Econ 202 Exam 3 Practice Problems

Principles of Microeconomics
Dr. Phillip Miller

Multiple Choice
*Identify the choice that best completes the statement or answers the question.*

Chapter 13 – Production and Costs

1. Total revenue minus both explicit and implicit costs is called
   a. accounting profit.
   b. economic profit.
   c. average total cost.
   d. None of the above is correct.

**Scenario 13-3**
Tony is a wheat farmer, but he also spends part of his day teaching guitar lessons. Due to the popularity of his local country western band, Farmer Tony has more students requesting lessons than he has time for if he is to also maintain his farming business. Farmer Tony charges $25 an hour for his guitar lessons. One spring day, he spends 10 hours in his fields planting $130 worth of seeds on his farm. He expects that the seeds he planted will yield $300 worth of wheat.

2. Refer to Scenario 13-3. What is the total opportunity cost of the day that Farmer Tony incurred for his spring day in the field planting wheat?
   a. $130
   b. $250
   c. $300
   d. $380

**Figure 13-2**
3. **Refer to Figure 13-2.** The graph illustrates a typical production function. Based on its shape, what does the corresponding total cost curve look like?
   a. an upward-sloping curve that increases at an increasing rate
   b. an upward-sloping curve that increases at a decreasing rate
   c. a downward-sloping curve
   d. a horizontal straight line

<table>
<thead>
<tr>
<th>Number of Workers</th>
<th>Number of Machines</th>
<th>Output (corks produced per hour)</th>
<th>Marginal Product of Labor</th>
<th>Cost of Workers</th>
<th>Cost of Machines</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
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<td>1</td>
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<td>80</td>
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</table>

4. **Refer to Table 13-4.** Assume Gallo's currently employs 2 workers. What is the marginal product of labor when Gallo's adds a 3rd worker?
   a. 5 corks per hour
   b. 10 corks per hour
   c. 20 corks per hour
   d. 25 corks per hour

**Figure 13-3**
5. Refer to Figure 13-3. The graph illustrates a typical total cost curve. Based on its shape, what does the corresponding production function (i.e., total product curve) look like?
   a. an upward-sloping curve that increases at an increasing rate
   b. an upward-sloping curve that increases at a decreasing rate
   c. a downward-sloping curve
   d. a horizontal straight line

6. For a large firm that produces and sells automobiles, which of the following costs would be a variable cost?
   a. the unemployment insurance premium that the firm pays to the state of Missouri that is calculated based on the number of worker-hours that the firm uses
   b. the cost of the steel that is used in producing automobiles
   c. the cost of the electricity of running the machines on the factory floor
   d. All of the above are correct.

7. Which of the following expressions is correct?
   a. marginal cost = (change in quantity of output)/(change in total cost)
   b. average total cost = (total cost)/(quantity of output)
   c. total cost = variable cost + marginal cost
   d. average variable cost = (quantity of output)/(total variable cost)

<table>
<thead>
<tr>
<th>Table 13-10</th>
<th>Jimmy's Gigaplots Factory</th>
</tr>
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<tbody>
<tr>
<td>Quantity of gigaplots</td>
<td>Fixed Cost</td>
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<tr>
<td>1</td>
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<tr>
<td>2</td>
<td>$28</td>
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<tr>
<td>7</td>
<td>$133</td>
</tr>
<tr>
<td>8</td>
<td></td>
</tr>
</tbody>
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8. Refer to Table 13-10. What is the average fixed cost of producing 8 gigaplots at Jimmy's Gigaplot factory?
   a. $2.12
   b. $3.13
   c. $20.00
   d. $24.37
**Scenario 13-7**
Farmer Jack is a watermelon farmer. If Jack plants no seeds on his farm, he gets no harvest. If he plants 1 bag of seeds, he gets 30 watermelons. If he plants 2 bags of seeds, he gets 50 watermelons. If he plants 3 bags of seeds he gets 60 watermelons. A bag of seeds costs $100, and the costs of seeds are his only costs.

9. Refer to Scenario 13-7. Which of the following statements is(are) true of Farmer Jack's marginal cost?
   (i) His marginal cost curve is U-shaped.
   (ii) His marginal cost decreases with increased watermelon output.
   (iii) His marginal cost reflects diminishing marginal product.
   
   a. (ii) only
   b. (iii) only
   c. (i) and (iii) only
   d. (i) and (ii) only

10. The minimum points of the average variable cost and average total cost curves occur where
   a. the marginal cost curve lies below the average variable cost and average total cost curves.
   b. the marginal cost curve intersects those curves.
   c. the average variable cost and average total cost curves intersect.
   d. the slope of total cost is the smallest.

**Figure 13-6**

11. Refer to Figure 13-6. Which of the figures represents the total cost curve for a firm?
   a. Figure 1
   b. Figure 2
   c. Figure 3
   d. Figure 4

12. In the long run Firm A incurs total costs of $1,200 when output is 30 units and $1,400 when output is 40 units. Firm A exhibits
   a. diseconomies of scale because total cost is rising as output rises.
   b. diseconomies of scale because average total cost is rising as output rises.
   c. economies of scale because total cost is rising as output rises.
   d. economies of scale because average total cost is falling as output rises.

13. Diseconomies of scale occur when
   a. average fixed costs are falling.
   b. average fixed costs are constant.
   c. long-run average total costs rise as output increases.
   d. long-run average total costs fall as output increases.
Chapter 14 – Perfect Competition

14. Which of the following is not a characteristic of a perfectly competitive market?
   a. Buyers and sellers are price takers.
   b. Each firm sells a virtually identical product.
   c. Free entry is limited.
   d. Each firm chooses an output level that maximizes profits.

<table>
<thead>
<tr>
<th>Table 14-2</th>
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<tbody>
<tr>
<td>Quantity</td>
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<tr>
<td>8</td>
</tr>
<tr>
<td>9</td>
</tr>
</tbody>
</table>

15. Refer to Table 14-2. Over what range of output is marginal revenue declining?
   a. 1 to 6
   b. 3 to 7
   c. 7 to 9
   d. None; marginal revenue is constant over the entire range of output.
Table 14-5

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Total Revenue</th>
<th>Total Cost</th>
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<tbody>
<tr>
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<tr>
<td>9</td>
<td>$81</td>
<td>$82</td>
</tr>
</tbody>
</table>

16. **Refer to Table 14-5.** At a production level of 4 units which of the following is true?
   a. Marginal cost is $4.
   b. Total revenue is greater than variable cost.
   c. Marginal revenue is less than marginal cost.
   d. The firm is maximizing profit.

Table 14-6

**John’s Vineyard**

<table>
<thead>
<tr>
<th>Costs</th>
<th>Revenues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity Produced</td>
<td>Total Cost</td>
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<tr>
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</tr>
<tr>
<td>8</td>
<td>$582</td>
</tr>
</tbody>
</table>

17. **Refer to Table 14-6.** What is the marginal cost of the 5th unit?
   a. $55
   b. $60
   c. $68
   d. $80

18. **Refer to Table 14-6.** What is the marginal cost of the 8th unit?
   a. $0
   b. $72.75
   c. $120
   d. $502
19. Refer to Table 14-6. What is the marginal revenue from selling the 1st unit?
   a. $30
   b. $50
   c. $80
   d. $160

20. Refer to Table 14-6. What is the marginal revenue from selling the 5th unit?
   a. $12
   b. $68
   c. $80
   d. $480

21. Refer to Table 14-6. At what quantity does John’s Vineyard maximize profits?
   a. 3
   b. 6
   c. 7
   d. 8

22. Refer to Table 14-6. What is John’s Vineyard's economic profit at its profit-maximizing output level?
   a. $25
   b. $75
   c. $115
   d. $225

23. A profit-maximizing firm will shut down in the short run when
   a. price is less than average variable cost.
   b. price is less than average total cost.
   c. average revenue is greater than marginal cost.
   d. average revenue is greater than average fixed cost.

24. In the long run, all of a firm's costs are variable. In this case the exit criterion for a profit-maximizing firm is to shut down if
   a. price is less than average total cost.
   b. price is greater than average total cost.
   c. average revenue is greater than average fixed cost.
   d. average revenue is greater than marginal cost.

25. In the long run, each firm in a competitive industry earns
   a. zero accounting profits.
   b. zero economic profits.
   c. positive economic profits.
   d. Both a and b are correct.
Chapter 15 – Monopoly

26. Which of the following is not an example of a barrier to entry?
   a. Mighty Mitch’s Mining Company owns a unique plot of land in Tanzania, under which lies the only large deposit of Tanzanite in the world.
   b. A college student starts a part-time tutoring business.
   c. A novelist obtains a copyright for her new book.
   d. A taxi cab driver in New York City obtains a license to legally provide transportation in New York City.

27. Drug companies are allowed to be monopolists in the drugs they discover in order to
   a. allow drug companies to charge a price that is equal to their marginal cost.
   b. discourage new firms from entering the drug market.
   c. encourage research.
   d. allow the government to earn patent revenue.

28. For a monopolist, when does marginal revenue exceed average revenue?
   a. never
   b. when output is less than the profit-maximizing level of output
   c. when output is greater than the profit-maximizing level of output
   d. for all levels of output greater than zero

29. Suppose a firm has a monopoly on the sale of widgets and faces a downward-sloping demand curve. When selling the 100th widget, the firm will always receive
   a. less marginal revenue on the 100th widget than it received on the 99th widget.
   b. more average revenue on the 100th widget than it received on the 99th widget.
   c. more total revenue on the 100 widgets than it received on the first 99 widgets.
   d. a lower average cost per unit at 100 units output than at 99 units of output.

30. For a monopoly,
   a. average revenue exceeds marginal revenue.
   b. average revenue equals marginal revenue.
   c. average revenue is less than marginal revenue.
   d. price equals marginal revenue.
Refer to Figure 15-4. If the monopoly firm wants to maximize its profit, it should operate at a level of output equal to
a. Q1.
b. Q2.
c. Q3.
d. Q4.

When a certain monopoly sets its price at $8 it sells 64 units. When the monopoly sets its price at $10 it sells 60 units. The marginal revenue for the firm over this range is
a. $11.
b. $22.
c. $33.
d. $44.

After the patent runs out on a brand name drug, generic drugs enter the market. What happens next in the market?
- Price increases, and total surplus decreases.
- Price decreases, and total surplus decreases.
- Price decreases, and total surplus increases.
- Price increases, and total surplus increases.

Splitting up a monopoly is often justified on the grounds that
- consumers prefer dealing with small firms.
- small firms have lower costs.
- competition is inherently efficient.
- nationalization is a less-preferred option.
35. The George Stigler quote, “...the degree of ‘market failure’ for the American economy is much smaller than the ‘political failure’ arising from the imperfections of economic policies...” illustrates the advantage of which type of public policy toward monopolies?
   a. antitrust laws
   b. regulation
   c. public ownership
   d. “do nothing”

36. Which of the following statements is not correct?
   a. The government may use antitrust laws to break up an existing company to improve competition.
   b. The government may break up a natural monopoly to lower the price charged to customers.
   c. Sometimes the best strategy is for the government to do nothing about monopoly inefficiency because the “fix” may be worse than the problem.
   d. Private ownership is typically preferred to public ownership.

37. A monopolist faces the following demand curve:

<table>
<thead>
<tr>
<th>Price</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>$8</td>
<td>300</td>
</tr>
<tr>
<td>$7</td>
<td>400</td>
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<tr>
<td>$6</td>
<td>500</td>
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<td>600</td>
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<td>700</td>
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<td>$3</td>
<td>800</td>
</tr>
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<td>$2</td>
<td>900</td>
</tr>
<tr>
<td>$1</td>
<td>1,000</td>
</tr>
</tbody>
</table>

The monopolist has fixed costs of $1,000 and has a constant marginal cost of $2 per unit. If the monopolist were able to perfectly price discriminate, how many units would it sell?
   a. 400
   b. 500
   c. 900
   d. 4,200

Scenario 15-6
An airline knows that there are two types of travelers: business travelers and vacationers. For a particular flight, there are 100 business travelers who will pay $600 for a ticket while there are 50 vacationers who will pay $300 for a ticket. There are 150 seats available on the plane. Suppose the cost to the airline of providing the flight is $20,000, which includes the cost of the pilots, flight attendants, fuel, etc.

38. Refer to Scenario 15-6. How much profit will the airline earn if it sets the price of a ticket at $600?
   a. -$5,000
   b. $15,000
   c. $40,000
   d. $60,000
39. **Refer to Scenario 15-6.** How much profit will the airline earn if it sets the price of a ticket at $300?
   a. -$15,000
   b. -$5,000
   c. $25,000
   d. $45,000
MULTIPLE CHOICE

1. B
2. D
3. A
4. B
5. B
6. D
7. B
8. B
9. B
10. B
11. B
12. D
13. C
14. C
15. D
16. B
17. C
18. C
19. C
20. C
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25. B
26. B
27. C
28. A
29. A
30. A
31. B
32. B
33. C
34. C
35. D
36. B
37. C
38. C
39. C