CMS 555

IV Semester M.Com. Degree Examination, September/October 2022
(CBCS) (Regular and Repeaters)
COMMERCE
Optional (FMAIS) : Financial Derivative Markets

Time : 3 Hours   Max. Marks : 70

SECTION – A

Answer **any four** questions out of seven. **Each** question carries **10** marks. Answer to the question should **not** exceed **4** pages.   **(4×10=40)**

1. Describe the following concepts :

   a) Cost of Carry

   b) Forward Contract

   c) Backwardation, Contango and Basis.

2. Considering a volatile market condition, if an investor intends to participate in the derivative segment (F&O) and finds an opportunity exists to take hedge and realize optimal profits, what combination of contracts would you suggest, what would be composition of the portfolio (in terms of long and short positions), how do you ensure your suggested strategy offers the participant with optimal payoff.

3. Consider a six month long forward contract, on a non-dividend paying stock. The R_f = 9% p.a., the stock price is Rs. 150, the delivery price is Rs. 140. Determine the forward price.

   If an interim dividend of Rs. 10 is paid during the third week of the fourth month of the contract what will be value of the contract ?

   If a constant dividend is paid at the end of every quarter @ 8% what will be the price of the contract ?

4. Compare and contrast Indian Derivative Markets with Global Derivative Markets.

P.T.O.

5. Suppose a trader has sold 100 option contracts – that is option to buy 10,000 shares (with each contract size being 100 shares). The stock price is Rs. 250 and the option price is Rs. 22 and the delta ratio is 0.40.

   a) How many shares should be bought to hedge the exposure ?

   b) If the stock price increases to Rs. 260 and falls to Rs. 240, show the results.

   What does the outcome communicate and what would be optimum payoff to the investor ?

6. Suppose that options on a stock with strike price Rs. 150 and Rs. 175, cost Rs. 20 and Rs. 35 respectively. How can the options be used to create

   a) A bull spread

   b) A bear spread.

   Construct a table that shows the profit and loss payoff for both spreads.

7. A two month call option on a stock with a strike price of Rs. 55 is selling for Rs. 8.5. The put option on the same stock with identical strike price and expiration is selling for Rs. 1.6. The current stock price is Rs. 50. Assume that $R_f = 10\%$. Explain the scope of arbitrage on the basis of put-call parity.

SECTION – B

Answer **any two** questions out of three. **Each** question carries **15** marks. Answer to the question should **not** exceed **7** pages. **(2×15=30)**

8. "Derivatives has transformed into more of speculation and investment tool rather than being a mere hedging tool". Elucidate with the contemporary market evidences or insights into the current market status of these instruments.

9. Describe and explain the motives of Hedgers, Speculators and Arbitragers participating in Derivative Segment. What are the unique features/dynamics of these instruments ?

10. Find the value of a European call option with a strike price of Rs. 21 which is currently selling at Rs. 20. Assume that there are two price steps of three months each and in each time step the stock prices either move up by a proportional amount of 10% or down by 10%. Assume that the $R_f = 12\%$. What is the value of the option at the end of the terminal period ?

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