SECTION—C

5. From the following data, calculate the values of call and put options using Black and Scholes model :

Current price of the share	=	₹ 486
Exercise price	=	₹ 500
Time to expiration	=	65 days
Standard deviation	=	0.54
Continuously compounded rate of interest	=	9% p.a.
Dividend expected	=	Nil

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M.B.A. (Semester-IV) Examination

FINANCIAL DERIVATIVES

Paper—MBA/4103/CGF

Time—Three Hours] [Maximum Marks—70

Note :— (1) Attempt **All** questions.

(2) Figures to right indicate full marks.

(3) Use of scientific calculator is allowed.

SECTION—A

1. (a) Discuss the important economic functions performed by the derivative markets. Is a derivatives market a complete market ? 14

OR

(b) "Last decade has witnessed a tremendous growth of derivatives market worldwide." Discuss the statement in light of history of derivatives. 14

SECTION—B

2. (a) Discuss the pricing mechanism of forward contract. 7

(b) A forward contract on 200 shares, currently trading at ₹ 112 per share, is due in 45 days. If the annual risk-free rate of interest is 9%, calculate the value of the contract price.

How would the value be changed if dividend of ₹ 4 per share is expected to be paid in 25 days before the due date ? 7

OR

(c) "Forward contracts are zero-sum games." Explain. Also give the difference between the delivery price and forward price. 7

(d) On 15 March 2013, the price of SBI share in cash market is ₹ 350 per share, X enter into an forward agreement with Y to buy 1500 shares of SBI at agreed price of ₹ 370 per share on April 15, 2013. Find out the profit profile of X, if price of SBI on April 15, 2013 turn to be ₹ 450 in spot market. 7

3. (a) Discuss the various characteristic features of future contracts. What is the role of clearing corporations in trading of such contracts ? 7

(b) A speculator predicts a price increase in the gold futures market from current futures price of ₹ 5,000 per 10 gram. The market lot is 100 gram. Speculator buys one lot of futures gold of ₹ (5,000 × 10) = ₹ 50,000. Assume that margin is 10%. What amount of margin, is required, if prices of gold increase by 20% ? What will be profit to speculator ? 7

OR

(c) "Hedging is the basic function of future market." Discuss the statement in the light of uses of futures contract. 7

(d) A share is currently available at ₹ 100. The risk free rate of interest is 9% p.a. compounded quarterly. What should be the fair price of a 45-days futures contract ? 7

4. (a) What is swap contract ? What are various motivations underlying swap contract ? 7

(b) Company X and Y both wish to borrow ₹ 10 crore for 5 years. Company Y wants to arrange a floating rate loan. The rate of interest is six-month LIBOR. Company X wants to arrange a fix rate loan. They have been offered the following terms :

	Fixed Rate	Floating Rate
Company X	10.0%	Six month LIBOR + 0.3%
Company Y	11.2%	Six month LIBOR + 1.0%

Show the transaction without intermediary and with intermediary. 7

OR

(c) What is Interest Rate Swap Contract ? Discuss the various features of an interest rate swaps. 7

(d) "Swaps are private negotiations between the two parties to exchange their future cash flow and liability." Explain the statement in the light of role of financial intermediary in swap market. 7