Derivatives & Risk Management

DRM 03

MMS-III (Finance).

23/10/2012

MMS (Fin)

Roll No.

Total No. of Printed Pages: 1

Total No. of Questions: 4

Maximum Marks: 30

Duration (hrs.): 1 hr. 30 min

Section – A

Note: Attempt any 3 questions, each question carries 10 marks

Section A + Section B to be solved on SEPARATE Answer Book.

Q.1 a) Why does an investor into straddle and what is his view on the asset price before doing so?

b) Draw the actual payoff for the buyer and seller and calculate the payoff profile of straddle buyer and seller?

2. Calculation of margin for a long position

Futures price- Rs. 100
Initial Margin- Rs.5
Maintenance Margin requirement Rs. 3
No. of contracts 10

Day	Beginning Balance (Margin)	Funds Deposited	Settlement Price	Futures Price Change	Gain/ Loss	Ending Balance (margin)
0			100			
1			98			
2			99			
3			101.50			
4			96.50			
5			93			
6			102			

3. Explain speculating, hedging and arbitraging with the help of live examples and mentioned briefly their mechanism?

4. Explain the Terminology

a) Swaptions
b) Bullion Market
c) Leaps
d) Mark to Market Margin
e) Out of the Money option

Section - B

Roll No.

Total No. of Printed Pages: 1

Total No. of Questions: 05

Maximum Marks: 30

Duration (hrs.): 1.5

Section, if any: B

Note: All Questions are compulsory.

1. A stock is currently priced at 40. Over each of the next two 3-month periods it is expected to go up by 6% or go down by 5%. The risk free rate is 8% with continuous compounding. Calculate the value of a 6 month European and American put option with a strike price of 41. The 3 month and 6 month compounding factors are 1.0202 and 1.0408 respectively. (10m)

2. Explain in brief

   a) Delta b) Theta c) Gamma (6m)

3. What is the difference between historical and implied volatility. (2m)

4. An investor makes the following transactions on a stock
   Buys one call for a premium of 3 and put with a premium of 2 both with strike prices of 45

   Calculate the maximum profit, maximum loss and breakeven price.
   Calculate the profit when price is 0, 35, 40, 45, 50, 55. Draw the payoff diagram.(6m)

5. An investor makes the following transactions on a stock
   Buys one put with a premium of 2 and buys the stock for 35.

   Calculate the maximum profit, maximum loss and breakeven price.
   Calculate the profit when price is 0, 25, 30, 35, 40.Draw the payoff diagram.(6m)