1. Which of the following is true about a bond with a deferred call provision?
   a. It could be called at any time during the tenure of the Bond.
   b. Principal repayment can be deferred until it reaches maturity
   c. It could not be called right after the date of issue.

2. All other things being equal, which one of the following bonds has the greatest volatility?
   a. 10-year, 15% coupon.
   b. 10-year, 10% coupon.
   c. 3-year, 10% coupon.

3. What is the worst-case profitability scenario for an investor who sold a call on the firm’s stock for a premium of $10 and a strike price of $100?
   a. $90 per share profit
   b. $0 per share profit (break-even)
   c. Unlimited losses

4. One of the most commonly used yield spread measures is the nominal spread. Which of the following is least likely a limitation of nominal spread? The nominal spread assumes:
   a. An upward sloping yield curve.
   b. All cash payments will be received in a prompt and timely manner.
   c. All cash flows can be discounted at the same rate.

5. Suppose an investor buys one share of stock and a put option on the stock. What will be the value of her investment on the final exercise date if the stock price is below the exercise price?
   a. The value of two shares of stock
   b. The value of one share of stock plus the exercise price
   c. The exercise price

6. Which of the following statement is least accurate?
   a. A Conventional mortgage is an example of an amortizing loan
   b. Call provisions give the issuer the right and the obligation to retire all or a part of an issue prior to maturity
   c. Sinking fund provisions provide for the repayment of principal through a series of payments over the life of the issue.

7. Which of the following statement is incorrect?
   a. Accrued interest is the interest earned since the last coupon payment date and is paid by a bond buyer to a bond seller.
   b. Clean price is the quoted price of the bond without accrued interest
   c. Full price refers to the quoted price without any accrued interest.
8. An FRA settles in 30 days
   - $1 million notional
   - Based on 90-day LIBOR
   - Forward rate of 6%
   - Actual 90-day LIBOR at settlement is 6.5%

   Calculate the PV of the FRA
   a. $1,000
   b. $1,203
   c. $1,230

9. Suppose that a corporate bond and a government bond have equivalent characteristics. They both have a coupon rate of 10% paid annually and have two years remaining to maturity. Assuming a flat government term structure of 15% which of the following is a possible price of the corporate bond?
   a. 91.87
   b. 83.17
   c. 91.35

10. A firm has just issued $1,000 face value bonds with a coupon rate of 8%, paid semi-annually, and a maturity of 15 years. If the issue price for this bond is $785.50, what is the yield-to-maturity, stated annually?
    a. 9.872 percent
    b. 10.365 percent
    c. 10.942 percent

11. When computing the yield to maturity, the implicit reinvestment assumption is that the interest payments are reinvested at the:
    a. Yield to maturity at the time of the investment.
    b. Prevailing yield to maturity at the time interest payments are received.
    c. Coupon rate.

12. Consider a $1,000 par value bond with a 7% annual coupon. The bond pays interest annually. There are 2 years remaining until maturity. What is the current yield on the bond assuming that the required return on the bond is 10%? Use simple compounding.
    a. 0.1
    b. 0.0738
    c. 0.05
13. Ghanshyam group’s economics department has forecast that interest rates are going to change by 70 basis points. Vijay, a fixed-coupon bond portfolio manager with asset value of $120.00 million at Ghanshyam Group, forecasts that the portfolio’s value will increase by $2.2 million if interest rates fall and will decrease by $2.0 million if interest rates rise. Which of the following choices is closest to the portfolio’s effective duration?
   a. 4.3
   b. 3.6
   c. 3.50

14. What bond type does the following price-yield curve represent and at which yield level is convexity equal to zero?
   a. Callable bond with convexity close to zero at y_2.
   b. Callable bond with convexity close to zero at y_1 and y_3.
   c. Puttable bond with convexity close to zero at y_2.

15. Which of the following five year bonds has the lowest interest rate sensitivity?
   a. Floating rate bond.
   b. Option-free 5% coupon bond.

16. A zero-coupon bond with a maturity of 10 years has an annual effective yield of 10%. What is the closest value for its modified duration?
   a. 10
   b. 100
   c. 9

17. With any other factors remaining unchanged, which of the following statements regarding bonds is not valid?
   a. The price of a callable bond increases when interest rates increase.
   b. Issuance of a callable bond is equivalent to a short position in a straight bond plus a long call option on the bond price.
   c. The put feature in a puttable bond lowers its yield compared with the yield of an equivalent straight bond.

18. A newly issued 8% bond that pays semiannual coupons has principal value of $1,000 with a bond life of 1 year and a yield of 6% per year. The Macaulay Duration of the bond is 0.9809 and convexity is 1.3780. If the yield changes from 6% to 6.5%, then the statement that best describes the actual bond price change is:
a. Bond's actual price change is -4.83 and predicted price change according to formula that adjusts for both convexity and duration is -4.73
b. Bond's actual price change is -5.052996 and predicted price change according to a formula that adjusts for both convexity and duration is -4.85.
c. Bond's actual price change is -4.83 and predicted price change according to a formula that adjusts for both convexity and duration is -4.83

19. Of the following bonds, which one will suffer the largest proportional price increase after a decrease in interest rates of 10 basis points? Assume the annual yield is 7%.
   a. A zero-coupon bond maturing in 5 years
   b. A coupon-paying bond, with Macaulay Duration of 3.81 years and convexity of 16.39 years squared
   c. A bond with a coupon of 10% maturing in 10 years that is immediately callable

20. A 10-year, 8% coupon bond currently sells for $90. A 10-year, 4% coupon bond currently sells for $80. What is the 10-year zero rate?
   a. 5.7%
   b. 6.4%
   c. 3.57%