Birla Institute of Technology and Science, Pilani

MID SEMESTER EXAMINATION, II SEMESTER 2016-17 PART –A (Closed Book)

Course Number : ECON F354/ FIN F311
Course Title: Derivatives and Risk Management
Maximum Marks /Weight: 20 / 10%
Time: 30 minutes
ID Number: 2015B3A352SP
Name: HARSH JAISWAL

Please answer your options in the table given below:

1	2	3	4	5	6	7	8	9	10
D	B	D	D	C	B	A	D	D	B
11	12	13	14	15	16	17	18	19	20
C	C	E	A	B	B NA	A	A	C	B

1. Which of the following best describes the nature of a forward contract? With a forward contract, the two parties agree to:
   A. exchange an item of a specific quality for cash at a future predetermined date.
   B. exchange an item for an agreed amount of cash at a future predetermined date.
   C. exchange a given amount of an item for an agreed amount of cash at a future predetermined date.
   D. exchange a given amount of an item of a specific quality for an agreed amount of cash at a future predetermined date.

2. If you have a _____ sensitivity to changes in market prices, you would be said to be _____ and would benefit from an _____ in the market price. Which is correct?
   A. positive long the risk increase
   B. positive short the risk decrease
   C. negative long the risk decrease
   D. negative short the risk increase

3. Which of the following correctly describes a futures contract?
   A. A futures is an instrument whose value depends on the values of other more basic underlying variables.
   B. An exchange-traded contract to buy or sell a specific amount of an asset or security for a specific price or rate on a specific future date.
   C. An agreement to buy or sell an asset at a certain time in the future for a certain price (the delivery price).
   D. All of A, B, and C.

4. Which of the following is not a fundamental financial instrument?
   A. A share.
   B. A call option on a share.
   C. A bond.
   D. A bank loan.

5. The spot price of a commodity is \$1200 and its forward price in one year is \$1255. The one-year interest rate is 4 per cent per annum. Which of the following is correct? An arbitrageur can create a replicating portfolio by:
   A. borrowing and buying the commodity in the cash market and buying the forward contract to give a profit of \$55.
   B. selling the commodity in the cash market and investing and buying the forward contract to give a profit of \$7.
   C. borrowing and buying the commodity in the cash market and selling the forward contract to give a profit of \$7.
   D. selling the commodity in the cash market and investing and selling the forward contract to give a profit of \$55.

C –

6. Which of the following is correct? In the context of derivatives markets, hedging can be considered to be a special case of:
A. arbitrage that involves taking no risk on delivery.
B. risk reduction where the intention is to eliminate all risks.
C. speculation where the intention is to take on as much risk as possible.
D. financial engineering that involves taking no model risk.

7. The general rule for undertaking arbitrage is this: _____ and _____ which means, in terms of derivatives, _____ a derivative instrument when its price is _____ its theoretical or fair value price. Which of the following is correct?
A. buy low sell high selling above
B. sell low buy high buying below
C. buy low sell high buying below
D. sell low buy high selling above

8. The "modified duration" used by practitioners is equal to the Macaulay duration
A. times the change in interest rate.
B. times (one plus the bond's yield to maturity).
C. divided by (one minus the bond's yield to maturity).
D. divided by (one plus the bond's yield to maturity).

9. Given the time to maturity, the duration of a zero-coupon bond is higher when the discount rate is
A. higher.
B. lower.
C. equal to the risk free rate.
D. The bond's duration is independent of the discount rate.

10. The interest-rate risk of a bond is
A. the risk related to the possibility of bankruptcy of the bond's issuer.
B. the risk that arises from the uncertainty of the bond's return caused by changes in interest rates.
C. the unsystematic risk caused by factors unique in the bond.
D. the risk related to the possibility of bankruptcy of the bond's issuer and the risk that arises from the uncertainty of the bond's return caused by changes in interest rates.
E. All of these are correct.

11. Which of the following two bonds is more price sensitive to changes in interest rates?
1) A par value bond, X, with a 5-year-to-maturity and a 10% coupon rate.
2) A zero-coupon bond, Y, with a 5-year-to-maturity and a 10% yield-to-maturity.
A. Bond X because of the higher yield to maturity.
B. Bond X because of the longer time to maturity.
C. Bond Y because of the longer duration.
D. Both have the same sensitivity because both have the same yield to maturity.
E. None of these is correct.

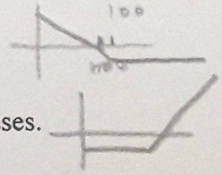
12. Holding other factors constant, which one of the following bonds has the smallest price volatility?
A. 5-year, 0% coupon bond
B. 5-year, 12% coupon bond
C. 5 year, 14% coupon bond
D. Cannot tell from the information given.

13. Which of the following is true?
A. Holding other things constant, the duration of a bond decreases with time to maturity.
B. Given time to maturity, the duration of a zero-coupon increases with yield to maturity.
C. Given time to maturity and yield to maturity, the duration of a bond is higher when the coupon rate is lower.
D. Duration is a better measure of price sensitivity to interest rate changes than is time to maturity.
E. Given time to maturity and yield to maturity, the duration of a bond is higher when the coupon rate is lower, and duration is a better measure of price sensitivity to interest rate changes than is time to maturity.

14. An investor can simultaneously be "in the money" yet have a negative not profit on the basis of

A. having to cover the initial cost of the option.
B. the absence of transaction costs.
C. a failure to exercise an option.
D. uncertainty in the price of the underlying instrument.

15. Selling a call differs from selling a put in that a



A. put has possibly unlimited losses.
B. call has possibly unlimited losses.
C. put will sell for a lower price.
D. call will sell for a lower price.

16. A long position is an obligation to ________ whereas a short position is an obligation to ________.

A. sell; purchase
B. purchase; sell
C. exercise a call; exercise a put
D. exercise a put; exercise a call

17. A major difference between a forward contract and a future contract is that only a future contract is

A. a standardized contract that is traded over an exchange.
B. available exclusively from commercial banks.
C. limited to large contracts.
D. available for any amount and maturity.

18. An option on a financial instrument gives the holder the

A. right to purchase or sell an underlying financial instrument at a given price.
B. obligation to purchase or sell an underlying financial instrument at a given price.
C. right to purchase or sell an underlying financial instrument at its future spot price.
D. obligation to purchase or sell an underlying financial instrument at its future spot price.

19. A call option gives the holder the right to ________ an instrument whereas a put option gives the holder the right to ________.

A. exercise; confiscate
B. sell; purchase
C. purchase; sell
D. transfer; sell

20. If an investor wants to speculate on the direction of the entire stock market, the most efficient method would be to acquire

A. an exchange forward.
B. a stock index future.
C. a portfolio of stocks and bonds.
D. a portfolio containing stocks of all traded companies