Birla Institute of Technology & Science (BITS), Pilani.

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Course No.: ECON F354 & FIN F311 2nd Semester, 2016-17, Course Title: Derivatives and Risk Management

Quiz – I Date: 20/02/2017. Duration: 20Minutes Maximum Marks: 20

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Each correct answer carries 1 mark and a wrong answer carries negative 0.50 mark

1. Ceteris paribus, the duration of a bond is positively correlated with the bond's
   A. time to maturity.
   B. coupon rate.
   C. yield to maturity.
   D. All of these are correct.
   E. None of these is correct.
2. Holding other factors constant, the interest-rate risk of a coupon bond is higher when the bond's:
   A. term-to-maturity is lower.
   B. coupon rate is lower.
   C. yield to maturity is higher.
   D. term-to-maturity is lower and yield to maturity is higher.
   E. None of these is correct.
3. 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.
   E. None of these is correct.
4. Identify the bond that has the longest duration (no calculations necessary).
   A. 20-year maturity with an 8% coupon.
   B. 20-year maturity with a 12% coupon.
   C. 20-year maturity with a 0% coupon.
   D. 10-year maturity with a 15% coupon.
   E. 12-year maturity with a 12% coupon.
5. A 6%, 30-year corporate bond was recently being priced to yield 8%. The Macaulay duration for the bond is 8.4 years. Given this information, the bond's modified duration would be
   A. 8.05
   B. 9.44
   C. 9.27
   D. 7.78
   E. None of these is correct.
6. A 9%, 16-year bond has a yield to maturity of 11% and duration of 9.25 years. If the market yield changes by 32 basis points, how much change will there be in the bond's price?
   A. 1.85%
   B. 2.01%
   C. 2.67%
   D. 6.44%
   E. None of these is correct.
7. A 7%, 14-year bond has a yield to maturity of 6% and duration of 7 years. If the market yield changes by 44 basis points, how much change will there be in the bond's price?
   A. 1.85%
   B. 2.91%
   C. 3.27%
   D. 6.44%
   E. None of these is correct.
8. An agreement between a business and a large money center bank to sell 10 million British Pounds in sixty days is called a
   A. a call option.
   B. a forward contract.
   C. a put option.
   D. a long futures position.
9. An investor planning to buy IBM stock in 30 days can protect himself against price risk by
   A. selling an IBM put option that expires in 30 days
   B. buying an IBM call option that expires in 30 days
   C. selling an IBM call option that expires in 30 days
   D. buying an IBM put option that expires in 30 days

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10. A portfolio manager is concerned that the expected drop in interest rates is going to lower the yield on the $1,000,000 of T-Bill she plans to buy in 3 months. She can hedge this interest rate risk by:
    A. Taking a short position in 3-month T-bill futures contract.
    B. Taking a long position in 3-month T-bill futures contract.
    C. Buying a put on a 3-month T-bill futures contract.
    D. Either *a* or *c* above.
    E. She cannot hedge this risk.
11. A put option with a strike price higher than the current spot price is said to be _____.
    A. profitable
    B. in-the-money
    C. out-of-the-money
    D. at-the-money
    E. none of the above
12. A call option with a strike price less than the current spot price is said to be _____.
    A. profitable
    B. in-the-money
    C. out-of-the-money
    D. at-the-money
    E. none of the above
13. When a contract is marked-to-market:
    A. Delivery of the underlying asset occurs
    B. The holder engages in arbitrage between the underlying market and the futures market
    C. The contract is reversed
    D. The margins account of the contract holder is adjusted to reflect changes in prices in the underlying market
    E. One of the parties to the contract defaults
14. Any option with a positive intrinsic value is said to be _____.
    A. profitable
    B. in-the-money
    C. out-of-the-money
    D. at-the-money
15. The holder of a put option will benefit if the underlying stock's price _____.
    A. falls
    B. stabilizes
    C. remains the same
    D. rises
    E. a put option holder will always benefit
16. What action would the holder of a maturing call option take with an option which cost $3 and had a strike price of $50 if the market value of the stock was $52?
    A. let the option expire unexercised
    B. exercise the option
    C. request that the $300 be returned
    D. none of the above
17. Farmer growing wheat is ______ in wheat and may hedge price risk by ______ wheat futures.
    A. short; long
    B. buying; selling
    C. selling; buying
    D. long; selling
18. First National Bank recently purchased a futures contract to hedge a risk position at the bank. If the price of the futures contract is increasing,
    A. First National is "gaining."
    B. First National is "losing."
    C. First National is neither "gaining" nor "losing."
    D. First National is taking a loss in the futures
19. All of the following is true *except*:
    A. A swap is like a series of forward contracts in that it guarantees the exchange of two items of value at some future points in time.
    B. Only the net interest difference is swapped in an interest rate swap.
    C. Swap parties usually have the same level of credit risk.
    D. Unlike in a forward contract, the exact terms of exchange of the swap will vary with changes in interest rates.
20. A put option with a strike price less than the current spot price is said to be _____.
    A. profitable
    B. in-the-money
    C. out-of-the-money
    D. at-the-money

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