Chapters 8-11 take-home quiz. Please mark your answers on a Scantron and submit it in the box by my office before 12:00 Noon on Friday, December 6. I will post the answers on the web page sometime Friday afternoon. Late Scantron sheets cannot be accepted for points because the key will be available.

1. The "law of diminishing marginal returns" means that:
   A) each additional unit of an input used will decrease output.
   B) each additional unit of an input used will increase output, but by smaller and smaller amounts.
   C) each additional unit of an input used will increase output by larger and larger amounts.
   D) the firm is maximizing profit.

2. The sum of fixed and variable costs is:
   A) total cost.
   B) marginal cost.
   C) variable cost.
   D) average cost.

3. Marginal cost is the change in:
   A) total cost resulting from a 1-unit change in a variable input.
   B) total cost resulting from a 1-unit change in quantity.
   C) total cost resulting from a 1-unit change in average cost.
   D) average cost resulting from a 1-unit change in quantity.

4. Total cost divided by the quantity of output produced is:
   A) average total cost.
   B) average fixed cost.
   C) average product.
   D) marginal cost.
5. (Exhibit: Short-Run Costs) Curve A is the _______ cost curve.
   A) average total  
   B) average variable  
   C) marginal  
   D) total  

6. (Exhibit: Short-Run Costs) Curve C is the _______ cost curve.
   A) average total  
   B) total  
   C) marginal  
   D) average variable  

7. (Exhibit: Short-Run Costs) Curve A declines from a cost of about $50 and a quantity of 1 to a cost of about $40 and a quantity of 2 (point F) at which time it rises again. The declining segment is due to _______ marginal returns, and the rising segment is due to _______ marginal returns.
   A) decreasing; increasing  
   B) diminishing; increasing  
   C) increasing; diminishing  
   D) increasing; constant
8. In the long run, all costs are:
   A) fixed.
   B) constant.
   C) variable.
   D) marginal.

Use the following to answer question 9:

![Diagram of Long-run Average Cost](image)

9. (Exhibit: Long-Run Average Cost) Output per period in the region from O to A indicates that a firm is experiencing:
   A) diseconomies of scale.
   B) constant returns to scale.
   C) economies of scale.
   D) negative costs of production.

10. Which of the following is true in a perfectly competitive market?
    A) One unit of a good or service cannot be differentiated from any other on any basis.
    B) Brand preferences exist but are very slight.
    C) Barriers to entry are relatively strong.
    D) Information is costly.
Use the following to answer questions 11-12:

11. (Exhibit: Marginal Decision Rule) If $P_1$ is the market price, and if this firm has decided to produce any output, it should produce:
   A) where $MR > MC$.
   B) quantity $q_2$.
   C) quantity $q_1$ where $MR > MC$.
   D) a quantity greater than $q_1$ but less than $q_2$.

12. (Exhibit: Marginal Decision Rule) To maximize economic profit, this firm should produce quantity _______ where _______ = _______.
   A) $q_1$; $MR$; $MC$
   B) $q_2$; price; $MC$
   C) $q_2$; $MR$; $TR$
   D) $q_1$; $TR$; $TC$

13. In perfect competition:
   A) price and marginal cost are the same.
   B) price and marginal revenue are the same.
   C) price and total revenue are the same.
   D) total revenue and total variable cost are the same.
14. (Exhibit: A Profit-Maximizing Monopoly Firm) This profit-maximizing monopoly firm's cost per unit at its profit-maximizing quantity is:
   A) $8.
   B) $15.
   C) $16.
   D) $18.

15. Monopolistic competition is an industry characterized by a:
   A) small number of firms producing identical products, with barriers to entry for firms.
   B) small number of firms producing similar products, with relatively easy entry for firms.
   C) large number of firms producing similar products, with relatively easy entry for firms.
   D) large number of firms producing identical products, with relatively easy entry for firms.
16. If a perfectly competitive firm sells 30 units of output at a price of $10 per unit, its marginal revenue is:
   A) $10.
   B) more than $10.
   C) less than $10.
   D) $300.

Use the following to answer question 17:

17. (Exhibit: Profit Maximizing) The exhibit shows cost curves for a firm operating in a perfectly competitive market. If the market price is $P_3$, the firm will produce quantity _______ and _______ in the short run.
   A) $q_2$; make a profit
   B) $q_1$; break even
   C) $q_2$; incur a loss
   D) $q_4$; incur a loss
18. (Exhibit: Short-Run Costs) At the given price, the most profitable level of output occurs at quantity:
A) N.
B) P.
C) S.
D) T.

19. (Exhibit: Short-Run Costs) This firm's supply curve begins at quantity:
A) Q.
B) R.
C) S.
D) T.

20. A firm's shut-down point is the minimum value of:
A) total cost.
B) average variable cost.
C) average total cost.
D) marginal cost.

21. The demand curve for a monopoly is:
A) the sum of all the firm supply curves in the monopoly's industry.
B) the industry demand curve.
C) horizontal because no one can enter.
D) perfectly elastic.
22. A natural monopoly is most likely to result if a single firm:
   A) is the only seller in a community.
   B) is investor-owned, but is granted the exclusive right by the government to operate in a market.
   C) experiences economies of scale over a wide range of output.
   D) has gained control over a strategic input of an important production process.

23. The demand curve facing a price setter:
   A) is vertical.
   B) is horizontal.
   C) is upward sloping.
   D) is downward sloping.

Use the following to answer question 24:

24. (Exhibit: Computing Monopoly Profit) The profit-maximizing price is _______ and will generate total economic profit of _______.
   A) \( P_2 \); EF
   B) \( P_3 \); the rectangle \( P_1P_2FG \)
   C) \( P_3 \); the rectangle \( P_2P_3EF \)
   D) \( P_3 \); EF
25. A feature of monopolistic competition that makes it different from monopoly is the:
   A) fact that firms in the model of monopolistic competition follow the marginal decision rule while monopolies do not.
   B) downward-sloping demand curve.
   C) downward-sloping marginal revenue curve.
   D) number of firms in the industry.

26. In the long run, monopolistically competitive firms tend to experience:
   A) high economic profits.
   B) zero economic profits.
   C) negative economic profits.
   D) substantial economic losses.

27. Because monopolistically competitive firms charge a P > MC:
   A) monopolistic competition is efficient.
   B) monopolistic competition is inefficient.
   C) the marginal benefit to society of an additional unit of output is below its cost.
   D) B and C are true.

28. The industry characterized by a few interdependent firms where there are barriers to entry is called:
   A) monopolistic competition.
   B) perfect competition.
   C) oligopoly.
   D) monopoly.

29. Price discrimination is when a firm charges:
   A) the same price to all customers.
   B) different prices for different goods to different customers.
   C) different prices for the same goods to different customers.
   D) None of the above are true.

30. Because tourist demand for airline flights is relatively ______ , small ______ in price will result in relatively ______ in additional tourists.
   A) inelastic; reductions; very small increases
   B) elastic; reductions; large increases
   C) inelastic; increases; small decreases
   D) elastic; increases; no change