75 PRICING AND VALUATION OF OPTIONS

1. The lower and upper bounds on European options will always:

   (A) be nonnegative.

   (B) include a present value calculation of the exercise price.

   (C) be positive.

2. Which of the following statements about the difference in arbitrage in pricing forward commitments and options is correct?

   (A) Both the forward buyer and the option buyer pay no cash up front,

   (B) The forward buyer has an unlimited loss but the option buyer has a limited loss at maturity when the underlying is a stock.

   (C) Only options have upper and lower no-arbitrage price bounds.

3. The time value of an option is most accurately described as:

   (A) the amount by which the intrinsic value exceeds the option premium.

   (B) equal to the entire premium for an out-of-the-money option.

   (C) increasing as the option approaches its expiration date.

4. Which of the following statements about moneyness is most accurate? When the stock price is:

   (A) below the strike price, a call option is in-the-money.

   (B) above the strike price, a put option is in-the-money.

   (C) above the strike price, a put option is out-of-the-money.

5. An increase in the riskless rate of interest, other things equal, will:

   (A) decrease call option values and decrease put option values.

   (B) decrease call option values and increase put option values.

   (C) increase call option values and decrease put option values.

6. The value of a put option at expiration is most likely to be increased by:
   (A) a higher exercise price.
   (B) a lower risk-free interest rate.
   (C) higher volatility of the underlying asset price.

7. An investor will exercise a European put option on a stock at its expiration date if the stock price is:
   (A) less than the exercise price.
   (B) equal to the exercise price.
   (C) greater than the exercise price.

8. Dividends or interest paid by the asset underlying a call option:
   (A) decrease the value of the option.
   (B) increase the value of the option.
   (C) have no effect on the value of the option.

9. For a European style put option:
   (A) time value is equal to its market price minus its exercise value.
   (B) intrinsic value is equal to its market price plus its exercise value.
   (C) exercise value is equal to the underlying stock price minus its exercise price.

10. A call option that is in the money:
    (A) has an exercise price less than the market price of the asset.
    (B) has an exercise price greater than the market price of the asset.
    (C) has a value greater than its purchase price.

11. An investor holds two options on the same underlying stock, a call option with an exercise price of 25 and a put option with an exercise price of 30. If the market price of the stock is 27:
    (A) only one of the options is in the money.
    (B) both options are in the money.
    (C) neither option is in the money.

12. Which of the following statements about the lower bound on a European put option is correct?
    (A) The lower bound can only be negative for deep out-of-the-money puts.
    (B) The lower bound is always zero.
    (C) The lower bound cannot exceed the difference between the present value of the exercise price and the underlying asset price.

13. A one-year European call option has an exercise price of X = $500. At the time of the option's purchase, the underlying asset trades at S0 = $485, and the risk-free rate is r = 1.25%. What is the no-arbitrage upper bound of this option in six months, if the underlying asset price is St = $510?

    (A) $510.

    (B) $500.

    (C) $507.

14. An investor has bought a European put option and written a European call option. Other things equal, a decrease in the risk-free rate will increase the value of:

    (A) only one of these option positions.

    (B) both of these option positions.

    (C) neither of these option positions.

15. Other things equal, a short put position would become more valuable as a result of an increase in:

    (A) the time to expiration.

    (B) the price of the underlying asset.

    (C) the volatility of the price of the underlying asset.

16. At expiration, exercise value is equal to time value for:

    (A) an in-the-money call or an out-of-the-money put.

    (B) an out-of-the-money call or an out-of-the-money put.

    (C) an out-of-the-money call or an in-the-money put.

17. Which of the following will increase the value of a call option?

    (A) An increase in the exercise price.

    (B) A dividend on the underlying asset.

    (C) An increase in volatility.

18. Which of the following statements about long positions in put and call options is most accurate? Profits from a long call:

    (A) and a long put are positively correlated with the stock price.

    (B) are negatively correlated with the stock price and the profits from a long put are positively correlated with the stock price.

    (C) are positively correlated with the stock price and the profits from a long put are negatively correlated with the stock price.

19. A decrease in the riskless rate of interest, other things equal, will:

(A) decrease call option values and decrease put option values.

(B) increase call option values and decrease put option values.

(C) decrease call option values and increase put option values.

20. The time value of a European call option with 30 days to expiration will most likely be:

(A) less than the current option premium if the option is currently in-the-money.

(B) greater than the current option premium if the option is currently out-of-the-money.

(C) equal to the intrinsic value if the exercise price is greater than the current spot price.

21. A call option's intrinsic value:

(A) decreases as the stock price increases above the strike price, while a put option's intrinsic value increases as the stock price decreases below the strike price.

(B) increases as the stock price increases above the strike price, while a put option's intrinsic value decreases as the stock price decreases below the strike price.

(C) increases as the stock price increases above the strike price, while a put option's intrinsic value increases as the stock price decreases below the strike price.

22. Compared to an otherwise identical European put option, one that has a longer time to expiration:

(A) must be worth more than the put that is nearer to expiration.

(B) must be worth at least as much as the put that is nearer to expiration.

(C) may be worth less than the put that is nearer to expiration.

23. An option's intrinsic value is equal to the amount the option is:

(A) in the money, and the time value is the market value minus the intrinsic value.

(B) in the money, and the time value is the intrinsic value minus the market value.

(C) out of the money, and the time value is the market value minus the intrinsic value.

24. The upper bound of a European put option is the:
    (A) exercise price.
    (B) difference between the present value of the exercise price and the underlying asset price.
    (C) present value of the exercise price.