

1. What are the minimum values of an American-style and a European-style 3-month call option with a strike price of \$90 on a non-dividend-paying stock trading at \$96 if the risk-free rate is 3%?
 - a. American: \$6.00, European: \$6.00
 - b. American: \$6.00, European: \$5.62
 - c. American: \$6.62, European: \$6.62

2. If the owner of a call option with a strike price of \$35 finds the stock to be trading for \$42 at expiration, then the option:
 - a. Expires worthless.
 - b. Will not be exercised
 - c. Is worth \$7 per share.

3. An agreement by Microsoft to receive 6-month LIBOR & pay a fixed rate of 5% per annum every 6 months for 3 years on a notional principal of \$10 million. What is the net cash flow in period 3 if 6-month LIBOR at start of period 3 is 5.5%?
 - a. \$275,000
 - b. \$250,000
 - c. \$25,000

4. What is the option buyer's total profit or loss per share if a call option is purchased for a \$5 premium, has a \$50 exercise price, and the stock is valued at \$53 at expiration?
 - a. (\$5)
 - b. (\$2)
 - c. \$3

5. A 90-day T-Bill Future is quoted price at 98. Calculate the delivery price
 - a. \$98
 - b. \$980,000
 - c. \$995,000

6. Which combination of positions will tend to protect the owner from downside risk?
 - a. Buy the stock and buy a call option.
 - b. Sell the stock and buy a call option.
 - c. Buy the stock and buy a put option.

7. Which of the following statements is true?
 - a. For both calls and puts an increase in the exercise price will cause an increase in the option price
 - b. For both calls and puts an increase in the time to maturity will cause an increase in the option price

- c. For calls, but not for puts, an increase in the time to maturity will cause an increase in the option price
8. An FRA settles in 30 days
- \$1 million notional
 - Based on 90-day LIBOR
 - Forward rate of 5.5%
 - Actual 90-day LIBOR at settlement is 6.5%
 - Calculate the PV of the FRA
- a. \$2,453
b. \$2,460
c. \$2,463
9. European put-call parity says the difference in price for call options less put options, both with exercise price E and time to maturity T , is equal to the stock price:
- a. Minus the future value of the exercise price.
b. Plus the future value of the exercise price.
c. Minus the present value of the exercise price
10. Find lower bound for European call $X = \$75$, stock is trading at $\$73$, RFR = 5%, 3 months expiry
- a. \$3.5
b. \$3.8
c. \$3.9
11. If the volatility of the underlying asset decreases, then the:
- a. Value of the put option will increase, but the value of the call option will decrease
b. Value of the put option will decrease, but the value of the call option will increase
c. Value of both the put and call option will decrease
12. An agreement by Microsoft to receive 6-month LIBOR & pay a fixed rate of 5% per annum every 6 months for 3 years on a notional principal of \$10 million. What is the net cash flow in period 4 if 6-month LIBOR at start of period 4 is 5.6%?
- a. \$275,000
b. \$30,000
c. \$250,000
13. A put option with strike price of \$20 has an option premium of \$2. At expiry, underlying was traded at \$22. Premium at expiry day would be
- a. \$2
b. \$1
c. None of the above

14. What is least likely to be incorrect regarding Exchange traded contracts
 - a. They are not customized
 - b. They are not regulated
 - c. They are mostly illiquid

15. Which combination of positions is least likely to protect from risk of stock price going up down?
 - a. Buy the stock and buy a call option.
 - b. Sell the stock and buy a call option.
 - c. Buy the stock and buy a put option.

16. Intrinsic value of a put option is least likely to
 - a. Increase when the stock price goes below the strike price
 - b. Decrease when the stock price goes above the strike price
 - c. Increase when the stock price goes above the strike price

17. European and American options differ in the way that
 - a. American option can be exercised any time till expiry, European can not be exercised before expiry
 - b. European option can be exercised upto 10 days before expiry, American can not be exercised before expiry
 - c. European option can be exercised any time till expiry, American can not be exercised before expiry

18. A swap agreement where one party pays based on a set rate and other pays based income generated / capital gains from underlying asset is called
 - a. Equity swap
 - b. Plain-vanilla swap
 - c. Return swap

19. The buyer of a call option has the choice to exercise, but the writer of the call option has:
 - a. The choice to offset with a put option
 - b. The obligation to deliver the shares at exercise
 - c. The choice to deliver shares or take a cash payoff

20. Which of the following is closest approximation for the maximum value of a call option
 - a. The price of the stock minus the exercise price
 - b. The exercise price times one plus the risk free return
 - c. The price of the stock