

Quiz #4 -- March 8, 2018

- Chad runs a coffee shop that has annual revenues of \$300,000, supply costs of \$60,000, and employee salaries of \$60,000. He has the option of renting out the coffee shop for \$80,000 per year, and he has three outside offers from competitors to work as a senior barista at Starbucks (for an annual salary of \$30,000), at Simon's coffee house (for an annual salary of \$40,000), and at Peet's coffee shop (for an annual salary of \$60,000). He can only hold one job at a time. What should Chad do?
 - He should rent out his coffee shop and take the job at Starbucks.
 - He should rent out his coffee shop and take the job at Simon's.
 - He should rent out his coffee shop and take the job at Peet's.
 - He should continue to run his coffee shop.

Use the following to answer question 2.

Table 7.1

Output Quantity, Q	Fixed Costs, FC	Variable Costs, VC	Total Costs, TC	Average Fixed Cost, AFC	Average Variable Cost, AVC	Average Total Cost, ATC
0	70	0				
1	70	40				
2	70	70				
3	70	120				
4	70	210				
5	70	330				

- (Table 7.1) Which of the following is correct at 4 units of output?
 - $AFC = 70$; $AVC = 21$; $ATC = 91$
 - $AFC = 17.50$; $AVC = 52.50$; $ATC = 70$
 - $AFC = 0.06$; $AVC = 0.02$; $ATC = 0.08$
 - $AFC = 280$; $AVC = 840$; $ATC = 1,320$
- A fixed cost is a cost that:
 - does not change with the level of the firm's output.
 - is associated with the firm's variable inputs.
 - decreases as the firm increases output.
 - captures the wear and tear of using capital in the production process.

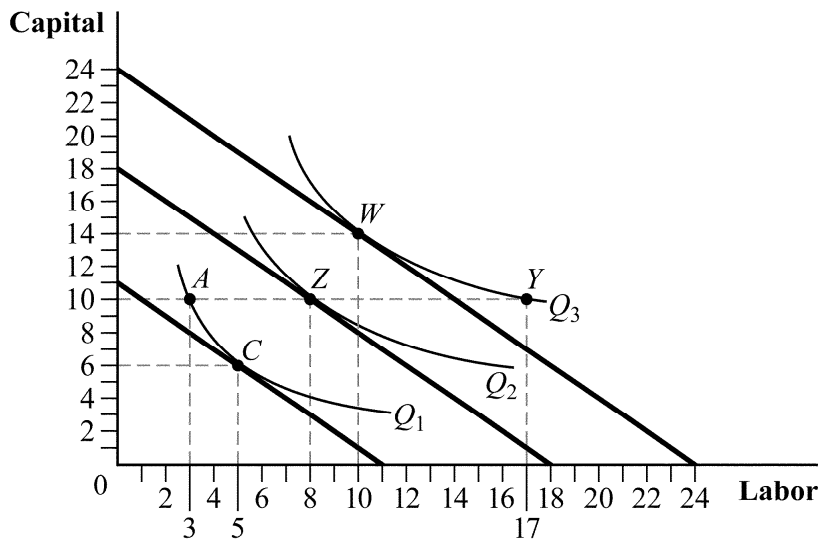
4. Which of the following statements is TRUE?

- I. $MC = \Delta TC / \Delta Q$
- II. $MC = \Delta VC / \Delta Q$
- III. Marginal cost falls as diminishing returns to labor set in.

- A) I, II, and III B) I and II C) II and III D) I and III

Use the following to answer question 5.

Figure 7.10



5. (Figure 7.10) Suppose the firm is producing at point Z and wants to reduce its output to Q_1 . Which of the following statements is TRUE?

- A) In the short run, the firm will move to point A, where total costs of production are higher than at point C.
- B) The firm will move along its long-run expansion path from point Z to point A.
- C) In the short run, the firm will move to point A, where total costs of production are lower than at point C.
- D) In the long run, the firm will move to point A, where total costs of production are lower than at point C.

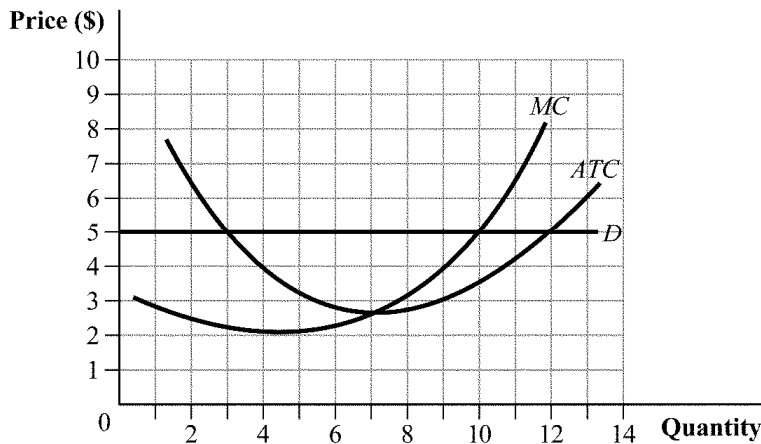
6. Which of the following characteristics relate to perfect competition?

- I. An industry is dominated by several large firms.
- II. Consumers cannot distinguish one firm's product from another.
- III. New firms can easily enter the industry.

- A) I and II B) II and III C) II only D) III only

Use the following to answer question 7.

Figure 8.6



7. (Figure 8.6) This firm maximizes profit by producing _____ units of output.

- A) 3 B) 7 C) 10 D) 12

8. A firm should _____ output whenever MR exceeds MC because _____.

- A) reduce; revenues will rise by more than costs, increasing the firm's profit
- B) reduce; total revenues exceed total costs
- C) expand; revenues will rise by more than costs, increasing the firm's profit
- D) not change; selling more output will increase marginal revenue by less than marginal cost

9. In a perfectly competitive industry, the equilibrium price is \$56 and the minimum average total cost of the industry's firms is \$40. If this is a constant-cost industry, we would expect that in the long run:
- A) new firms will enter the market, shifting the industry's short-run supply curve outward until the minimum average total cost rises to \$56.
 - B) new firms will enter the market, shifting the industry's short-run supply curve outward until the new equilibrium price is \$40.
 - C) new firms will enter the market, shifting the industry's short-run supply curve inward until firms are making positive profit.
 - D) existing firms will exit the market, shifting the industry's short-run supply curve inward until firms are breaking even.
10. In the market for lock washers, a perfectly competitive market, the current equilibrium price is \$5 per box. Washer King, one of the many producers of washers, has a daily short-run total cost given by $TC = 190 + 0.20Q + 0.0025Q^2$, where Q measures boxes of washers. Washer King's corresponding marginal cost is $MC = 0.20 + 0.005Q$. How many boxes of washers should Washer King produce per day to maximize profit?
- A) 280 B) 960 C) 1,450 D) 2,125

Answer Key - S18-4

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