ECO201: PRINCIPLES OF MICROECONOMICS

SECOND MIDTERM EXAMINATION

November 18, 2008

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 42 multiple choice questions. Be sure to fill in an answer for all 42 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.
<table>
<thead>
<tr>
<th>Company</th>
<th>Sales (thousands of dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>750</td>
</tr>
<tr>
<td>B</td>
<td>500</td>
</tr>
<tr>
<td>C</td>
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<td>I</td>
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<tr>
<td>J</td>
<td>125</td>
</tr>
<tr>
<td>K</td>
<td>125</td>
</tr>
</tbody>
</table>

1) The above table shows the market shares for all the landscaping services in a suburban area. The four–firm concentration ratio equals
   A) 65 percent.     B) 60 percent.     C) 30 percent.     D) 100 percent.

2) If firms J and K merge, the Herfindahl Hirschman Index would _____ and the four firm concentration ratio would _____
   A) rise; rise.     B) fall ; rise.     C) rise; not change.     D) not change; not change.

3) Taco Bell produces both tacos and burritos because when it does so, Taco Bell experiences
   A) economies of scope.     B) decreasing scope of costs.     C) economies of scale.     D) increasing normal profit.

4) The short run is a period of time in which
   A) the quantity used of at least one resource is fixed.
   B) resource prices are fixed.
   C) output prices are fixed.
   D) the quantities used of all resource are fixed.

5) A company could produce 99 units of a good for $316 or produce 100 units of the same good for $320. The marginal cost of the 100th unit
   A) is $320.     B) is $4.00     C) is $3.20.     D) cannot be calculated with this information.

6) As output increases, marginal cost will eventually
   A) decrease because of the law of increasing returns.     B) decrease because of the law of diminishing returns.     C) increase because of the law of increasing returns.     D) increase because of the law of diminishing returns.
7) Economic profit is the difference between total revenue and  
   A) implicit costs of production.  B) opportunity costs of production.  
   C) interest costs of production.  D) explicit costs of production.

8) Ed is a freelance writer who could work for a newspaper at $25,000 a year but  
   instead works for himself for $41,000 a year. His only business expenses are $1,000  
   for writing materials and $12,000 for rent. Ed’s normal profit is $1,000. Ed’s  
   economic profit from working as a freelance writer is  
   A) $25,000.  B) $2,000.  C) $15,000.  D) $1,000.

<table>
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<tr>
<th>Technique</th>
<th>Number of workers</th>
<th>Units of capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>B</td>
<td>1</td>
<td>5</td>
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<td>C</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>D</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

9) The table above shows four methods for producing 10 computer desks a day. Of the  
   four methods, _______ technologically inefficient.  
   A) D is  B) B and C are  C) B is  D) A and B are

10) The table above shows four methods for producing 10 computer desks a day. If the  
    cost of a worker is $100 a day and the cost of capital is $100 a day, the method that is  
    economically efficient is _______.  
    A) A  B) B  C) B, C, or D  D) C

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

12) Owners of a proprietorship have _______ liability and stockholders in a  
    corporation have _______.  
    A) unlimited; limited  B) limited; limited  
    C) limited; unlimited  D) unlimited; unlimited

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

14) The _______ the Herfindahl–Hirschman Index (HHI), the _______ the industry.  
    A) higher; less competitive  B) higher; more firms in  
    C) lower; less competitive  D) lower; more profitable
<table>
<thead>
<tr>
<th>Output (pies)</th>
<th>Total variable cost (dollars)</th>
<th>Total cost (dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>300</td>
</tr>
<tr>
<td>100</td>
<td>400</td>
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</tr>
<tr>
<td>400</td>
<td>2,800</td>
<td></td>
</tr>
</tbody>
</table>

15) The above table gives some of the costs of the Delicious Pie Company. What is the average total cost of producing 200 pies?
   A) $6.50
   B) $650
   C) $5.00
   D) More information is needed to calculate the average variable cost.

16) A firm’s marginal cost is $30, its average total cost is $50, and its output is 800 units. Its total cost of producing 801 units is
   A) $40,030.
   B) $40,050.
   C) $24,030
   D) $24,050

17) Average variable cost is at a minimum at the same amount of output at which
   A) average product of labor is at a minimum.
   B) marginal product of labor is at a maximum.
   C) average product of labor is at a maximum.
   D) marginal product of labor is at a minimum.

18) Suppose that the marginal product of labor is 8, the average product of labor is 10, and the wage per unit of labor is $20. Based on this information, it will be correct to conclude that:
   A) the marginal cost of another unit of output is $2.50
   B) the average variable cost of a unit of output is $2.00
   C) hiring another worker will cause the average product of labor to fall
   D) all of the above

19) If total fixed cost increases, then the average total cost curve _______ and the marginal cost curve _______.
   A) shifts upward; does not shift
   B) does not shift; does not shift
   C) shifts upward; shifts upward
   D) does not shift; shifts upward
20) In the above figure, if the price is $16, the profit maximizing firm will
   A) produce 35 units.          B) choose not to produce.
   C) produce 10 units.          D) produce 50 units.

21) In the above figure, if the price is $12, the profit maximizing firm will have an economic profit
   A) of more than $100.
   B) that is negative, that is, it will have an economic loss.
   C) of less than $100 but more than $0.
   D) of zero, that is, it will break even with a normal profit.

22) In the above figure, below what minimum price will the firm shutdown rather than produce?
   A) for any price less than $4 per unit       B) for any price less than $16 per unit
   C) for any price less than $12 per unit    D) for any price less than $8 per unit

23) Suppose that the corn industry is perfectly competitive and in a long run equilibrium. The price of corn is $3 per bushel. Since the industry is at a long run equilibrium,
   A) each firm has a zero economic profit.
   B) each firm is producing the output that minimizes average total cost
   C) each firm is producing at the output where average total cost is $3 per bushel.
   D) all of the above.
24) The average total cost curves for plants A, B, C and D are shown in the above figure. Which plant is best to use to produce 50 units per day?
   A) plant A  B) plant B  C) plant C  D) plant D

25) 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) infinite because the firm produces a unique product.
   D) zero because the firm produces a unique product.

26) In the above figure, the firm will produce
   A) 5 units.  B) 15 units  C) 0 units.  D) 20 units.
27) Suppose that the corn industry is perfectly competitive and in a long run equilibrium. The price of corn is $3 per bushel. If the government subsidizes ethanol production and the demand for corn permanently rises, in the SHORT RUN, we should expect to see:
   A) the price of corn rise, existing farmers increase production, and positive economic profits.
   B) the price of corn rise, no change in production levels by farmers, and positive economic profits
   C) the price of corn rise, increased production by farmers, but economic profits will remain at zero.
   D) no change in the price of corn because corn farmers will enter until the price of corn returns to $3.

28) Suppose that the corn industry is perfectly competitive and in a long run equilibrium. The price of corn is $3 per bushel. Assuming the industry is a constant cost industry, if the government subsidizes ethanol production and the demand for corn rises, in the LONG RUN, we should expect to see:
   A) the price of corn rise above $3, no change in production levels by farmers, and zero economic profits
   B) the price of corn rise above $3, existing farmers increase production, and positive economic profits.
   C) the price of corn rise above $3, increased production by farmers, but economic profits will remain at zero.
   D) the price of corn return to $3 because corn farmers will enter until the price of corn returns to $3 and zero economic profits return.

29) Suppose that the corn industry is perfectly competitive and in a long run equilibrium. The price of corn is $3 per bushel. Assuming the industry is an increasing cost industry, if the government subsidizes ethanol production and the demand for corn rises, in the LONG RUN, we should expect to see:
   A) the price of corn rise above $3 and positive economic profits.
   B) the price of corn remains at $3 and zero economic profits.
   C) the price of corn rises above $3, the ATC of corn production is higher than before demand rose, and zero economic profits.
   D) the price of corn settles below $3, the ATC of corn production is lower than before demand rose, and zero economic profits.

30) Suppose that if new firms enter the shipping industry, the cost of the ships and the wages of ship workers increase. This would imply that the shipping industry is:
   A) An increasing cost industry
   B) A decreasing cost industry.
   C) an industry where firms have economies of scale.
   D) an industry where firms have diseconomies of scale.
31) For the unregulated, single-price monopoly shown in the figure above, when its profit is maximized, output will be
   A) 4 units per year and the price will be $4.
   B) 6 units per year and the price will be $4.
   C) 4 units per year and the price will be $6.
   D) None of the above answers is correct.

32) If a monopoly is producing an amount of output at which marginal revenue exceeds marginal cost, in order to increase its profit the monopoly will _______ its price and _______ its output.
   A) raise; decrease
   B) raise; increase
   C) lower; increase
   D) lower; decrease
33) The unregulated, single-price monopoly shown in the figure above has a total economic profit of

34) Price discrimination by a monopoly
   A) increases consumer surplus.        B) decreases consumer surplus.
   C) increases the firm’s profit.       D) Both answers B and C are correct.

35) Some have observed that many restaurants give senior citizens discounts. Based on the theory of price discrimination, this could be explained by
   A) more inelastic demand for restaurant food among senior citizens than in the general population.
   B) more elastic demand for restaurant food among senior citizens than in the general population.
   C) a greater income elasticity of demand for restaurant food among senior citizens than in the general population
   D) a lower income elasticity of demand for restaurant food among senior citizens than in the general population.
36) In the figure above, compared to a perfectly competitive industry with the same costs, a single-price, unregulated monopoly will raise the price by
   A) $4.00 per unit.  
   B) $2.00 per unit.  
   C) $8.00 per unit.  
   D) $6.00 per unit.

37) In the figure above, the deadweight loss created if the industry changes from perfectly competitive to a single-price, unregulated monopoly is
   A) $36.00 per day.  
   B) $8.00 per day.  
   C) zero.  
   D) $24.00 per day.
38) 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) $40 and 30,000 households are served
   B) $20 and 40,000 households are served
   C) $40 and 40,000 households are served
   D) $60 and 20,000 households are served

39) Natural gas is a natural monopoly. The figure above shows the market for natural gas in the city of Lucknow. If a marginal cost price rule regulation is imposed, the price per household per month is _______ and the firm will experience _______ economic profits.
   A) $20; zero.  
   B) $60; positive.  
   C) $20; negative  
   D) $40; zero
40) Prime Pharmaceuticals has developed a new asthma medicine, for which it has a patent. An inhaler can be produced at a constant marginal cost of $2/inhaler. The demand curve, marginal revenue curve, and marginal cost curve for this new asthma inhaler are in the figure above. With its patent giving it a monopoly for its new inhaler, if Prime Pharmaceuticals operates as a single-price monopoly, then there will be a deadweight loss equal to
A) $24 million.  
B) zero.  
C) $32 million.  
D) $16 million.

41) Prime Pharmaceuticals has developed a new asthma medicine, for which it has a patent. An inhaler can be produced at a constant marginal cost of $2/inhaler. The demand curve, marginal revenue curve, and marginal cost curve for this new asthma inhaler are in the figure above. With its patent giving it a monopoly for its new inhaler, if Prime Pharmaceuticals could perfectly price discriminate, then which of the following is true?
A) Inhalers would sell for $5 each.  
B) It would produce and sell 16 million inhalers.  
C) Inhalers would sell for $2 each.  
D) None of the above answers is correct.

42) Prime Pharmaceuticals has developed a new asthma medicine, for which it has a patent. An inhaler can be produced at a constant marginal cost of $2/inhaler. The demand curve, marginal revenue curve, and marginal cost curve for this new asthma inhaler are in the figure above. With its patent giving it a monopoly for its new inhaler, if Prime Pharmaceuticals could perfectly price discriminate, then consumer surplus would equal
A) $64 million.  
B) zero.  
C) $32 million.  
D) $16 million.