REV-01 2022/07
MBA/55/63

MASTER OF BUSINESS ADMINISTRATION
FOURTH SEMESTER
MANAGEMENT OF FINANCIAL DERIVATIVES
MBA-404C

Duration : 3 hrs. **Full Marks: 70**

(PART-A: Objective)

Time : 20 min. **Marks : 20**

Choose the correct answer from the following: *1X20=20*

1. Derivative is a financial product whose value is derived from ----------------------
   a. Financial Market b. Financial Security
   c. Underlying Asset d. None of the above

2. --------------- contract is traded in over the counter
   a. Forward b. Futures
   c. Option d. All of the above

3. One of the most important services provided by the derivatives is to control, avoid, shift and manage efficiently different types of ---------------- through various strategies.
   a. Price b. Risk
   c. Return d. All of the above

4. ----------------- serve as barometers of the future trends in prices which result in the discovery of new prices both on the spot and futures markets.
   a. Forward contract b. Futures contract
   c. Option contract d. Swap contract

5. The term ------------------- refers to the financial instruments whose value is determined on the basis of the price movement of the equity.
   a. Equity Derivatives b. Commodity Derivatives
   c. Financial Derivatives d. None of the above

6. Financial derivatives include:
   a. Stocks b. Commodity
   c. Real Estate d. All of the above

7. Which of the following are the benefits of commodity futures?
   a. Price discovery b. Faster dissemination of information
   c. Reducing cost of credit d. All of the above

8. The derivatives which confers a right without an obligation to buy or sell another asset is -----
   a. Forward derivatives b. Future derivatives
   c. Option derivatives d. Swap derivatives

9. A right to buy the underlying asset at predetermined price within specified interval of time

a. Call option
b. Put option
c. Both 'a' & 'b'
d. None of the above

10. A right to sell the underlying asset at predetermined price within a specified interval of time
a. Call option
b. Put option
c. Both 'a' & 'b'
d. None of the above

11. The person who obtains the right to buy or sell but has no obligation to perform is called
a. Holder
b. Write
c. Seller
d. All of the above

12. The predetermined price at the time of buying/writing of an option at which it can be exercised is called
a. premium
b. Strike price
c. Spot price
d. All of the above

13. The binomial model of stock price movements is a --------
a. Binary Model
b. Discrete time model
c. Double movement model
d. All of the above

14. The right to exercise the option is valid for a limited period of time. The latest time when the option can be exercised is called
a. Strike date
b. Maturity date
c. Both 'a' & 'b'
d. None of the above

15. A --------------- is a derivative contract where two parties agreed to performance contract on cash flows in near futures.
a. Swap
b. Future
c. Option
d. forward

16. A ---------------- swap is a swap where exchanged cash flows are dependent on the price of an underlying commodity
a. Fixed-Floating swap
b. Commodity-for-interest swap
c. Both 'a' and 'b'
d. None of the above

17. The index of National Stock Exchange is ....
a. Sensex
b. Nifty
c. S&P 500
d. S&P CNX

18. The market risk factors like: changes in the interest rates, Inflation rates, government trade policies, economic activities, political factors, changes in tax laws etc. is known as -------------
a. Systematic risk
b. Unsystematic risk
c. External risk
d. Internal risk

19. Funds managers or money managers use stock index futures basically for three purposes, they are ....

a. Hedging, asset allocation & yield enhancement
b. Hedging, speculation & arbitrageur
c. Risk, return & security
d. None of the above

20. A .... futures contract deals with buying or selling of the face value of a stock index
a. Stock Index
b. Sensex
c. Nifty
d. None of the above

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PART-B : Descriptive

Time: 2 HRS 40 MINS | Marks : 50

[Answer question no.(1) & any four (4) from the rest]

1. Given the following information about a Share: 10
Current market price: Rs 50
Annual volatility: 30%
Risk-free interest rate: 10%
Find out the value of 3-month call option using Black Scholes Model with exercise price of
    - (a) Rs 40
    - (b) Rs 50 and
    - (c) Rs 60

Note: Area under the standard normal distribution [N(d)]

d	*0*	*d*	*0*	*d*	*0*
0.0	*0.500*	*0.*[illegible]	*0.7580*	*1.4*	*0.9192*
0.1	*0.5398*	*0.8*	*0.7881*	*1.5*	*0.9332*
0.2	*0.5793*	*0.9*	*0.8159*	*1.6*	*0.9452*
0.3	*0.6179*	*1.0*	*0.8413*	*1.7*	*0.9554*
0.4	*0.6554*	*1.1*	*0.8643*	*1.8*	*0.9641*
0.5	*0.6915*	*1.2*	*0.8849*	*1.9*	*0.9713*
0.6	*0.7291*	*1.3*	*0.9032*	*2.0*	*0.9772*

2. What is a Derivative? Explain the different types of financial derivatives. 3+7=10

3. Explain Pricing Futures on Investment Asset (Cost of Carry Model) and Pricing Futures on Consumption Asset. 5+5=10

4. Explain Cash-and-Carry Arbitrage and Reverse Cash-and-Carry Arbitrage. 4+6=10

5. Explicate Call Option and Put Option with the help diagram. And also justify the Binomial Option Pricing Model using three different investors as an example at three different scenarios. 4+6=10

6. What is a Swap? Explain the different types of Swap. 3+7=10

7. What is a Commodity Swap? Explain the Types, Structure and Valuing of Commodity Swap. 3+7=10

8. Briefly explain the concept of Stock Index. Explain Stock Index Futures as a Portfolio Management Tool. 3+7=10

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