Sample Exam 2

1. Suppose the base year for a Lespeyres index is 2001. The value of the index is 1.3 in 2004 and 1.6 in 2006. By how much did the cost of the bundle increase between 2004 and 2006?
   A. .3%  B. 23%  C. 0.23%  D. 60%

2. The amount of compensation associated with the income effect of a price change is called
   A. A compensation variation   C. Consumer surplus
   B. An income effect   D. A subsidy

![Figure 6.1](image)

3. According to Figure 6.1,
   A. Soup is a normal good   C. Soup is a Giffen good
   B. Soup is an inferior good   D. Bread is an inferior good

![Figure 6.4](image)
4. Refer to Figure 6.4. If the price of computers is $1,000, then consumer surplus is given by the area represented by
A. c+d  B. b  C. b+c  D. a+b+e

<table>
<thead>
<tr>
<th>Number of Workers</th>
<th>Units of Capital</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>16</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>22</td>
</tr>
<tr>
<td>6</td>
<td>5</td>
<td>23</td>
</tr>
</tbody>
</table>

Table 7.1

5. Refer to Table 7.1. What is the marginal product of the 3rd worker?
A. 4 units of output
B. 3 units of output
C. 15 units of output
D. 5 units of output

6. The rate at which one input can be substituted for another is shown by
A. The slope of a firm's production function
B. The slope of a firm's efficient production frontier
C. The shape of a firm's isoquants
D. The shape of a firm's production function

7. Refer to Table 7.1. What is the average product of the 4th worker?
A. 4 units of output  C. 16 units of output
B. 3 units of output  D. 6 units of output

8. As long as a firm can freely dispose of any extra inputs it may have
A. Its production function must slope downward
B. Its production function must be concave
C. Its production function must slope upward
D. Its production function must be convex
9. Refer to Figure 8.6, which shows just three of a firm's various possible short-run average cost curves. Which of the following statements is true?
A. The firm experiences increasing returns to scale at production levels above 130 units of output
B. The firm experiences constant returns to scale
C. The firm experiences increasing returns to scale up to a production level of 130 units of output
D. The firm experiences decreasing returns to scale up to a production level of 130 units of output

10. Suppose that a firm produces both steel and electricity. It is cheaper for this firm to produce both goods than it would be if they were produced by two separate firms. Further, as this firm increases its production levels of both products, the average cost of producing steel rises, while the average cost of producing electricity remains constant. This firm experiences
A. Economies of scope, diseconomies of scale in the production of steel and constant returns to scale in the production of electricity
B. Economies of scope, economies of scale in the production of steel and constant returns to scale in the production of electricity
C. Diseconomies of scope, economies of scale in the production of steel and constant returns to scale in the production of electricity
D. Diseconomies of scope, diseconomies of scale in the production of steel and increasing returns to scale in the production of electricity

11. As a firm with decreasing returns to scale technology increases its output,
A. It will experience diseconomies of scale and its average cost of production will rise
B. It will experience diseconomies of scale and its average cost of production will fall
C. It will experience economies of scale and its average cost of production will rise
D. It will experience economies of scale and its average cost of production will fall
12. A firm that is experiencing economies of scale has ______ returns to scale technology and a ______ average cost curve.
A. Increasing; positively-sloped
B. Increasing; negatively-sloped
C. Decreasing; positively-sloped
D. Decreasing; negatively-sloped

13. Refer to Figure 8.4. What is the marginal cost of producing 100 units of output?
A. $125  B. $210  C. $85   D. $2.10

14. Since sunk costs are incurred no matter what,
A. They are relevant in deciding how much to produce
B. They are essential in the profit-maximizing sales quantity formula
C. They can generally be ignored in making economic decisions
D. They are considered fixed costs

Scenario 9.1: Dan is the owner of a price-taking company that manufactures sporting goods. One particular facility Dan owns produces baseball bats and gloves. His cost function for baseball bats is 
\[ C = 100Q_B + Q_B^2 + Q_BQ_G \] and his marginal cost \[ MC_B = 100 + 2Q_B + Q_G \], where \( Q_B \) is the output level for bats and \( Q_G \) is the output for gloves. Dan’s cost function for baseball gloves is 
\[ CG = 50Q_G + Q_G^2 + Q_GQ_B \] and his marginal cost is \( MC_G = 50 + 2Q_G + Q_B \). The price of a baseball bat is $240 and the price of a glove is $150.

15. Refer to Scenario 9.1. If Dan were to shut down his production of bats and only produce gloves, what would be his profit-maximizing sales quantity of gloves?
A. 20  B. 25  C. 30  D. 50

16. A competitive firm's profit-maximizing sales quantity ______ when the market price increases.
A. Cannot decrease
B. Cannot increase
C. May increase or decrease
D. Will always decrease
17. The simplified profit maximization equation is
A. Profit = Revenue - Cost
B. Profit = Revenue + Cost
C. Profit = Revenue/Cost
D. Profit + Revenue x Cost

18. If a person attaches more importance to leisure than they do to labor, then their indifference curves
A. Will lie closer to the labor axis
B. Will lie closer to the leisure axis
C. Will be positively-sloped
D. Will be L-shaped

![Graphs A, B, C](image)

**Figure 7.6**

19. Refer to Figure 7.6. Which graph represents constant returns to scale?
A. A
B. B
C. C
D. Both graph A and graph C

31. Refer to Table 8.1. Assume the wage rate is $10 and the firm has $1,000 in unavoidable fixed cost. What is the average variable cost of producing 22 units of output?
A. $0.91
B. $45.45
C. $0.45
D. $0.83
20. Which of the following is NOT true about marginal revenue?
A. It is a firm's marginal benefit
B. It is defined as the extra revenue generated by the production of one more unit
C. It can be expressed mathematically as \( MR = \frac{R(Q - \Delta Q) - R(Q)}{\Delta Q} \)
D. It can be expressed mathematically as \( \Delta R / \Delta Q \)

21. Characteristics of a perfectly competitive market include
A. The presence of transaction costs
B. Differentiated products
C. Many sellers, each with a small market share
D. All of the above

22. Refer to Figure 9.4. In the long run, how much should the firm produce at the price \( P_3 \)?
A. 0   B. \( Q_1 \)   C. \( Q_2 \)   D. \( Q_3 \)
Sample Exam 2 Key

1. (p. 17) B
2. (p. 10) A
3. (p. 6) A
4. (p. 12) D
5. (p. 9) A
6. (p. 20) C
7. (p. 9) A
8. (p. 7) C
9. (p. 31) C
10. (p. 32) A
11. (p. 31) A
12. (p. 31) B
13. (p. 27) A
14. (p. 19) C
15. (p. 21) D
16. (p. 14) A
17. B
18. A
19. A
20. C
21. C
22. D