

15/11/2019

Friday. Time : 10.30 to 1.00.

75

Duration : 2.5 Hours

Marks : 75

- Note: 1) All questions are compulsory.
2. Figures to the right indicate marks.

Q1. A. Match the following: (Any 8)

8M

Column A		Column B	
1	Backwardation	a	Negative Cost
2	LEAPS	b	Spot Price greater than future price
3	Interest and dividend	c	Options with a maturity upto 1 year
4	Underpriced Futures	d	Rs. 0.05
5	Future Payoffs	e	Illiquid
6	Forwards	f	Measures sensitiveness to volatility of underlying
7	Price Steps	g	Reverse Cash & Carry Arbitrage
8	Option Seller	h	Similar underlying not available
9	Vega	i	Profit Limited to Premium
10	Cross hedge	j	Linear

B. State whether True or False: (Any 7)

7M

- There are three derivatives contract running in the F&O segment at any given time.
- An American Option can be exercised on any day upto expiry.
- Intrinsic Value of an Option is either positive or zero.
- Options have non linear payoffs.
- NSCCL has empanelled 13 clearing banks for handling the clearing function.
- A perfect hedge is when loss from one position is offset by gains from the other position.
- In a calendar spread, all options have different expiration dates but same strike prices.
- Future contracts are marked to market on a daily basis.
- A long Butterfly is a neutral strategy for a range bound market.
- The Greek alphabet theta measures the time decay of an option.

Q2. A. What derivatives? Explain its characteristics.

8M

B. Explain the different types of derivatives.

7M

OR

Q2. C. Who are the different participants in the derivatives market?

8M

D. What are the requirements of a successful derivatives market?

7M

Q3. A. An investor undertook the following positions in the F&O segment

On 1st October 2019 expiring on 27th December 2019

8M

- Long 7 ICICI Bank Futures at Rs. 750 per share. Lot size = 1000 shares
 - Short 8 Infosys Ltd. Futures at Rs. 796 per share. Lot size = 2500 shares
- On 29th December 2019 (expiry) ICICI Bank closed at Rs. 791 while Infosys ltd Closed at Rs. 600. Calculate the overall gain/loss from the given positions.

B. Explain the Reverse Cash and Carry Arbitrage strategy in futures.

7M

OR

Q3. C. Mr. A has a long position in a two month November futures contract of Reliance Industries Ltd with a lot size of 1500 shares trading at Rs. 1210/-
Show the payoff with a diagram for the following range of spot prices in September:

- a) Rs. 1100
 - b) Rs. 1210
 - c) Rs. 1310
- 8M
- D. Explain the features of futures. 7M

Q4. A. Mr. Jamie Lannister buys a 2 month December 2019 put option on S&P CNX NIFTY 50 at an exercise price of 11,590. After 2 months S&P CNX NIFTY closes at 11,300. He had bought 5 such contracts each with a lot size of 75. Calculate his payoff and show the payoff diagram for the same. 8M

B. Today, on 15th November 2019, Bata India, is trading at Rs. 1650. Miss Arya is contemplating buying an option expiring on 27th December 2018. From the data given below, calculate Intrinsic Value, Time Value and Moneyness of the following options. 7M

Sr. No.	Call Strike Price	Call Premium	Put Strike	Put Premium
1	1590	175	1730	185
2	1650	150	1650	160
3	1720	20	1535	25

OR

Q4. C. A share of Bajaj Auto is trading at Rs. 700. The analysts expect that there will either be a 25% upswing or 20% downswing in two future periods. The Exercise Price of a call option is Rs. 790. The risk free interest rate is 8%. Find the price of this option using Multi Period Binomial Model. 8M

D. Explain the various factors affecting option premium. 7M

Q5. A. Explain the following terms: 8M

- a. SPAN
- b. Unsystematic Risk
- c. Clearing Members
- d. Final exercise settlement of options

B. Explain the settlement of Futures. 7M

OR

Q5. Write Short Notes on: (Any three) 15M

1. Cost of Carry Model in Futures Pricing
2. Short Straddle Option Strategy
3. Option Spreads
4. Options Greeks - Delta and Gamma
5. Features of Forwards
