Call Parity.

Marks 10