1) Which of the following are true statements?
   A) Money or the money supply is defined as anything that is generally accepted in payment for goods and services or in the repayment of debts.
   B) Inflation is a condition of a continually rising price level.
   C) The inflation rate is measured as the rate of change in the aggregate price level.
   D) All of the above are true statements.
   E) Only (a) and (b) of the above are true statements.

2) Which of the following statements about the characteristics of debt and equity is untrue?
   A) They can both be long-term financial instruments.
   B) They can both be short-term financial instruments.
   C) They both involve a claim on the issuer's income.
   D) They both enable a corporation to raise funds.
   E) None of the above.

3) Federal funds are
   A) funds raised by the federal government in the bond market.
   B) loans made by the Federal Reserve System to banks.
   C) loans made by banks to the Federal Reserve System.
   D) loans made by banks to each other.
   E) none of the above.

4) Securities are _____ for the person who buys them, but are _____ for the individual or firm that issues them.
   A) assets; liabilities
   B) liabilities; assets
   C) negotiable; nonnegotiable
   D) nonnegotiable; negotiable

5) A corporation acquires new funds only when its securities are sold
   A) in the primary market by an investment bank.
   B) in the primary market by a stock exchange broker.
   C) in the secondary market by a securities dealer.
   D) in the secondary market by a commercial bank.

6) U.S. Treasury bills
   A) are the safest of all money market instruments.
   B) sell at a discount because they have no interest payments.
   C) are the most liquid of the money market securities.
   D) are all of the above.
   E) are only (b) and (c) of the above.
7) The problem created by asymmetric information before the transaction occurs is called _____, while the problem created after the transaction occurs is called ______.
   A) adverse selection; moral hazard  B) moral hazard; adverse selection
   C) costly state verification; free-riding  D) free-riding; costly state verification

8) That only large, well-established corporations have access to securities markets
   A) explains why indirect finance is such an important source of external funds for businesses.
   B) can be explained by the problem of adverse selection.
   C) can be explained by government regulations that prohibit small firms from acquiring funds in securities markets.
   D) can be explained by all of the above.
   E) can be explained by only (a) and (b) of the above.

9) The conversion of a barter economy to one that uses money increases efficiency by reducing
   A) the need to exchange goods.
   B) the need to specialize.
   C) the need to employ team production methods.
   D) transactions costs.

10) Checkable deposits are money because
    A) federal regulations mandate that they be so considered.
    B) they serve the functions of money.
    C) only banks, and not savings and loan associations, can issue checkable deposits.
    D) of both (a) and (b) of the above.
    E) of both (a) and (c) of the above.

11) If the price level doubles, the value of money
    A) doubles.
    B) more than doubles, due to scale economies.
    C) rises but does not double, due to diminishing returns.
    D) falls by 50 percent.

12) The Fed revises its estimates of the monetary aggregates, sometimes by large amounts, because
    A) large depository institutions need only report their deposits infrequently.
    B) weekly monetary data need to be adjusted for the "weekend effect."
    C) monthly monetary data need to be adjusted for the "payday effect."
    D) of none of the above.

13) **Bonus Question**: The news article “Wary Banks Links Loans to Fickle Capital Markets” highlights
    A) Banks are routinely adjusting their lending rates based on the rate of return available in long-term capital markets.
    B) Banks are now reselling their risky loans much like bonds in order to reduce their risks.
    C) Banks with high non-performing loans are raising funds in capital markets to meet their capital requirements.
    D) Banks earned substantial profits in their equity and bond portfolios during the stock market boom, which has led to an increase in banks’ asset holding in capital markets.

14) Which of the following statements accurately describes the three different measures of the money supply--M1, M2, and M3?
A) The three measures do not move together, so they cannot be used interchangeably by policymakers.
B) The three measures' movements closely parallel each other, even on a month-to-month basis.
C) Short-run movements in the money supply are extremely reliable.
D) Both (a) and (c) of the above.

15) People hold money even during inflationary episodes when other assets prove to be better stores of value. This can be explained by the fact that money is
A) extremely liquid.
B) a unique good for which there are no substitutes.
C) the only thing accepted in economic exchange.
D) all of the above.

16) Which of the following are true statements?
A) Wealth is the total collection of pieces of property that are a store of value.
B) Money is frequently confused with income.
C) Income is a flow of earnings per unit of time.
D) All of the above are true.
E) Only (a) and (b) of the above are true.

17) If there are five goods in a barter economy, one needs to know ten prices in order to exchange one good for another. If, however, there are ten goods in a barter economy, then one needs to know _____ prices in order to exchange one good for another.
A) 20 B) 25 C) 30 D) 45

18) Which of the following $1,000 face-value securities has the highest yield to maturity?
A) A 5 percent coupon bond with a price of $600.
B) A 5 percent coupon bond with a price of $800.
C) A 5 percent coupon bond with a price of $1,000.
D) A 5 percent coupon bond with a price of $1,200.
E) A 5 percent coupon bond with a price of $1,500.

19) What is the return on a 5 percent coupon bond that initially sells for $1,000 and sells for $1,200 next year?
A) 5 percent
B) 10 percent
C) -5 percent
D) 25 percent
E) None of the above

20) If the interest rates on all bonds rise from 5 to 6 percent over the course of the year, which bond would you prefer to have been holding?
A) A bond with one year to maturity  B) A bond with five years to maturity
C) A bond with ten years to maturity  D) A bond with twenty years to maturity

21) In which of the following situations would you prefer to be making a loan?
A) The interest rate is 9 percent and the expected inflation rate is 7 percent.
B) The interest rate is 4 percent and the expected inflation rate is 1 percent.
C) The interest rate is 13 percent and the expected inflation rate is 15 percent.
D) The interest rate is 25 percent and the expected inflation rate is 50 percent.

22) Prices and returns for _____ bonds are more volatile than those for _____ bonds.
A) long-term; long-term  B) long-term; short-term
C) short-term; long-term  D) short-term; short-term

23)  The process of calculating what dollars received in the future are worth today is called
   A) calculating the yield to maturity.      B) discounting the future.
   C) deflating the future                   D) none of the above.

24)  The interest rate that equates the present value of payments received from a debt instrument
   with its value today is the
   A) simple interest rate.                  B) discount rate.
   C) yield to maturity.                    D) real interest rate.

25)  Which of the following are true for a coupon bond?
   A) When the coupon bond is priced at its face value, the yield to maturity equals the
      coupon rate.
   B) The price of a coupon bond and the yield to maturity are negatively related.
   C) The yield to maturity is greater than the coupon rate when the bond price is below the
      par value.
   D) All of the above are true.
   E) Only (a) and (b) of the above are true.

Answers:

26. You want to invest your savings of $10000 for next two years.
   (a) Your bank is offering you a certificate of deposit with an annual interest rate of 10%.
   There is another option you want to consider: a 2-year 10% coupon bond at a price of
   $10100. How will you choose between the two options without using a financial
   calculator? Show your work. (5 points)
   (b) Suppose your bank was offering you only 9.5% annual interest rate. What will you do
   now (again, without using a financial calculator)? Show your work. (5 points)
27. A 6-month treasury note with a face value of $1000 is selling at $950 on a discount basis. 
(a) If the annual rate of inflation is expected to be 1%, what is the expected real rate of return? Show your work. (6 points) 
(b) Will the investor be better off, if the actual inflation turns out to be 0% instead? Show your work. (2 points)
28. Suppose you buy a 5-year zero-coupon (discount) bond with a Face Value of $1000, at a yield to maturity of 5%.
   (a) What is its selling price? Show your work (3 points)
   (b) Exactly 2 years later, the interest rates rise to 10%. If your holding period is 2 years i.e., you have to sell this bond after two years, what price will you end up selling at? Show your work. (4 points)
   (c) What is your effective rate of return in part (b)? Show your work. (3 points)
26. **Part (a).** A 10% coupon bond with a price above its Face Value will have its yield to maturity less than 10%. The other alternative, which offers 10%, will be preferable.

**Part (b).** Now with 9.5% deposit rate, let’s first obtain the present value of the bond’s cash flow

\[
PV(\text{at } 9.5\%) = \frac{1000}{1.095} + \frac{1000}{1.095^2} + \frac{10000}{1.095^2} = 10087
\]

Since the bond is priced at 10100, which is greater than 10087 (the present value at 9.5%), its yield to maturity must be less than 9.5%. The bank’s offer is still preferable.

27. **Part (a).** If the annual return is \( i \), then the nominal return is obtained from

\[
950 = \frac{1000}{(1+i)^2}
\]

(Note: You can also use \( 950 = \frac{1000}{(1+\frac{i}{2})} \) . The results will be approximately similar)

or

\[
i = \left(\frac{1000}{950}\right)^2 - 1 = 0.108 (= 10.8\%)
\]

Hence, the expected real rate of return (annual) is

\[
i_r = i - \pi_e = 10.8 - 1 = 9.8\%
\]

**Part (b)** If the actual inflation rate turns out to be 0% the actual real rate of return will be

\[
i_r = i - \pi_a = 10.8 - 0 = 10.8\%
\]

The investors will be better off.

28. **Part (a).** Given that its yield to maturity is 5%, the current price (at time \( t \)) will be

\[
P_t = PV \text{ (at YTM)} = \frac{1000}{1.05^5} = 783.53
\]

**Part (b).** Two years later, at 10% interest rate the price will fall. Since the remaining cash flow is still $1000 face value payment, but now after three years, the price after two years (say, at \( t+2 \)) will be

\[
P_{t+2} = PV \text{ (at } 10\%) = \frac{1000}{1.10^3} = 751.31
\]

**Part (c).** The rate of return will be given by

\[
P_{t+2} = P_t \ (1+i)^2
\]
which implies that

\[ i = \left( \frac{P_{t+2}}{P_t} \right)^{\frac{1}{2}} - 1 = \left( \frac{751.31}{783.53} \right)^{\frac{1}{2}} - 1 = -0.0208 (-2.08\%) \]