**TCHE 303 – MONEY AND BANKING**

**TUTORIAL 2**

1. Would $175, to be received in exactly one year, be worth more to you today when the interest rate is 15% or when it is 20%?
2. Write down the formula that is used to calculate the yield to maturity on a twenty-year 12% coupon bond with a $1,000 face value that sells for $2,500.
3. To help pay for college, you have just taken out a $1,000 government loan that makes you pay $126 per year for 25 years. However, you don’t have to start making these payments until you graduate from college two years from now. Why is the yield to maturity necessarily less than 12%? (This is the yield to maturity on a normal $1,000 fixed-payment loan on which you pay $126 per year for 25 years.)
4. You are offered two bonds, a one-year U.S. Treasury bond with a YTM of 9% and a one-year US T-bill with a yield on a discount basis of 8.9%. Which would you rather own?
5. Do bondholders fare better when the yield to maturity increases or when it decreases? Why?
6. A financial adviser has just given you the following advice: “Long-term bonds are a great investment because their interest rate is over 20%.” Is the financial adviser necessarily right?
7. If mortgage rates rise from 5% to 10% but the expected rate of increase in housing prices rises from 2% to 9%, are people more or less likely to buy houses?
8. When is the current yield a good approximation of the yield to maturity?
9. Why would a government choose to issue a perpetuity, which requires payments forever, instead of a terminal loan, such as a fixed-payment loan, discount bond, or coupon bond?
10. Under what conditions will a discount bond have a negative nominal interest rate? Is it possible for a coupon bond or a perpetuity to have a negative nominal interest rate?
11. *True or False*: With a discount bond, the return on the bond is equal to the rate of capital gain.
12. If interest rates decline, which would you rather be holding, long-term bonds or short-term bonds? Why? Which type of bond has the greater interest-rate risk?
13. Which would be most affected in the event of an interest rate increase—the price of a five-year coupon bond that paid coupons only in years 3, 4, and 5 or the price of a five-year coupon bond that paid coupons only in years 1, 2, and 3, everything else being equal? Explain.
14. Retired persons often have much of their wealth placed in savings accounts and other interest-bearing investments, and complain whenever interest rates are low. Do they have a valid complaint?
15. Suppose two parties agree that the expected inflation rate for the next year is 3 percent. Based on this, they enter into a loan agreement where the nominal interest rate to be charged is 7 percent. If the inflation rate for the year turns out to be 2 percent, who gains and who loses?
16. Interest rates were lower in the mid-1980s than in the late 1970s, yet many economists have commented that real interest rates were actually much higher in the mid-1980s than in the late 1970s. Does this make sense? Do you think that these economists are right?