ECO201: PRINCIPLES OF MICROECONOMICS

SECOND MIDTERM EXAMINATION

November 6, 2007

FORM 3.

Directions

1. FILL IN YOUR SCANTRON WITH YOUR UNIQUE ID AND THE FORM NUMBER LISTED ON THIS PAGE. This is worth the equivalent of one question.

2. There are 46 multiple choice questions. Be sure to fill in an answer for all 46 questions on the scantron.

3. A calculator is allowed. No cell phones are allowed.

4. You have the entire class period to finish the exam and fill in your scantron. Additional time may be purchased at a price of 5 percentage points per minute.
1) In perfect competition, the elasticity of demand for the product of a single firm is
   A) infinite because many other firms produce identical products.
   B) zero because many other firms produce identical products.
   C) zero because the firm produces a unique product.
   D) infinite because the firm produces a unique product.

2) A firm will increase profits by increasing the amount of output it produces as long as its
   A) marginal revenue exceeds its marginal cost.
   B) average total revenue exceeds its average total cost.
   C) marginal cost exceeds its marginal revenue.
   D) average total revenue exceeds its average variable cost.

3) Perfect competition arises if the _______ efficient scale of a single producer is _______ relative to the demand for the good or service.
   A) minimum; small
   B) minimum; large
   C) maximum; large
   D) maximum; small

4) In the above figure, if the price is $16, the profit maximizing firm will
   A) produce 50 units.
   B) produce 10 units.
   C) choose not to produce.
   D) produce 35 units.

5) In the above figure, if the price is $16, a profit-maximizing firm would have an
   A) an economic profit of $120
   B) an economic profit above zero but less than $120.
   C) a zero economic profit
   D) an economic loss.
6) In the above figure, below what minimum price will the firm shutdown rather than produce?
   A) for any price less than $12 per unit  B) for any price less than $8 per unit
   C) for any price less than $4 per unit  D) for any price less than $16 per unit

7) In the above figure, if this is a competitive industry without external economies or diseconomies and the price is currently $10, we should expect that in the long run firms will (enter, exit) until the price __________.
   A) enter; falls to $8  B) enter; rises to $12
   C) exit; rises to $12  D) exit; rises above $12.

8) In the above figure, if this is a competitive industry and there are external economies that in the long run the price will settle:
   A) below $10  B) between $10 and $12
   C) at $12  D) above $12

9) A perfectly competitive firm is producing more than the profit-maximizing amount of its product. You can conclude that its
   A) average total cost exceeds the price of the product.
   B) total cost exceeds its total revenue.
   C) marginal revenue is less than the price of the product.
   D) marginal cost exceeds the price of the product.

10) The apple industry is perfectly competitive and is in long-run equilibrium. Now a disease kills 50 percent of the apple orchards. In the short run, the price of a bag of apples _______ and the remaining apple growers make _______ profits. In the long run, the _______.
   A) remains the same; normal; orchards will be replanted and growers will make normal profits
   B) increases; normal; price of apples will return to their original level
   C) increases; positive economic; orchards will be replanted and economic profit will return to zero
   D) increases; normal; orchards will be replanted and economic profit will return to zero
11) If there are external diseconomies in an industry, in the long run, after a permanent increase in demand, the price
A) will be the same as it was initially before the increase in demand.
B) will be lower than it was initially before the increase in demand.
C) will be higher than it was initially before the increase in demand.
D) may be higher or lower than it was initially before the increase in demand, depending on whether or not the firms are earning an economic profit.

12) Assuming long-run external economies exist, when demand increases in a perfectly competitive market, in the long run the average total cost curve for a typical firm
A) is no longer U-shaped.  B) shifts upward.
C) shifts downward.  D) stays the same.

13) A perfectly competitive industry is in long-run equilibrium. Some firms in the industry adopt new technology that reduces the average total cost of producing the good. In the long run, the price is _______, firms with the new technology make _______ profits, and firms with the old technology _______.
A) constant; economic; make normal profit
B) constant; normal; exit the industry
C) lower; normal; switch to the new technology or exit the industry
D) lower; normal; exit the industry

14) Heidi quit her job as a chef making $40,000 per year to start her own restaurant. The first year, Heidi’s restaurant earned $100,000 in revenue. Heidi pays $50,000 per year in wages to the waitresses and hostess, $20,000 per year to buy food, etc. What is Heidi’s economic profit for the year?
A) $30,000  B) $50,000  C) $80,000  D) $-10,000

15) A firm that is technologically efficient
A) is not always economically efficient, and a firm that is economically efficient is not always technologically efficient.
B) must be economically efficient, and a firm that is economically efficient must always be technologically efficient.
C) must be economically efficient, but a firm that is economically efficient is not always technologically efficient.
D) is not always economically efficient, but a firm that is economically efficient must always be technologically efficient.
Techniques that produce 100 sweaters

<table>
<thead>
<tr>
<th>Technique</th>
<th>Labor (hours)</th>
<th>Capital (machines)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>10</td>
<td>35</td>
</tr>
<tr>
<td>B</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>C</td>
<td>10</td>
<td>60</td>
</tr>
<tr>
<td>D</td>
<td>30</td>
<td>20</td>
</tr>
</tbody>
</table>

16) In the above table, the technique that is never economically efficient is
   A) A.          B) B.          C) C.          D) D.

17) An advantage of the corporation over other forms of business organization is that
   A) large-scale, low-cost capital is more readily available.
   B) the owners have unlimited liability.
   C) a corporation’s profits are taxed only once.
   D) the decision-making structure is simple.

18) The profits of a proprietorship are
   A) exempt from taxation.
   B) taxed as capital gains indexed for inflation.
   C) subject to a corporate tax.
   D) taxed at the same rate as the owner’s other personal income.

19) Suppose there are 11 firms in an industry. The largest firm has sales of $10 million. Each of the 10 smaller firms have sales of $1 million each. The Herfindah-Hirschman index for this industry is:
   A) 2750          B) 3750          C) 1500          D) 2250

20) ________ account for the largest portion of all firms; ________ account for most of the total revenue received by businesses.
    A) Partnerships; corporations          B) Corporations; proprietorships
    C) Proprietorships; partnerships       D) Proprietorships; corporations

21) In economics, the short run is the time frame in which the quantities of ________ and the long run is the period of time in which ________.
    A) some resources are fixed; the quantities of all resources can be varied
    B) all resources are variable but technology is fixed; technology is variable
    C) all resources are fixed; the quantities of all resources can be varied
    D) some resources are variable; the quantities of all resources are fixed
<table>
<thead>
<tr>
<th>Labor (workers)</th>
<th>Total product (shirts)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td>2</td>
<td>120</td>
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<tr>
<td>3</td>
<td>180</td>
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<tr>
<td>4</td>
<td>220</td>
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<tr>
<td>5</td>
<td>250</td>
</tr>
</tbody>
</table>

22) The table above shows the short-run product schedule for Virginia's Tee-Shirts. What is the marginal product associated with the hiring the fifth worker?
   A) 50 shirts   B) 235 shirts   C) 30 shirts   D) 250 shirts

23) The table above shows the short-run product schedule for Virginia's Tee-Shirts. The worker for whom the law of diminishing returns initially occurs is the ________ worker.
   A) 3rd   B) 5th   C) 2nd   D) 4th

24) A firm's average variable cost is $90, its total fixed cost is $10,000, and its output is 1,000 units. Its total cost is
   A) between $85,000 and $95,000.   B) between $95,000 and $105,000.
   C) less than $85,000.   D) more than $105,000.

25) As output increases, marginal cost will eventually
   A) increase because of the law of diminishing returns.
   B) decrease because of the law of increasing returns.
   C) decrease because of the law of diminishing returns.
   D) increase because of the law of increasing returns.

26) A firm’s marginal cost is $82, its average total cost is $50, and its output is 800 units. Its total cost of producing 801 units is
   A) greater than $40,080.   B) less than $40,000.
   C) between $40,000 and $40,050.   D) between $40,050 and $40,080.

27) If marginal cost exceeds average variable cost, then ________ cost is ________.
   A) average variable; rising   B) average fixed; at a maximum
   C) average total; falling   D) average total; at a maximum
Techniques that produce 100 sweaters

<table>
<thead>
<tr>
<th>Technique</th>
<th>Labor (hours)</th>
<th>Capital (machines)</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>10</td>
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<td>60</td>
</tr>
<tr>
<td>D</td>
<td>30</td>
<td>20</td>
</tr>
</tbody>
</table>

28) Using the data in the above table, if the price of an hour of labor is $10 and the price of a unit of capital is $20, then the most economically efficient technique for producing 100 sweaters is

A) A.        B) B.        C) C.        D) D.

29) In the above figure, the long-run average cost curve exhibits diseconomies of scale

A) along the entire curve.        B) between 10 and 20 units per hour.
C) between 20 and 25 units per hour.        D) between 5 and 10 units per hour.

30) An industry in which one firm can supply the entire market at a lower price than can two or more firms is called a

A) legal monopoly.        B) price-discriminating monopoly.
C) natural monopoly.        D) single-price monopoly.
31) The figure above shows a monopoly firm’s demand curve. If the price and quantity of haircuts move from point $t$ to point $u$, the monopoly’s
   A) total revenue will rise.
   B) marginal revenue will increase.
   C) total revenue will fall.
   D) total revenue will remain the same.

32) Efforts by a firm to obtain a monopoly
   A) increase consumer surplus.  B) are called rent seeking.
   C) are called price discrimination.  D) are called price taking.
<table>
<thead>
<tr>
<th>Price (dollars)</th>
<th>Quantity demanded</th>
<th>Marginal revenue (dollars)</th>
<th>Total cost (dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>0</td>
<td>0</td>
<td>25</td>
</tr>
<tr>
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<td>6</td>
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<td>73</td>
</tr>
<tr>
<td>9</td>
<td>7</td>
<td>-9</td>
<td>88</td>
</tr>
</tbody>
</table>

33) Using the data in the above table for a single-price monopolist, how many units of output will be produced?
   A) 5 units        B) 0 units        C) 4 units        D) 6 units

34) For the unregulated, single-price monopoly shown in the figure above, when its profit is maximized, output will be
   A) 6 units per year and the price will be $4.
   B) 4 units per year and the price will be $6.
   C) 4 units per year and the price will be $4.
   D) None of the above answers is correct.

35) The unregulated, single-price monopoly shown in the figure above has a total economic profit of
36) In comparison with perfect competition, a single-price monopolist with the same costs creates a _______ consumer surplus and earns a _______ economic profit.

A) larger; smaller  
B) larger; larger  
C) smaller; larger  
D) smaller; smaller

37) The figure above shows the demand for and costs of producing Charlene's Chocolates. If Charlene's Chocolates is a monopoly that charges one price to all customers, then consumer surplus is _______ and it creates a deadweight loss of _______.

A) $400; $200  
B) $800; $400  
C) $0; $200  
D) $200; $100

38) The figure above shows a monopoly firm's demand curve. At point $t$

A) demand is elastic.  
B) total revenue is at a minimum.  
C) demand is inelastic.  
D) demand is unit elastic.
39) According to the Wall Street Journal article on shipping, there has been nearly a tripling of shipping rates over the past few years. Based upon our analysis of the cause of this increase in shipping rates, we should expect to see:

A) in the short run, shipper profits should rise.
B) shipping rates should gradually fall back toward earlier levels as new shippers enter the market.
C) if there are external diseconomies in shipbuilding, shipping rates will not fall to their original level in the long run.
D) all of the above.

40) According to our discussion in class, when the airlines were deregulated in the 1980s,

A) airline ticket prices fell and airline profits rose.
B) airline ticket prices and airline profits both rose.
C) airline ticket prices and airline profits both fell.
D) airline ticket prices rose and airline profits fell.

41) Suppose that a firm is able to sort its consumers into a group that is known to "shop around" and do comparison pricing and another group that does not. If the firm chooses to price discriminate it should charge the "price shoppers" a (higher, lower) price because they will have (more, less) elastic demand.

A) higher; more.  B) higher; less
C) lower; less.  D) lower; more

42) When the cell phone company charges a monthly fee for service that includes 500 minutes and then has a per minute charge for any minutes over 500, it is

A) using a two-part pricing scheme and attempting to convert consumer surplus into its own profits.
B) using a two-part pricing scheme and attempting to convert producer surplus into its own profits.
C) acting as a perfect price discriminator and attempt to convert producer surplus into its own revenue.
D) acting as price discriminator and taking advantage of different price elasticities of demand among consumers.
43) If the monopoly illustrated in the figure above could engage in perfect price discrimination, then it would sell
   A) 50 tickets.       B) 60 tickets.       C) 30 tickets.       D) 100 tickets.

44) If the monopoly illustrated in the figure above could engage in perfect price discrimination, then when it maximizes its profit the total revenue collected by the firm would be

45) Which of the following statements regarding a marginal-cost pricing rule for a natural monopoly is WRONG?
   A) It is efficient.
   B) It sets price equal to marginal cost.
   C) It allows the firm to earn a normal profit.
   D) It maximizes total surplus in a regulated industry.
46) Natural gas is a natural monopoly. The figure above shows the market for natural gas in the city of Lucknow. When an average cost price rule regulation is imposed, the price per household per month is ________.
   A) $20 and 30,000 households are served
   B) $60 and 20,000 households are served
   C) $40 and 30,000 households are served
   D) $40 and 40,000 households are served