ECO201: PRINCIPLES OF MICROECONOMICS

FIRST MIDTERM EXAMINATION

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FORM 1

Directions

1. Fill in your scantron with your unique-id and the form number listed on this page. Proper completion of this step of the directions is worth the equivalent of one question.

2. There are 45 multiple choice questions. All answers should be recorded on the scantron sheet. No credit will be given for answers placed elsewhere. Record your answers on the exam as well because this will be the record of your answers which you can use to determine which questions you got right or wrong on the exam.

3. A calculator is allowed. Cell phones or any other electronic device are prohibited. Access to any electronic device other than a calculator will be treated as a case of academic dishonesty.

4. You have until the end of the class period to finish the exam and complete the scantron. Additional time may be purchased at a price of 5 percentage points per minute.
1) Suppose Pippi buys an oven for her pizza parlor for $100,000. Pippi’s pizza tasted so pitiful she went out of business 12 months later. She was able to sell the pizza oven for $75,000. This decrease in the value of the oven is
A) interest forgone.  B) economic depreciation.  
C) an economic loss.  D) the total implicit rental rate on the oven.

2) Sheila’s Sports Shop is a very popular sporting goods store, which has a yearly revenue of $600,000. Sheila runs the business herself. Her alternative employment options are to be a college swimming coach for $50,000 per year or a construction worker for $40,000 per year. Sheila spends $230,000 purchasing goods for resale to her customers. She also has four employees, who each earn $25,000 per year. Sheila owns the building that her Sports Shop is housed in and she could have rented it out for $20,000 per year. Sheila’s economic profit is equal to
A) $250,000 per year.  B) $270,000 per year.  
C) $160,000 per year.  D) $200,000 per year.

<table>
<thead>
<tr>
<th>Technique</th>
<th>Capital (units)</th>
<th>Labor (units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td>25</td>
<td>30</td>
</tr>
<tr>
<td>X</td>
<td>35</td>
<td>10</td>
</tr>
<tr>
<td>Y</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Z</td>
<td>45</td>
<td>5</td>
</tr>
</tbody>
</table>

3) The table above shows techniques that can be used to produce 100 shirts. The technique that is NOT technologically efficient is
A) W.  B) X.  C) Y.  D) Z.

4) The table above shows techniques that can be used to produce 100 shirts. If the price of an hour of labor is $6 and the price of a unit of capital is $30, then the economically efficient technique is
A) W.  B) X.  C) Y.  D) Z.

5) The principal-agent problem refers to the fact that firms must
A) choose between economic efficiency and technological efficiency. 
B) devise incentives to get employees to work in the best interest of the firm’s owners. 
C) choose between a managerial and an incentive system. 
D) choose between operating as a partnership or corporation.

6) An advantage of a partnership over a corporation is that
A) a partnership’s owners usually have limited liability, while the entire wealth of owners of a corporation is at risk. 
B) a partnership’s cost of capital is low relative to that of a corporation. 
C) a partnership’s profits are taxed only once, while retained profits of a corporation are taxed twice. 
D) a partnership has a perpetual life, while a corporation dies with its owners.
7) Compared to corporations, businesses that are proprietorships
   A) can raise capital more cheaply.
   B) account for a larger percentage of the economy’s total revenue each year.
   C) are far more numerous.
   D) All of the above are correct answers.

8) There are six firms in an industry, with market shares of 50 percent, 25 percent, 10 percent, 10 percent, 3 percent and 2 percent. The four firm concentration ratio is ________, and the HHI is ________.
   A) 95; 3338
   B) 100; 3338
   C) 95; 10,000
   D) 100; 100

9) Which of the following would be classified as a fixed cost for the proprietor who owns and operates the local Texaco station?
   A) The federal excise tax paid on each gallon of Texaco gasoline sold.
   B) The Social Security tax the owner pays the federal government on the owner’s income.
   C) The rent paid on the 10 year lease for the property on which the station is located.
   D) The state income tax on the profit earned.

10) The above table gives some of the costs of the Delicious Pie Company. What is the total fixed cost of producing 100 pies?
    A) $400
    B) $700
    C) $300
    D) More information is needed to calculate the total fixed cost.

11) The above table gives some of the costs of the Delicious Pie Company. The marginal cost of increasing pie output from 200 to 300 pies equals ________ per pie.
    A) $1,000
    B) $1,800
    C) $6
    D) $8

12) The above table gives some of the costs of the Delicious Pie Company. What is the average variable cost of producing 300 pies?
    A) $6
    B) $5
    C) $1,800
    D) More information is needed to calculate the average variable cost.
13) 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 20 units per day?
   A) plant A     B) plant B     C) plant C     D) plant D

14) Diseconomies of scale definitely means that as the firm increases its output, its
   A) short-run average total cost increases.
   B) short-run average total cost decreases.
   C) long-run average total cost increases.
   D) long-run average total cost decreases.

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

16) In perfect competition, _______.
   A) there are restrictions on entry into the market
   B) only firms know their competitors' prices
   C) there are many firms that sell identical products
   D) firms in the market have advantages over firms that plan to enter the market
17) Consider the perfectly competitive firm in the above figure. The profit maximizing level of output for the firm is equal to
A) 17 units.  B) 14 units.  C) 19 units.  D) 0 units.

18) Consider the perfectly competitive firm in the above figure. At the profit maximizing level of output, the firm is
A) incurring an economic loss equal to $187.00.  
B) incurring an economic loss equal to $119.00.  
C) incurring an economic loss equal to $123.50.  
D) making zero economic profit.

19) Consider the perfectly competitive firm in the above figure. The shutdown point occurs at a price of
A) $16.00.  B) $11.00.  C) $12.00.  D) $22.00.

20) Suppose that the firm described in the above diagram is in a constant cost perfectly competitive industry. In the long run, firms will _____ until the price settles ____.  
A) exit; at $22  
B) exit; between $16 and $22  
C) exit; above $22  
D) none of the above

21) Suppose that the firm described in the above diagram is in a decreasing cost perfectly competitive industry. In the long run, firms will _____ until the price settles _____.  
A) exit; between $16 and $22  
B) exit; at $22  
C) exit; above $22  
D) none of the above
22) Suppose that the tobacco industry is a perfectly competitive constant cost industry in a long run equilibrium with a price of $10 per pound. If the government imposes a tax of $2 per pound on tobacco buyers, we should expect that in the **short run,**
A) tobacco producer profits will fall
B) the full price (price including tax) paid by the tobacco buyer will rise by less than $2
C) tobacco producers will reduce their production of tobacco.
D) all of the above

23) Suppose that the tobacco industry is a perfectly competitive constant cost industry in a long run equilibrium with a price of $10 per pound. If the government imposes a tax of $2 per pound on tobacco buyers, we should expect that in the **long run,**
A) the full price (price including tax) paid by the tobacco buyer will rise by $2
B) tobacco producer profits will be lower than before the tax was implemented
C) the price received by tobacco producers will be lower than before the tax was implemented.
D) all of the above

24) Suppose that the tobacco industry is a perfectly competitive increasing cost industry in a long run equilibrium with a price of $10 per pound. If the government imposes a tax of $2 per pound on tobacco buyers, we should expect that in the **long run,** tobacco buyers will pay a price (including tax)
A) above $10 but below $12
B) $12.
C) above $12
D) it is impossible to know without more information.

25) New York City has a medallion system in the taxi industry that we discussed in class. Which of the following should cause the market value of a medallion to rise?
A) an increase in the price of gasoline
B) a decrease in subway fares
C) an increase in the demand for taxi cab rides
D) all of the above

26) Suppose that the federal government increases the tax on fossil fuels like coal and oil. Since farmers use fuel in producing crops, we should expect that, in the **short run,** tax on fossil fuels will cause:
A) a decrease in crop production
B) a decrease in farm profits
C) an increase in prices for farm products
D) all of the above

27) Suppose that the federal government increases the tax on fossil fuels like coal and oil. Since farmers use fuel in producing crops, we should expect that, in the **long run,** the tax on fossil fuels will cause:
A) a reduction in the number of farmers
B) negative economic profits for farmers
C) no change in the price of farm crops
D) all of the above
28) 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 ________ economic profit, and firms with the old technology ________.
   A) lower; zero; exit the industry
   B) constant; zero; exit the industry
   C) lower; zero; switch to the new technology or exit the industry
   D) constant; a positive; make normal profit

29) In the long-run equilibrium for a perfectly competitive market,
   A) average total costs of production are minimized.
   B) the firms' economic profits are zero.
   C) there is no incentive for entry or exit.
   D) All of the above are correct.

30) A monopoly has two key features, which are ________.
   A) barriers to entry and close substitutes
   B) franchises and barriers to entry
   C) barriers to entry and no close substitutes
   D) close substitutes and no barriers to entry

31) An industry in which economies of scale allow one firm to supply the entire market at the lowest possible cost is called a
   A) one-firm monopoly.
   B) natural monopoly.
   C) single-price monopoly.
   D) legal monopoly.

32) A major difference between a single-price monopolist and a perfectly competitive firm is that the
   A) monopolist is guaranteed to earn an economic profit.
   B) monopolist can always increase its profits by increasing the price of its output.
   C) monopolist can maximize profit by setting the price of the output where demand is inelastic.
   D) monopolist's marginal revenue is less than price.

33) If a monopolist was operating in a price range where marginal revenue was negative, it would be
   A) maximizing revenue but not profits.
   B) in the inelastic range of the demand for its product.
   C) in the unit elastic range of the demand for its product.
   D) in the elastic range of the demand for its product.
### 34) Roxie's Movie Theatre is the only one in town. The table above gives the demand schedule for movies. If Roxie's is a single-price monopoly and the marginal cost of a movie is $6, Roxie's will charge ________ a movie and will sell ________ movie tickets a week.
A) $12; 200  B) $6; 400  C) $9; 300  D) $15; 100

<table>
<thead>
<tr>
<th>Price (dollars per movie)</th>
<th>Quantity demanded (movies per week)</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>0</td>
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<tr>
<td>15</td>
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<td>6</td>
<td>400</td>
</tr>
<tr>
<td>3</td>
<td>500</td>
</tr>
</tbody>
</table>

### 35) The figure above shows the demand and cost curves for a single-price monopoly. What economic profit does this firm make?
A) $400  
B) zero  
C) $600  
D) $200
36) The above figure illustrates a single-price unregulated monopolist. If the monopolist maximizes its profit, the consumer surplus equals ______.
A) $10,000
B) $40,000
C) $20,000
D) $45,000

37) 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) $6.00 per unit.  
C) $8.00 per unit.  
D) $2.00 per unit.
38) The above figure illustrates a single-price unregulated monopolist. If the monopolist maximizes its profit, the deadweight loss equals ________.
A) $40,000
B) $45,000
C) $20,000
D) $10,000
39) 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) It would produce and sell 16 million inhalers.
B) Inhalers would sell for $2 each.
C) Inhalers would sell for $5 each.
D) None of the above answers is correct.

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 could perfectly price discriminate, then consumer surplus would equal
A) $32 million.
B) $64 million.
C) zero.
D) $16 million.
41) The figure above provides information about Light-U-Up Utilities, which is a natural monopoly that provides electricity. What is the area of deadweight loss when Light-U-Up produces the unregulated, profit-maximizing level of output?
A) deg
B) acg
C) abd
D) There is no deadweight loss.

42) The figure above provides information about Light-U-Up Utilities, which is a natural monopoly that provides electricity. If Light-U-Up is regulated, what is its economic profit if it must follow a marginal cost pricing rule?
A) $0
B) -$40
C) -$20
D) $30

43) The figure above provides information about Light-U-Up Utilities, which is a natural monopoly that provides electricity. What is the area of deadweight loss when Light-U-Up is regulated and follows a marginal cost pricing rule?
A) deg
B) abd
C) acg
D) There is no deadweight loss.
44) In the above figure, if the natural monopoly is regulated with an average cost pricing rule and the firm does not inflate its costs, the deadweight loss to society is
A) ebc.
B) zero.
C) efc.
D) gac.

45) In the above figure, if the natural monopoly is regulated with an average cost pricing rule and the firm does not inflate its costs, then consumer surplus will be
A) $216 million.
B) $192 million.
C) $108 million.
D) $60 million.
Answers.

1) B
2) D
3) A
4) C
5) B
6) C
7) C
8) A
9) C
10) C
11) D
12) A
13) A
14) C
15) C
16) C
17) A
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38) D
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40) C
41) B
42) C
43) D
44) A
45) C