

90266

M-6373

Sl. No.

Total No. of Pages : 4

IV Semester M.B.A. Examination, May - 2019

(Scheme : 2011)

BUSINESS ADMINISTRATION

Derivatives (Elective V - FM)

Time : 3 Hours

Max. Marks : 75

SECTION - A

Answer all questions. Each question carries six marks.

[5 × 6 = 30]

1. Brief the various derivative instruments.
2. A Pharma Index consists of 4 stocks. The current value of the index is 3070 points. The following additional information is available -

Company Name	Market Price (Rs.)	Market Capitalization (Rs. in crores)
A	350	112
B	490	240
C	1655	365
D	2135	1075

Company C is expected to pay a dividend of Rs. 200/- per share in the next 40 days time. Considering the interest rate to be 12.00% PACC, determine the fair value of a 3 months index futures contract.

3. Using the following data, find out the IV & TV -

S_0	X	AC	AP
285	290	1.85	7.35
1026	1000	24.00	8.00
425	425	3.00	2.00
378	400	33.00	20.85

Also highlight what you would do in each of the above cases if you were the holder of the option contract

P.T.O.

Any amount in excess to the IM was immediately withdrawn. The closing price of the stock from the date of purchase to the date of sale is as follows -

Day	Closing Price (Rs.)	Day	Closing Price (Rs.)	Day	Closing Price (Rs.)
1	1258	4	1242	7	1225
2	1245	5	1209	8	1269
3	1218	6	1198	9	1305

9. Construct a Straddle using NIFTY Options when $S_0 = \text{Rs.}891/-$ and using the following data -

Strike Price	Call Premium (Rs.)	Put Premium (Rs.)
890	80	82
895	40	55
900	20	103
905	12	157
910	10	209

Prepare and draw the payoff profile considering the expiry prices to be Rs.870/-, Rs.880/-, Rs.890/-, Rs.900/-, Rs.910/-, Rs.920/-, and Rs.930/-. What would be the Upper BEP, Lower BEP, Maximum Profit and Maximum Loss from the strategy?

10. Wipro is currently trading at Rs. 340/- and the 91 Days T-Bill rate is 12.00% PACC. Using Binomial Options Pricing Model calculate the fair value of a call premium and a put premium for a contract with a strike price of Rs. 370/- expiring in the next 3 months. The probability of the spot price moving up is to Rs. 391/- or falling to Rs. 306/-. Suppose if the call option premium is currently trading at Rs. 8/- instead of the equilibrium price, is there an arbitrage opportunity? What would be the Hedge Ratio applicable for arbitrage under Binomial Model?

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SECTION - C

11. **Case Study (compulsory)**

[1 × 15 = 15]

The current market price of SBIN is Rs. 305/-, an investor is interested in purchasing a Rs. 300/- strike price Call Option with a time to expiry of 6 months. The variance of SBIN is 45% and the risk free interest rate is 10.00% p.a.

- a. He seeks your help in computing the call premium according to the Black & Scholes model.
- b. What are Option Greeks? Compute the Option Greeks and explain the impact of each Greek.



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