III. Answer the following (10 points each)

1. For the year 2000, nominal and real GDP were $9824.6 and $9,191.4. For 2001 the values of nominal and real GDP were $10,082.2 and $9,214.5. For the year 2001, determine the growth rate in output and the inflation rate on an annual basis.

2. A coupon bond (face value = $1,000) with a 5% coupon rate matures in 2 years. (You receive a coupon payment in one year, another in two years, and the face value in two years.) If the interest rate on alternative assets is 10%, what price would expect for the bond? At that price, what is the current rate (yield)?
3. Use bond demand and bond supply for a corporate and government bond to show the effects of an increase in expected inflation on the interest rate of the corporate and the government bonds. What will happen to the real interest rate?

4. Suppose the tax rate on interest income is 33%. Also suppose that federal government bonds (taxable) have a 6% interest rate and a municipal bond (same risk/liquidity levels as federal government bonds, but non-taxable) have a 5% interest rate. Use bond demand and bond supply to predict the changes in both interest rates.
II. Multiple Choice. Choose the best answer. Mark your answer on the scanner sheet. Correctly enter your Miami Unique ID. (3 points each)

1. Currently, M2 is about:
   a. $1,100 billion
   b. $5.7 trillion
   c. $7,500 billion.
   d. $1,100 million
   e. none of the above.

2. Which of the following is not included in M2?
   a. Coins
   b. Checking Accounts at Banks.
   c. Savings Accounts at a Credit Union
   d. A $10,000 Certificate of Deposit at a Bank.
   e. All the above are included in M2.

3. Mary transfers $100 from her savings account to her checking account. As a result of this:
   a. M1 will increase by $100.
   b. M2 will increase by $100.
   c. M2 will decrease by $100.
   d. both a and c are correct.
   e. both a and b are correct.

4. Historically, money supply growth rates tend to:
   a. fall at the same time as the economy enters a recession.
   b. fall before the economy enters a recession.
   c. Rise at the same time as the economy enters a recession.
   d. Rise before the economy enters a recession.
   e. None of the above are correct.

5. The price of a six-month discount bond with a face value of $1000 should be (assume the interest rate on alternative assets is 5%):
   a. $952
   b. $1050
   c. $976
   d. $1000
   e. none of the above.

6. A coupon bond that matures in four years with $10,000 face value and a $500 coupon payment every year and a current price of $10,600 has a coupon rate of:
   a. 4.72%.
   b. 5.00%
   c. 5.21%
   d. 6.25%
   e. None of the above are correct

7. An increase in the interest rate of bond x will:
   a. shift the demand for bond x to the right.
   b. shift the demand for bond y to the right.
   c. shift the supply of bond x to the left.
   d. both a and b are correct.
   e. none of the above are correct.
8. If the price of alternative assets falls, the interest rate on a bond will:
   a. rise.
   b. fall
   c. not change
   d. a, b, or c could be correct.
   e. none of the above are correct.

9. Economic growth will tend to:
   a. increase bond demand.
   b. increase bond supply.
   c. reduce bond supply.
   d. both a and b are correct.
   e. none of the above are correct.

10. Economic growth will:
    a. increase both bond demand and bond supply and decrease interest rates.
    b. decrease both bond demand and bond supply and decrease interest rates.
    c. increase both bond demand and bond supply and increase interest rates.
    d. decrease both bond demand and bond supply and have an uncertain effect of interest rates.
    e. none of the above are correct.

11. Federal Budget Deficits will:
    a. increase the demand for government bonds.
    b. reduce the demand for corporate bonds.
    c. reduce the supply of government bonds.
    d. both a and c are correct.
    e. none of the above are correct.

12. An increase in the level of risk of bond C will:
    a. increase the demand for bond D.
    b. reduce the demand for bond C.
    c. increase the supply of bond E.
    d. both a and b are correct.
    e. none of the above are correct.

13. An increase in the risk level of bond A will:
    a. increase the demand for bond B and lower the interest rate on bond B.
    b. increase the demand for bond A and lower the interest rate on bond A.
    c. increase the demand for bond A and increase the interest rate on bond A.
    d. both a and c are correct.
    e. none of the above are correct

14. As bond A becomes more liquid, then:
    a. the risk premium on bond A will rise.
    b. the risk premium on bond A will fall.
    c. the risk premium on bond B not change.
    d. both b and c are correct.
    e. none of the above are correct.
15. According to the expectations theory of the term structure, if the interest rate on a two-year bond is 8%, and the public expects interest rates on one-year bonds in one year to be 10%, then the interest rate in a one-year bond should be:
   a. 18%
   b. 2%
   c. 9%
   d. 6%
   e. none of the above are correct

16. If the municipal bond tax exemption was removed, we would predict that:
   a. the interest rate on municipal bonds will rise.
   b. the interest rate on corporate bonds will fall.
   c. the interest rate on US government bonds will rise.
   d. both a and b are correct.
   e. none of the above are correct.

17. An increase in expected inflation rate will:
   a. shift money demand right.
   b. shift money supply right.
   c. shift money supply left.
   d. both a and b are correct.
   e. none of the above are correct.

18. In the liquidity preference model (\(M^d\) and \(M^f\)), if the interest rate is below the equilibrium rate, there is an:
   a. excess demand for money and an excess supply of bonds.
   b. excess supply of money and an excess demand for bonds.
   c. excess demand for money and an excess demand for bonds.
   d. excess supply of money and an excess supply of bonds.
   e. none of the above are correct.

19. An increase in the money supply will:
   a. shift money supply left and lower the interest rate.
   b. shift bond demand right and raise bond prices.
   c. shift bond supply left and raise bond prices.
   d. both a and c are correct.
   e. none of the above are correct.

20. An increase in the level of risk of bonds will
   a. increase the demand for money and increase interest rates.
   b. increase the demand for money and lower interest rates.
   c. increase the supply of money and lower interest rates.
   d. increase the supply of money and increase interest rates.
   e. none of the above are correct