1. If the income elasticity of demand for cereal is -.25 and the income elasticity of demand for peaches is 1.5 then
   A) cereal and peaches are substitutes.
   B) cereal and peaches are complements.
   C) cereal is a normal good and peaches are an inferior good.
   D) cereal is an inferior good and peaches are a normal good.

2. Suppose you produce tie-dyed t-shirts. You notice that when you charge $10 per shirt, you sell 200 shirts. Also, when you raise the price to $12, you sell 150 shirts. As the price goes up from $10 to $12, your total revenue __________, therefore the demand for tie-dyed t-shirts must be
   A) increases; elastic.
   B) increases; inelastic.
   C) decreases; elastic.
   D) decreases; inelastic.

3. Suppose a firm doubles all of its inputs and this results in the firm tripling its output. The firm is experiencing
   A) constant returns to scale
   B) economies of scale
   C) diseconomies of scale
   D) increasing marginal product

4. If the price elasticity of demand for a good is -1.5, then a 5% decrease in the price of the good will cause a
   A) 7.5% increase in the quantity demanded.
   B) 7.5% decrease in the quantity demanded.
   C) 3.33% increase in the quantity demanded.
   D) 3.33% decrease in the quantity demanded.
   E) None of the above

5. If demand for a good is perfectly inelastic, then the demand curve will be
   A) a horizontal line.
   B) a vertical line.
   C) a straight line with a constant negative slope.
   D) flatter and flatter as the price of the good falls.

6. Ceteris paribus, the fewer substitutes there are for a good the more __________ the demand for the good, and the longer period of time people have to adjust to a price change, the more __________ the good.
   A) elastic; elastic
   B) elastic; inelastic
   C) inelastic; elastic
   D) inelastic; inelastic
7. If the slope of a demand curve is constant, then the price elasticity of demand for the good will

A) be constant.
B) become more elastic as price increases.
C) become more elastic as price decreases.

8. Refer to the diagram above. If the market price is $15, the profit maximizing firm should produce ______________ units of output and will make a profit of ________.

A) 45; 900
B) 60; 900
C) 45; 540
D) 60; -60
E) 60; 720

The next two questions refer to the following table:

<table>
<thead>
<tr>
<th># of units of output</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>$100</td>
</tr>
<tr>
<td>1</td>
<td>$150</td>
</tr>
<tr>
<td>2</td>
<td>$175</td>
</tr>
<tr>
<td>3</td>
<td>$225</td>
</tr>
<tr>
<td>4</td>
<td>$300</td>
</tr>
<tr>
<td>5</td>
<td>$400</td>
</tr>
</tbody>
</table>

9. The marginal cost of the 3rd unit of output is

A) $0
B) $100
C) $75
D) $225
E) None of the above
10. The average total cost of producing 4 units of output is

A) $25  
B) $50  
C) $75  
D) $300  
E) None of the above

<table>
<thead>
<tr>
<th>Number of workers</th>
<th>Total output</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>50</td>
</tr>
<tr>
<td>3</td>
<td>75</td>
</tr>
<tr>
<td>4</td>
<td>88</td>
</tr>
<tr>
<td>5</td>
<td>95</td>
</tr>
<tr>
<td>6</td>
<td>90</td>
</tr>
</tbody>
</table>

11. Refer to the table above. The marginal product of the 4th worker is

A) 88  
B) 22  
C) 12  
D) 13  
E) None of the above

12. When diminishing marginal product (returns) sets in,

A) average variable cost increases.  
B) average total cost increases.  
C) marginal cost increases.  
D) marginal cost decreases.  
E) total cost decreases.

13. The short run refers to

A) a period of time in which at least one input is fixed.  
B) a period of time in which all inputs are fixed.  
C) a period of time in which output is fixed.

14. If the marginal cost of producing a product is greater than the average total cost of producing the product then it must be the case that

A) the firm should produce less of the good in order to maximize profit.  
B) the firm will make a loss.  
C) the average total cost must be increasing.  
D) the firm should produce less of the good in order to maximize profit.

15. Which of the following is NOT a characteristic of a perfectly competitive market?

A) There are many buyers and sellers, each of which is very small compared to the entire market.  
B) The products that each seller produces are identical.  
C) There is perfect knowledge regarding the prices and qualities available to the consumers.  
D) Sellers compete with each other by charging different prices.  
E) It is easy for sellers to enter and exit the market in the long run.
16. If the market price of a product is above average variable cost but below average total cost, the firm will make a _________ in the short run, firms will _________ the market in the long run, and the market price of the product will _________ in the long run.

A) loss; enter; fall  
B) profit; enter; fall  
C) loss; exit; fall  
D) profit; enter; rise  
E) loss; exit; rise

17. In long run equilibrium, 

A) Price = MC = ATC  
B) Price = MC > ATC  
C) Price > MC = ATC  
D) Price < MC = ATC  
E) Price = MC < ATC
Short Answer. Please give concise, accurate answer to the following questions.

1. (16 points) Suppose the demand for baseballs is given by:

\[ Q_d = 1000 - 100P \]

where \( Q_d \) is the quantity demanded of baseballs and \( P \) is the price of baseballs.

a) If the price of baseballs is $4, what will be the total revenue collected from the sale of baseballs?

b) What is the Price Elasticity of Demand for baseballs between the prices of $6 and $7? (Please give your answer in the form of a fraction.)

c) What is the price elasticity of demand at a price of $3? (Please give your answer in the form of a fraction.)

d) If the price of baseballs is $3, should the firm raise or lower their price if they want to increase their total revenue.
2. (12 points) You are operating a firm in a perfectly competitive market. In the short run, you have fixed costs of $2000. Your variable costs are given in the following table:

<table>
<thead>
<tr>
<th>Q</th>
<th>TVC</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>500</td>
</tr>
<tr>
<td>2</td>
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<td>1000</td>
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<tr>
<td>4</td>
<td>1500</td>
</tr>
<tr>
<td>5</td>
<td>2500</td>
</tr>
</tbody>
</table>

Complete the following table:

<table>
<thead>
<tr>
<th>Market Price</th>
<th>Profit maximizing level of output</th>
<th>Profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>$300</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$400</td>
<td></td>
<td></td>
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<tr>
<td>$600</td>
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<td></td>
</tr>
<tr>
<td>$1200</td>
<td></td>
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</tr>
</tbody>
</table>
Multiple Choice Answer Key Exam 2

Form A

Form B

Form C

Short Answer Key

Short Answer. Please give concise, accurate answer to the following questions.

1. (16 points) Suppose the demand for baseballs is given by:
   \[ Q_d = 1000 - 100P \]
   where \( Q_d \) is the quantity demanded of baseballs and \( P \) is the price of baseballs.
   
   a) If the price of baseballs is $4, what will be the total revenue collected from the sale of baseballs?
   \[ TR = $2400 \]

   b) What is the Price Elasticity of Demand for baseballs between the prices of $6 and $7? (Please give your answer in the form of a fraction.)
   \[-13/7\]

   c) What is the price elasticity of demand at a price of $3? (Please give your answer in the form of a fraction.)
   \[-3/7\]

   d) If the price of baseballs is $3, should the firm raise or lower their price if they want to increase their total revenue.
   
   **Raise the Price**
2. (12 points) You are operating a firm in a perfectly competitive market. In the short run, you have fixed costs of $2000. Your variable costs are given in the following table:

**Note:** It was not necessary to fill in the table to receive credit, but it is helpful in answering the question below. The answers are provided here for your convenience.

<table>
<thead>
<tr>
<th>Q</th>
<th>TVC</th>
<th>TFC</th>
<th>TC</th>
<th>AVC</th>
<th>AFC</th>
<th>ATC</th>
<th>MC</th>
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</thead>
<tbody>
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<td>4500</td>
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<td>400</td>
<td>900</td>
<td>1000</td>
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</tbody>
</table>

Complete the following table:

<table>
<thead>
<tr>
<th>Market Price</th>
<th>Profit maximizing level of output</th>
<th>Profit</th>
</tr>
</thead>
<tbody>
<tr>
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