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Question Paper Code: CMB421



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

MBA IV Semester End Examinations (Regular) - April, 2019

Regulation: IARE-R16

FINANCIAL DERIVATIVES

Time: 3 Hours

(MBA)

Max Marks: 70

Answer ONE Question from each Unit

All Questions Carry Equal Marks

All parts of the question must be answered in one place only

UNIT – I

1. (a) Explain the classifications of derivatives that are trading in Indian derivative market. [7M]
 (b) Summarize the importance of the hedgers, speculators and arbitrageurs in derivative market. [7M]
2. (a) List out the different features of financial derivatives to strengthen the Indian financial system. [7M]
 (b) What are the functions of derivative market and list out the uses of derivatives. [7M]

UNIT – II

3. (a) Explain future contract specifications in detail. [7M]
 (b) Using the following data, prepare the margin account of the investor. Assume that if a margin call is made at any time, the investor would deposit the amount called for. [7M]
 Position: Short
 Contract Size: 500 units.
 No. of contracts: 8
 Initial Margin: 12%
 Maintenance margin: 3/4ths of initial margin
 Date of contract: June 3
 Unit Price: Rs 22
 Closing prices

Table 1

Date	Jun 4	Jun 5	Jun 6	Jun 7	Jun 10	Jun 11	Jun 12
Price (Rs)	22.30	23.10	22.90	23.00	23.15	22.85	22.95

4. (a) Differentiate forwards and futures contract that are used in financial derivatives. [7M]
 (b) Calculate the price of 100 forward contract using the following information. Price of share Rs 75. Time to expiration 9months. Dividend expected Rs 2.20per share. Time to dividend 4 months. Continuously compounded risk free rate of interest is 12%. [7M]

UNIT – III

5. (a) Write a brief note on principle of option pricing methods. [7M]
- (b) How can a butterfly spread be created by using the following three put options (with same expiration dates)? [7M]
- Option 1: Exercise price Rs70 Price = Rs 6
Option 2: Exercise price Rs75 Price = Rs 9
Option 3: Exercise price Rs80 Price = Rs 14
- Determine the range of stock prices within which losses would be made by the buyer of the options.
6. (a) Examine the basic and advanced option strategies to improve the derivative market system. [7M]
- (b) Using the Black and Scholes model and the principle of put-call parity, obtain the values of call and put options from the following data: [7M]
- Price of the share = Rs 124
Exercise price = Rs 130
Time to maturity = 4 months
Risk- free rate of return = 12% p.a.
Standard deviation of the distribution of the continuously compounded rate of return on the stock = 0.5. also state whether each of the options is in-the-money or out-of-the money, and decompose the values of each one into intrinsic value and time value.

UNIT – IV

7. (a) Explain the different types of risks associated with commodity derivatives. [7M]
- (b) Discuss the commodity markets and its participants criteria in Indian derivative market. [7M]
8. (a) What are the benefits of commodity futures for the industry and exchange members. [7M]
- (b) How the investors play a vital role in commodity derivative market? Explain in detail. [7M]

UNIT – V

9. (a) Explain in detail about the rationality behind swapping mechanism in international market. [7M]
- (b) Explain valuation of currency swaps and exchange rate mechanisms. [7M]
10. (a) Discuss the step by step procedures involved in “credit default swaps trading system”. [7M]
- (b) A credit default swap requires a premium of 60 basis points per year paid semiannually. The principal is \$300 million and the credit default swap is settled in cash. A default occurs after 4 years and 2 months, and the calculation agent estimates that the price of the reference bond is 40% of its face value shortly after the default. List the cash flows and their timing for the seller of the credit default swap. [7M]