General questions:
1. What is the principal-agent problem?
2. Explain some of the advantages and disadvantages of the following ways of dealing with the principal-agent problem: commissions for sales people, paying by the piece, performance contracts for athletes.
3. What are the three major types of business organizations?
4. What are the advantages and disadvantages of each type of business organization?
5. Why are most of the very large businesses in the U.S. incorporated?
6. Why are most small businesses in the U.S. not incorporated?
7. Define each of the following terms
   a. economies of scale.
   b. economies of scope.
   c. transactions costs.
8. Why might an investor prefer to receive capital gains instead of a dividend?

Numerical problems:
9. Suppose there is a one year bond that has a coupon rate of 5% and a maturity value of $1000. Indicate the yield on this bond if the price you pay for it is:
   a. $1000.  b. $900  c. $1050.
   d. What happens to the yield on a bond as the price paid for the bond increases?

10. Suppose that you put $1000 in the bank today and it earns 6% interest. If you allow the interest to compound, what balance will you have in:
    a. 1 year.  b. 10 years.  c. 40 years.

11. Suppose that you wish to have $1000 at some point in the future. If you can earn 6% interest, how much would you have to invest today to have $1000 in
    a. 1 year.  b. 10 years.  c. 40 years.

12. Suppose that you can purchase a copy machine for $11,000 today. You also know that you could lease the machine for $3,000 per year (the first least payment would be due on the first day of the lease). If the machine would last for 4 years and would have a scrap value of $1000 at the end of the 4 years, what would be the net present value of purchasing the copy machine assuming an interest rate of:
    a. 5%  b. 10%  c. 15%
    d. based on your answers above, provide a range of estimates for the internal rate of return.
Answers:
1-8: Refer to your textbook and lecture notes.
9a. 5%
b. 16.7%
c. 0%
d. The yield on a bond falls as the price of the bond rises.

10a $1,060
b. $1,791
c. $10,286

11a. $943
b. $558
c. $97

12a. $992
b. $144
c. -$579
d. between 10% and 15%