4M6405

Roll No. : ____________________

Total Printed Pages : 2

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M.B.A. (Sem. IV) (Main/Back) Examination, May/June - 2010
M-405 Financial Derivatives

Time : 3 Hours] [Total Marks : 70
[Min. Passing Marks : 28

*The question paper is divided into two sections. There are sections A and B. Section A contains 6 questions out of which the candidate is required to attempt any 4 questions. Section B contains short case study/application based 1 question which is **compulsory. All questions are carrying equal marks.***

Use of following supporting material is permitted during examination.
(Mentioned in form No. 205)

1. *Normal Distribution Table (Area under standard N(d), for values of d ≤)*
2. *Future value Table and Present Value Table.*

SECTION - A

1 (i) "Speculation in futures markets is pure gambling. It is not in the public interest to allow speculators to trade on a futures exchange." Discuss this view point.
(ii) Explain the difference between a market-if-touched order and a stop order.
(iii) Explain how margins protect investors against the possibility of default.

6+4+4

2 (i) What are the most important aspects of the design of a new futures contract?
(ii) Suppose that you enter into a 6 month forward contract on a non dividend paying stock when the stock price is \$30 and the risk free interest rate (with continuous compounding) is 12% per annum. What is the forward price?
(iii) A stock index currently stands at 350. The risk free interest rate 8% per annum (with continuous compounding) and the dividend yield on the index is 4% per annum. What should the futures price for a 4 month contract be?

4+5+5

3 (i) Explain carefully the difference between writing a put option and buying a call option.
(ii) Explain how you would value a swap that is the exchange of a floating rate in one currency for a fixed rate in another currency.
(iii) Explain and illustrate a one step binomial approach to valuing a European option. Give one example.

5+4+5

4 Short notes :
(i) Interest Rate Swaps (ii) Delta
(iii) Exotic Options (iv) Put Call Parity.

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5 (i) Difference between
(a) bid rate and ask rate and
(b) spot rates and forward rates.
(ii) How are currency futures and forward priced?

7+7

6 Five years back, fasteners Ltd. had raised loans through 10 year debenture issue worth 100 crore with fixed interest of 12%. After the issue the interest rates remained constant for sometime. But now they have been at around 10% and are likely to come down further. Fasteners Ltd. wish to contain the cost of funding for the remaining 5 years. A bank has offered a swap rate of 9.50%,- 9.60% against MIBOR for a period of 5 years. Depict the swap arrangement and find out the new nature of liabilities the firm can have.

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SECTION - B

Case Study

7 Application of Black Scholes Model : Call premium given the following information about share :
Current Market Price .... Rs. 50
Annual Volatility 30%
Risk free interest rate 10%

Find out the value of 3-month call option with exercise price of (a) Rs. 40, (b) Rs. 50 and (c) Rs. 60. What are the intrinsic value and the time value of the calls?

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