**Registration No.:** | | | | | | | | | | |

**Total Number of Pages: 02** **Course: MBA**

**Sub_Code: 18MBA302B**

**3rd Semester Regular/Back Examination: 2024-25**

**SUBJECT: FINANCIAL DERIVATIVE**

**BRANCH(S): MBA, FM&HRM, LSCM, MBA (M & F), RM, BA, FM, GM, HRM, IB, MM**

**Time: 3 Hours**

**Max Marks: 100**

**Q.Code: R126**

**Answer Question No.1 (Part-1) which is compulsory, any eight from Part-II and any two from Part-III.**

**The figures in the right-hand margin indicate marks. Non programable calculator allowed**



## Part-I

**Q1** **Answer the following questions:** **(2 x 10)**

**a)** What are derivatives? Give examples.

**b)** Which types of derivative instruments are traded over the counter?

**c)** What is the purpose of initial margin and maintenance margin?

**d)** Explain long future positions and short future position.

**e)** What are the roles of Clearing house in derivative market?

**f)** What do you mean by normal backwardation and normal contago?

**g)** What do you mean by theoretical value of futures contract?

**h)** Explain the terms: Option writer, Option holder, and maturity date.

**i)** What are the different types of options in terms of exercising the same.

**j)** What is a covered call strategy?

## Part-II

**Q2** **Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve)** **(6 x 8)**

**a)** Who are the major players of derivative market? Explain their functions in brief.

**b)** The share of Z Ltd. is currently trading at Rs. 300. The risk free rate of interest is 8% p.a.. A three month futures contract is selling for Rs. 312. Is the future contract correctly valued? What shall be the strategy of an arbitrageur to derive profit, if any?

**c)** Discuss the key factors that have an effect on the value of a call option.

**d)** Consider the following data about calls on share A. Classify each of the options and show their intrinsic values and time values. ( Price in Rupees)

| Options | Exercise Price | Stock Price | Call Option Price |
|---|---|---|---|
| 1 | 70 | 72.50 | 7.75 |
| 2 | 75 | 72.50 | 2.50 |

**e)** Consider the stock index is currently at 250. The dividend yield is 4% p.a., and the risk free rate is 6% p.a. A three month European call option on the index with a strike price of Rs. 245 is currently worth Rs. 10. What is the value of a three month put option on the index with a strike price of Rs. 245?

**f)** Distinguish between a derivative market and cash market.

**g)** Write a short note on the workings of stock index future.

**h)** Explain the concept of convergence and divergence of Futures and Spot prices with diagram.

**i)** "Options and futures are zero-sum games". Do you agree? Justify your answer.

**j)** Discuss with diagram straddle as a simple option trading strategy.

**k)** What are the differences between strangle and spread?

**l)** Derive the value of a call option in the binomial world using the replicating portfolio method and risk-neutral method.

## Part-III

## Only Long Answer Type Questions (Answer Any Two out of Four)

**Q3** Identify which of the following options are ITM, ATM, OTM for the buyer of the options. Which of these options will be exercised? Treat each case individually. **(16)**

a. RIL 1260 call when the price on expiry is 1300
b. L&T 820 put when the price on expiry is 820
c. ACC 490 call when the price on expiry is 450
d. TISCO 390 call when the price on expiry is 490
e. TTech 760 put when the price on expiry is 400
f. WIPRO 1370 call when the price on expiry is 1300
g. ITC 270 put when the price on expiry is 350
h. HUL 970 call when the price on expiry is 970.

**Q4** Who are the users of derivative market? Discuss the advantages in trading in a derivative market. **(16)**

**Q5** What is a swap? Explain the procedure involved in a swap involving a banking transactions and export and import of items. **(16)**

**Q6** Discuss in short the following option Greeks: **(16)**

a. Delta
b. Gamma
c. Theta
d. Vega.