

MBA
(SEM IV) THEORY EXAMINATION 2022-23
FINANCIAL DERIVATIVES

Time: 3 Hours

Total Marks: 100

Note: Attempt all Sections. If require any missing data, then choose suitably.

SECTION A

1. Attempt all questions in brief.

2 x 10 = 20

- (a) What are the underlying assets for a derivative instrument?
- (b) How you can define OTC contracts?
- (c) What is a Non-transferable Specific Delivery (NTSD) contract?
- (d) What is trading mechanisms in futures?
- (e) What are the basic principles of option valuation?
- (f) Define Intrinsic value in option contract.
- (g) What are the six basic payoffs?
- (h) Describe the Sample Contract.
- (i) What do you understand by Interest rate swaps?
- (j) Define forward rate agreement.

SECTION B

2. Attempt any three of the following:

10x3=30

- (a) "A derivative security is a financial contract whose value is derived from the value of something else, such as a stock price, a commodity price, an exchange rate, an interest rate, or even an index of prices." Elaborate.
- (b) "Rather than trade in physical commodities, futures markets buy and sell futures contracts, which state the price per unit, type, value, quality and quantity of the commodity in question, as well as the month the contract expires." Define.
- (c) The Black-Scholes model, often simply called Black-Scholes, is a model of the varying price over time of financial instruments, and in particular stock option. Elaborate.
- (d) The resulting price volatility in the spot markets gave rise to demand of commodity traders for derivatives trading to hedge the associated price risks. Define with commodity example.
- (e) "Swaps are private agreements between two parties to exchange cash flows in the future Notes according to a prearranged formula." Discuss.

SECTION C

3. Attempt any *one* part of the following:

10x1=10

- (a) Mr. Ramesh is speculating on SBI (currently trading at Rs.550) and is holding one share of SBI. Three-month short futures on SBI are Rs. 540 while a put option at Rs.542 is also available at premium of Rs. 5. What should Ramesh do? (For simplicity, there is no margin requirement under futures trading).
- (b) "An agreement between two parties (known as counter-parties) where one stream of future interest payments is exchanged for another based on a specified principal amount." What do you understand by this and how you can explain this?

4. Attempt any *one* part of the following:

10x1=10

- (a) Explain the statement: "Forwards are zero-sum games". Explain the various uses of forward contract with suitable examples.
- (b) Identify the distinction between Futures and Forwards Contracts with an example in derivative market.

5. Attempt any *one* part of the following:

10x1=10

- (a) Discuss the effect of a dividend payable on the underlying shares on the call and put option prices.
- (b) Explain the Black-Scholes model for the valuation of European call option. How is this different from valuation of put option?

6. Attempt any *one* part of the following:

10x1=10

- (a) The resulting price volatility in the spot markets gave rise to demand of commodity traders for derivatives trading to hedge the associated price risks. Define with any commodity example.
- (b) Hedging is the basic function of futures market. Discuss the statement in the light of uses of futures contract.

7. Attempt any *one* part of the following:

10x1=10

- (a) "Current spread and swaps for short and long positions. If the last price at which a trade was executed is available for the symbol, it is displayed instead of the spread and the swap." Elaborate.
- (b) By entering into an FRA, the parties lock in an interest rate for a stated period of time starting on a future settlement date, based on a specified notional principal amount. Define.