CHAPTER 2: Interest Rates

MULTIPLE CHOICE

1. A fixed-income security may be defined as:
   a. a security that earns a fixed return
   b. a security that makes interest and principal repayments according to a fixed schedule
   c. a security that is sold at a fixed discount
   d. a security that earns dividends according to a fixed schedule
   e. a security that is sold at a fixed price

   ANS: B DIF: Easy REF: 2.1 TOP: Introduction
   MSC: Factual

2. Suppose that you bought a stock for $40, received a dividend of $0.50, and sold it for $41 after 91 days. Your annualized arithmetic rate of return equals:
   a. 5.01 percent
   b. 10.03 percent
   c. 15.04 percent
   d. 16.07 percent
   e. None of these answers are correct.

   ANS: C DIF: Easy REF: 2.2 TOP: Rate of Return
   MSC: Applied

3. Suppose that you are planning to enroll in a master's program two years in the future. The cost to enroll is $150,000. You expect to have the following funds:

   • From your current job, you can save $5,000 after one year and $7,000 after two years.
   • You expect a year-end bonus of $9,000 after one year and $15,000 after two years.
   • Your grandparents saved money for your education in a tax-favored savings account and will give you $18,000 after one year.
   • Your parents offer you the choice of taking $50,000 at any time, but that amount is deducted from your inheritance. They are risk-averse investors and put money in ultra-safe government bonds giving 2 percent per year.

   The borrowing and the lending rate at the bank is 4 percent per year, compounded daily. Approximating this by continuous compounding, how much money will you need to borrow when you start your master's degree education two years from today?
   a. $39,489
   b. $40,530
   c. $42,489
   d. $47,501
   e. None of these answers are correct.

   ANS: B DIF: Difficult REF: 2.2 TOP: Rate of Return
   MSC: Applied

4. The interest rate is 7 percent per year. Compute the eight-month zero-coupon bond price using a compound interest rate with monthly compounding.
   a. $0.9533
   b. $0.9540
   c. $0.9545

d. $0.9554
e. None of these answers are correct.

ANS: C DIF: Easy REF: 2.3
TOP: Basic Interest Rates: Simple, Compound, and Continuously Compounded
MSC: Applied

5. The simple interest rate is 5 percent per year. What is the dollar return after nine months?
a. $1.0312
b. $1.0375
c. $1.0381
d. $1.0450
e. None of these answers are correct.

ANS: B DIF: Easy REF: 2.3
TOP: Basic Interest Rates: Simple, Compound, and Continuously Compounded
MSC: Applied

Use the following table, where the interest rate is 5 percent per year, compounded once a year to answer the questions that follow.

Time (in years)	**Cash flow (in dollars)**
0 (today)	– 105
1	7
2	9
3	106

6. Compute the present value of the above cash flows.
a. –$3.78
b. $0.53
c. $1.06
d. $1.40
e. None of these answers are correct.

ANS: D DIF: Moderate REF: 2.4
TOP: Discounting (PV) and Compounding (FV): Moving Money across Time
MSC: Applied

7. Compute the future value of the above cash flows in three years.
a. $0.05
b. $1.62
c. $4.82
d. $5.68
e. None of these answers are correct.

ANS: B DIF: Moderate REF: 2.4
TOP: Discounting (PV) and Compounding (FV): Moving Money across Time
MSC: Applied

8. If the price of a zero-coupon bond maturing in three years is $0.90, what is the continuously compounded rate of return?
a. 0.0351
b. 0.0426
c. 0.0542
d. 0.0744

e. None of these answers are correct.

ANS: A DIF: Moderate REF: 2.4
TOP: Discounting (PV) and Compounding (FV): Moving Money across Time
MSC: Applied

9. Which of the following is NOT true about US Treasury securities?
   a. These securities are virtually free from default risk.
   b. They trade in a market with some of the smallest bid/ask spreads in the world.
   c. Their interest payments are free from state and local taxes.
   d. They have low minimum denominations and offer a spectrum of maturities that range from one day to thirty years.
   e. They accurately reflect a company's cost of borrowing.

ANS: E DIF: Easy REF: 2.5 TOP: US Treasury Securities
MSC: Factual

10. A discriminatory auction of US Treasury securities:
    a. raises more revenue than a uniform price auction
    b. raises less revenue than a uniform price auction
    c. raises equal revenue as a uniform price auction
    d. may raise more or less revenues than a uniform price auction
    e. None of these answers are correct.

ANS: D DIF: Moderate REF: 2.6
TOP: US Federal Debt Auction Markets MSC: Conceptual

11. What is the when-issued market with respect to US Treasuries?
    a. It's a special kind of call market that begins a week or so before a Treasury securities auction.
    b. It's a special kind of forward market that begins a week or so before a Treasury securities auction.
    c. It's a special kind of futures market that begins a week or so before a Treasury securities auction.
    d. It's a special kind of repo market that begins a week or so before a Treasury securities auction.
    e. None of these answers are correct.

ANS: B DIF: Easy REF: 2.7
TOP: Different Ways of Investing in Treasury Securities MSC: Factual

12. A repo agreement:
    a. involves the sale of securities together with an agreement that the seller buys back the securities at a later date at a price that is negotiated at the time of initial sale
    b. involves the sale of securities together with an agreement that the seller buys back the securities at a later date at a price to be negotiated in the future
    c. involves the sale of securities together with an agreement that the seller will have the option to buy back the securities at a later date at a price to be negotiated in the future
    d. is an agreement that allows banks to take possession of homes that become delinquent on mortgage payments
    e. None of these answers are correct.

ANS: A DIF: Easy REF: 2.7
TOP: Different Ways of Investing in Treasury Securities MSC: Factual

13. US Treasury notes are:
    a. coupon bonds that have original maturity of more than ten years up to a maximum of thirty years
    b. coupon bonds that have original maturity of more than one year up to a maximum of ten years
    c. coupon bonds whose interest payments fluctuate with the inflation rate
    d. zero-coupon bonds that don't pay interest but pay back the principal at maturity
    e. zero-coupon bonds that mature in more than ten years

    ANS: B DIF: Easy REF: 2.8
    TOP: Treasury Bills, Notes, Bonds, and STRIPS MSC: Factual

14. Using a banker's discount yield of 3 percent per year, the price of a US Treasury bill that matures in 181 days is
    a. $0.9750
    b. $0.9849
    c. $0.9874
    d. $0.9881
    e. None of these answers are correct.

    ANS: B DIF: Easy REF: 2.8
    TOP: Treasury Bills, Notes, Bonds, and STRIPS MSC: Applied

15. Eurodollars are:
    a. US dollar–denominated deposits held in Europe
    b. US dollar–denominated bonds that are held outside the USA
    c. US dollar–denominated time deposits that are held outside the United States in a foreign bank or a subsidiary of a US bank
    d. Any time deposit denominated in a particular currency but held outside the country of the currency
    e. None of these answers are correct.

    ANS: C DIF: Moderate REF: 2.9 TOP: Libor versus Bbalibor
    MSC: Factual

16. Bbalibor is:
    a. the rate at which a bank with surplus funds lends to another bank for a fixed time period in the London interbank market
    b. the rate at which a bank with surplus dollars lends to another bank for a fixed time period in the London interbank market
    c. the rate at which a bank with a shortage of funds offers to borrow excess funds from another bank for a fixed time period in the London interbank market
    d. a trimmed average of libor quotes computed every trading day by the British Banker's Association
    e. None of these answers are correct.

    ANS: D DIF: Easy REF: 2.9 TOP: Libor versus Bbalibor
    MSC: Factual

17. The yield spread between Eurodollar deposits and Treasury Bill rates is called the:
    a. BED spread
    b. DA spread
    c. NOB spread
    d. TBE spread
    e. TED spread

ANS: E DIF: Easy REF: 2.9 TOP: Libor versus Bbalibor
MSC: Factual