7. (a) What do you understand by stock index futures? 2+8=10

(b) From the following figures calculate the future price of the index

Value of BSE index	= 4000
Value of Portfolio	= Rs.10, 00,000
Risk-free rate of interest	= 8%
Dividend yield on index	= 6% per annum
Beta of the portfolio (β)	= 1.5

Also assume that futures contract on the BSE index with five months to maturity is used to hedge the value of portfolio over the next three months. One futures contract is for delivery of Rs.50 times the index. Calculate the hedge ratio that should be sorted to hedge the portfolio. What happens if index turns to be 3500 in three months?

8. (a) Write short notes on LIBOR and MIBOR. 6+4=10

(b) Distinguish between Stock Index Future and Stock Future.

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

(Use separate answer scripts for Objective & Descriptive)

Duration : 3 hrs. Full Marks : 70

(PART-A : Objective)

Time : 20 min. Marks : 20

Choose the correct answer from the following: 1x20=20

1. The payoffs for financial derivatives are linked to:
   a. securities that will be issued in the future.
   b. the volatility of interest rates.
   c. previously issued securities.
   d. government regulations specifying allowable rates of return.
   e. none of the above.

2. Financial derivatives include:
   a. stocks b. bonds c. futures d. none of the above

3. Which of the following is not a financial derivative?
   a. Stock b. Futures
   c. Options d. Forward contracts

4. By hedging a portfolio, a bank manager:
   a. reduces interest rate risk b. increases reinvestment risk
   c. increases exchange rate risk d. increases the probability of gains

5. A person who agrees to buy an asset at a future date has gone:
   a. long b. short c. back d. ahead e. even

6. A short contract requires that the investor:
   a. sell securities in the future b. buy securities in the future
   c. hedge in the future d. close out his position in the future

7. A contract that requires the investor to sell securities on a future date is called a:
   a. short contract b. long contract
   c. hedge d. micro hedge

8. Forward contracts are risky because they:
   a. are subject to lack of liquidity b. are subject to default risk
   c. hedge a portfolio d. both (a) and (b) are true

9. Parties who have bought a futures contract and thereby agreed to_____ (take delivery of) the bonds are said to have taken a____ position.
   a. sell; short b. buy; short
   c. sell; long d. buy; long

10. Parties who have sold a futures contract and thereby agreed to_____ (deliver) the bonds are said to have taken a ____ position.
    a. sell; short b. buy; short
    c. sell; long d. buy; long

11. Futures differ from forwards because they are:
   a. used to hedge portfolios.
   b. used to hedge individual securities.
   c. used in both financial and foreign exchange markets.
   d. a standardized contract.

12. Options are contracts that give the purchasers the:
   a. option to buy or sell an underlying asset.
   b. the obligation to buy or sell an underlying asset.
   c. the right to hold an underlying asset.
   d. the right to switch payment streams.

13. The price specified on an option that the holder can buy or sell the underlying asset is called the:
   a. premium   b. call
   c. strike price   d. put

14. An option that can be exercised at any time up to maturity is called a(n):
   a. swap   b. stock option
   c. European option   d. American option

15. An option that can only be exercised at maturity is called a(n):
   a. swap   b. stock option
   c. European option   d. American option

16. Options on individual stocks are referred to as:
   a. stock options   b. futures options
   c. American options   d. individual options

17. A financial contract that obligates one party to exchange a set of payments it owns for another set of payments owned by another party is called a:
   a. hedge   b. call option
   c. put option   d. swap

18. A swap that involves the exchange of a set of payments in one currency for a set of payments in another currency is a(n):
   a. interest rate swap   b. currency swap
   c. swaptions   d. national swap

19. A swap that involves the exchange of one set of interest payments for another set of interest payments is called a(n):
   a. interest rate swap   b. currency swap
   c. swaptions   d. national swap

20. The disadvantage of swaps is that they:
   a. lack liquidity.
   b. are difficult to arrange for a counterparty.
   c. suffer from default risk.
   d. all of the above.

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(PART-B : Descriptive)

Time : 2 hrs. 40 min. **Marks : 50**

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

1. (a) Explain the term 'Financial Derivatives'. What are its important features? 2+4+4=10
   (b) An investor enters into a short cotton futures contract when the future price is 60 cent per pound. One contract is for delivery of 60000 pounds. How much the investor gain or lose if cotton price at the end of the contract is: (i) 58.20 cent per pound (ii) 61.30 cent per pound.

2. What are future contracts? How do they differ from forward contracts? 5+5=10

3. (a) What is a financial swap? Discuss the features of a swap contract with example. 2+4+4=10
   (b) Describe the major types of financial swaps with examples.

4. Distinguish between: 5+5=10
   (i) Call option and put option.
   (ii) American option and European option.

5. Current market price of: 10

	X	Y
Option	16.12	10.62
Stock	Rs.80	Rs.80
Exercise Price	Rs.70	Rs.80
Time to expiration	3 months	3 months
Risk free return	12% per annum	12% per annum
Expected Dividend	0	0
Standard Deviation of Stock returns	60%	60%

Calculate the option value for X and Y as Black Scholes model.

6. (a) Distinguish between options and future contracts with examples. 4+6=10
   (b) The Stock price of Reliance Industries in spot market is Rs.450 and two-month option contract is of RS.450. The price of the option is Rs.20 per share. At what price the option will be at-the-money, out-of-money and in-the-money of the option in both call as well put option?