I. Multiple Choice  (20 points)

1. Corporate takeovers

   a. serve no useful purpose.
   b. generally reduce the wealth of the shareholders of the firm that is being taken over.
   c. can punish managers who are not performing well.
   d. reduce the incentive of managers to keep costs low and maximize profit.

2. Which of the following items is most likely to be an implicit cost of production?

   a. the "competitive rate" salary the owner of the business pays herself for services provided
   b. property taxes on a building owned by the firm
   c. rental payments for a building utilized by the company and rented from another party
   d. the interest income forgone on the equity capital invested by owners.

3. If a firm is continually applying additional units of a variable resource to a fixed amount of other resources, and its output is increasing at a decreasing rate, this indicates that

   a. the firm is experiencing diminishing marginal returns.
   b. the firm is producing under conditions of increasing returns to scale.
   c. average fixed costs must be rising.
   d. the firm should expand its plant capacity.

4. Which of the following explains most accurately why the firm's short-run marginal cost curve will eventually rise?

   a. As more of the variable factor is used, its price will rise.
   b. When diminishing marginal returns set in, it will take ever-larger quantities of the variable resources to produce an additional unit of output.
   c. As the variable factor is used more intensely, its marginal product will rise, causing an increase in marginal costs.
   d. As the size of the firm increases, the operational efficiency of the firm declines, causing an increase in marginal costs.

5. The horizontal demand curve facing an individual firm in a competitive price-taker market is

   a. a violation of the law that demand curves slope downward.
   b. a reflection of the firm's small size relative to the total market.
   c. maintained only with the help of high barriers to entry.
   d. a reflection of the firm's price searching ability.
6. In a market economy, which of the following provides consumers the best protection against prices that persistently exceed the cost of producing goods and services?

   a. government regulation
   b. lobbying groups representing consumers
   c. the Consumer Protection Agency
   d. competitive markets

7. If a firm is a price taker and wants to earn as much profit as possible, it should expand output

   a. to the quantity at which marginal cost is minimized.
   b. as long as marginal cost is less than price.
   c. to the quantity at which average total costs are minimized.
   d. try to sell all the output it can produce so that its average fixed costs will be minimized.

8. In the short run, the supply curve of a firm in a price-taker market is

   a. the firm's MC curve (above the minimum AVC).
   b. the firm's ATC curve (above the minimum AVC).
   c. the firm's AVC curve (to the right of MC).
   d. a horizontal line at the market price.

9. The characteristic that distinguishes a competitive price-searcher market from a price-taker market is

   a. the existence of many firms in price-searcher markets.
   b. the firms in price-searcher markets produce differentiated products.
   c. the free entry into price-taker, but not price-searcher, markets.
   d. the downward-sloping market demand curve in price-searcher, but not price-taker, markets.

10. If a firm is currently selling nine units at a price of $5, which of the following is true?

    a. If the firm is a price searcher, it can sell the tenth unit at a price of $5.
    b. If the firm is a price searcher, it can sell the tenth unit only if it raises its price above $5.
    c. If the firm is a price taker, it can sell the tenth unit only if it lowers its price below $5.
    d. If the firm is a price taker, it can sell the tenth unit at a price of $5.

11. Which of the following is true of a competitive price-searcher firm when the market is in a long-run equilibrium?

    a. MR < MC < price
    b. MR < MC = price
    c. MR = MC < price
    d. MR = MC = price
12. A monopoly is most likely to emerge in a market when

   a. the producers in the market have U-shaped average total cost curves.
   b. the price elasticity of demand for the product is high.
   c. the cost of entry into and exit from the market is low.
   d. economies of scale are large relative to market demand.

13. "A profit-maximizing firm with a secure monopoly in its market and no fear of regulation or new entrants will always charge a price on the inelastic portion of its demand curve." Economic theory suggests that this statement is

   a. correct.
   b. incorrect because a monopolist could always gain by raising its price if it was operating on the inelastic portion of its demand curve.
   c. incorrect, except when the demand for the firm's product is declining.
   d. incorrect, except when the demand for the firm's product is increasing.

14. Which of the following conditions is true in long-run equilibrium for both a competitive price searcher and a competitive price taker, but not necessarily for a monopolist?

   a. P = MC
   b. P = ATC
   c. MR = P
   d. MR < P

15. A profit-maximizing farmer will apply additional units of fertilizer until the marginal revenue product (MRP) of fertilizer is half the MRP of skilled labor when a unit of fertilizer

   a. costs twice as much as a unit of skilled labor.
   b. costs half as much as a unit of skilled labor.
   c. is half as productive, on average, as a unit of skilled labor.
   d. is twice as productive, on average, as a unit of skilled labor.

16. Which one of the following resources will likely have the most inelastic supply curve in the short run?

   a. secretaries
   b. chemical engineers
   c. gas station attendants
   d. lawn service employees
17. Which of the following is most likely to cause the productivity of labor to increase?
   a. higher money wages
   b. a higher rate of investment in human and nonhuman capital
   c. more flexible working hours and improved retirement plans
   d. an increase in the proportion of the workforce that belongs to a labor union

18. A cost-saving invention can even generate an increase in employment in the industry affected by the invention if the
   a. demand for the product is highly elastic.
   b. demand for the product is highly inelastic.
   c. supply of workers is inelastic.
   d. supply of the product is inelastic.

19. Other things constant, if there were a decrease in demand for goods now compared to goods in the future, we would expect
   a. the interest rate to fall.
   b. the capital investment rate to decline.
   c. current consumption to rise.
   d. the demand for loanable funds to increase.

20. Economic analysis indicates that when usury laws hold interest below the equilibrium rate,
   a. saving will rise.
   b. the quantity of loanable funds demanded by borrowers will decline.
   c. high-risk borrowers will find it more difficult to obtain loanable funds.
   d. there will be an excess supply of loanable funds relative to demand.
II. Critical Analysis Exercises (BE PRECISE…BE NEAT)

20 points
1. Consider the following information: total revenue equals $10,000, total variable cost equals $12,000, total fixed cost equals $2,000, average variable cost is at its minimum, average fixed cost equals $1.00.
   a) Assuming the above information is for a *price-taking firm*, develop graphical analysis and advise the firm about what to do to maximize its profit.

   b) Using the same information, repeat the exercise under the assumption that the firm is a *price-searcher*. 
10 pts.
2. I produce product X in a price taker market. The price of X is $50.00 per unit. The production of X is accomplished by using inputs of labor (L) and capital (K). At this time the marginal productivity of labor is two units of X per day; the marginal productivity of capital is five units of X per day. I can hire any amount of labor at $100.00 per laborer per day; I can rent any amount of capital at $50.00 per unit per day. Evaluate the situation and advise using either diagrams or appropriate equations.

10 pts.
3. Returning to problem #2 above, consider the results of government imposing a $150.00 minimum daily wage per laborer. a) Use a carefully labelled diagram to show what will happen.
b) Comment on (and show in a diagram) whether you expect the total income earned by these laborers will be higher or lower after the wage increase. [Hint: What very, very basic economic concept is the key?]