ECO 301: Money and Banking **Name:** (20 points) ______________________________
Instructor: Dr. James Murray.
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Exam 1

1. (10 points) Suppose that bond sells today for \$800 makes coupon payments of \$150 per year for 10 years. The first payment is not made until 5 years from now, and a face value of \$1000 is paid when the last coupon payment is made. Write a formula that determines the annual yield to maturity. Hint: The only variable in the formula should be the yield to maturity. Everything else in the formula should be a number. You only need to write the formula, you do not need to actually compute the yield to maturity.

2. Suppose you purchase a coupon bond that makes semi-annual coupon payments (two coupon payments per year) at a price of \$950 on the secondary market. The bond was initially issued 6 years ago with a face value of \$1000, coupon rate of 6%, and a maturity date of 10 years.

   (a) (10 points) What is the expected present value of holding the bond to maturity if you expect a 5% average interest rate until that time?

(b) (10 points) Suppose the bond is held for only one year then re-sold on the secondary market. Suppose you expect interest rates next year to be 5%. What is your expected capital gain?

3. (10 points) Suppose as the economy rebounds from the recession there is an increase in current disposable income and in expected future disposable income. *Describe and illustrate* the impact on the corporate bond market. What should happen to interest rates on corporate bonds and the quantity of corporate bonds in equilibrium?

4. Suppose the Federal Reserve conducts an open market purchase of Treasury bonds.

   (a) (10 points) *Describe and illustrate* the impact on the market for money. What happens to the quantity of money and interest rate in the short run?

(b) (10 points) *Describe and illustrate* the impact on the market for bonds. What happens to the quantity of bonds and interest rate in the short run?

(c) (10 points) Suppose bonds and money are substitute assets to store wealth. Suppose fiscal policy actions cause individuals to doubt the Federal government's ability to repay its loans. *Describe and illustrate* the impact on the market for money *and* bonds.

5. (10 points) Suppose people expect interest rates to rise, but also the degree of uncertainty regarding future interest rates increases. Draw and describe the shape the yield curve will take. If it is possible the yield curve can take more than one shape, draw and describe each scenario.