

Schuetze Lab 9 Material

1. The total product curve:
 - A) shows the relation between output and the quantity of a variable input for varying levels of the fixed input.
 - B) will become flatter as output increases, if there are diminishing returns to the variable input.
 - C) will be downward sloping, if there are diminishing returns to the variable input.
 - D) will become horizontal, when the marginal product of the variable input is constant.

2. Buford Bus Manufacturing installs a new assembly line. As a result, the output produced per worker increases. The marginal cost of output at Buford:
 - A) will increase. (The *MC* curve will shift left.)
 - B) will decrease. (The *MC* curve will shift right.)
 - C) will be unchanged.
 - D) is at its maximum.

3. The marginal cost curve is the mirror image of the:
 - A) total product curve.
 - B) average product curve.
 - C) marginal product curve.
 - D) average total cost curve.

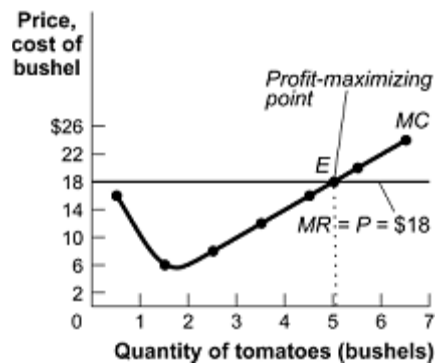
4. The idea of diminishing returns to an input in production suggests that if a local university adds more and more custodians, the marginal product of labour for the custodial staff will _____ over time.
 - A) increase at an increasing rate
 - B) increase at a decreasing rate
 - C) decrease
 - D) not change

5. The _____ is the increase in output obtained by hiring an additional worker.
 - A) average product
 - B) total product
 - C) marginal product
 - D) marginal cost

6. Rebecca knows that Becca Furniture's marginal cost curve is above the average total cost curve. This means Becca Furniture's average total cost curve:
- A) must be rising.
 - B) must be flat.
 - C) must be falling.
 - D) may be rising, falling, or flat, depending on other things.
7. A fixed cost:
- A) will exist only in the short run.
 - B) is independent of the level of output.
 - C) will be positive, even if the firm doesn't produce any output in the short run.
 - D) All of the above are correct.
8. If all firms in an industry are price-takers, then:
- A) each firm can take the price that it wants to charge and sell at this price, provided it is not too different from the prices other firms are charging.
 - B) each firm takes the market price as given for its current output level, recognizing that the price will change if it alters its output significantly.
 - C) an individual firm cannot alter the market price even if it doubles its output.
 - D) the market sets the price, and each firm can take it or leave it (by setting a different price).
9. Suppose a perfectly competitive firm can increase its profits by increasing its output. Then, it must be the case that the firm's:
- A) marginal revenue exceeds its marginal cost.
 - B) price exceeds its average total cost.
 - C) marginal cost exceeds its marginal revenue.
 - D) price exceeds its marginal revenue.

Use the following to answer question 10:

Figure: Marginal Revenue, Costs, and Profits



10. (Figure: Marginal Revenue, Costs, and Profits) In the accompanying figure, if market price decreases to \$16, marginal revenue _____ and profit-maximizing output _____.
- A) increases; decreases
 - B) increases; increases
 - C) decreases; increases
 - D) decreases; decreases

Multiple Choice Answers

- 1. B
- 2. B
- 3. C
- 4. C
- 5. C
- 6. A
- 7. D
- 8. C
- 9. A
- 10. D

Short Answer Questions

You produce widgets. Currently you produce 4 widgets at a total cost of \$40.

- a. What is your average total cost?
- b. Suppose you could produce one more (the fifth) widget at a marginal cost of \$5. If you do produce that fifth widget, what will your average total cost be? Has your average total cost increased or decreased? Why?
- c. Suppose instead that you could produce one more (the fifth) widget, but at a marginal cost of \$20. If you do produce that fifth widget, what will your average total cost be? Has your average total cost increased or decreased? Why

Short Answer Solutions

- a. Your average total cost is $\$40/4 = \10 per widget
- b. If you produce one more widget you are producing 5 widgets at a total cost of $\$40 + \$5 = \$45$. Your average total cost is therefore $\$45/5 = \9 . Your average total cost has decreased because the marginal cost of the additional widget was below the average total cost before you produced the additional widget.
- c. If you produce one more widget you are producing 5 widgets at a total cost of $\$40 + \$20 = \$60$. Your average total cost is therefore $\$60/5 = \12 . Your average total cost has increased because the marginal cost of the additional widget was above the average total cost before you produced the additional widget.

Answer Key