M.B.A. (C.B.C.S. & Old Pattern) Sem-III

MBA236B / PCB3EB2 - Risk Management and Derivatives

P. Pages : 2 **GUG/S/19/10708**

Time : Three Hours Max. Marks : 70

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Notes : 1. Attempt **any five** questions.
2. All questions carry equal marks.

1. What is stock index? Explain economic significance of index movements. Discuss index construction issues in details. **14**

2. Explain in brief the history of financial derivative market. Discuss it's participants and economic functions. **14**

3. Briefly discuss the option pricing model developed by Binomial. **14**

4. Briefly discuss about futures pricing – cost of carry model. **14**

5. Explain various types of foreign exchange risk. Discuss risk management techniques in detail. **14**

6. Discuss the concept of swaps. Explain the characteristics and types of swaps. **14**

7. Discuss the evolution and global scenario of credit derivatives. **14**

8. Write short notes on **any two**. **14**

a) Free float market capitalization.

b) Instruments of futures and options market.

c) Trading strategies using futures.

d) Risk management practices in India.

9. Maruti's share price is at Present Rs.120. After 6-months, its price will be either Rs.150 with probability of 0.8 or Rs. 110 with probability of 0.20. An European call option exists with an exercise price of Rs.130 based on these facts, answer the following: **14**

i) As a call option writer, if you intend to create a perfectly hedged position, what will you do?

ii) What will be the value of your hedged position in each of these two possibilities?

iii) What is the expected value of call option price at the maturity date?

10. ABC textiles limited places an order to by textile machinery with an American company. As per the agreement, ABC textiles Limited will be paying US$ 200,000 after 180 days. As the fluctuation in the spot rate of the US dollar over next 180 days will impact the rupee cost of import, the Board of ABC Textiles Limited asks its finance manager to collect data from the currency forward market, money market, currency option market etc. The board also asks a consultant to assess various possible dollar spot rates after six months. The various findings are as follows: **14**

a) Possible spot rate of dollar after six months, as estimated by the consultant, is Rs.47.25, Rs.47.75, Rs.48, Rs.48.50, Rs.48.90.

b) Spot rate of dollar as of today is Rs.48/US $

c) 180 day forward rate of dollar as of today is Rs.48.48/US $

d) Interest rates are as follows:

	India	USA
For 180 day deposit rate (per annum)	7.5%	1.5%
For 180 day borrowing rate (per annum)	8.0%	2.0%

e) A call option on the dollar, which expires in 180 days, has an exercise price of Rs.48/US $ and premium Rs. 0.52/US $.

f) A put option on dollar, which expires in 180 days, has an exercise price of Rs.48/US $ and premium of Rs.0.04/US $.

carry out a comparative analysis of the various outcomes (Rupee cost of import) under the alternatives of

i) Not hedging ii) Forward hedging
iii) Money market hedging and iv) Option hedging.

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