Economics 101
Spring 2000
Section 4 - Hallam
Quiz 10

For questions 1- 4, consider a firm (or industry) with the following demand, cost, and marginal cost functions:

$$q = D(p) = 12 - \frac{1}{2}p$$
$$C(q) = 12q$$
$$MC(q) = 12$$

1. What is the inverse demand function?
   a. $q = -12 + \frac{1}{2}p$
   b. $p = 24 - 2q$
   c. $p = 12 - \frac{1}{2}q$
   d. $q = 24 - 2p$
   e. $p = 12 - q$

2. What is marginal revenue function for this firm if it is a uniform pricing monopolist?
   a. $MR = -12 + 2p$
   b. $MR = 60 - q$
   c. $MR = 24 - 4q$
   d. $MR = 24 - q$
   e. $MR = 12 - 4q$

3. How much output should the uniform pricing monopolist produce?
   a. 2
   b. 6
   c. 3
   d. 8
   e. 4

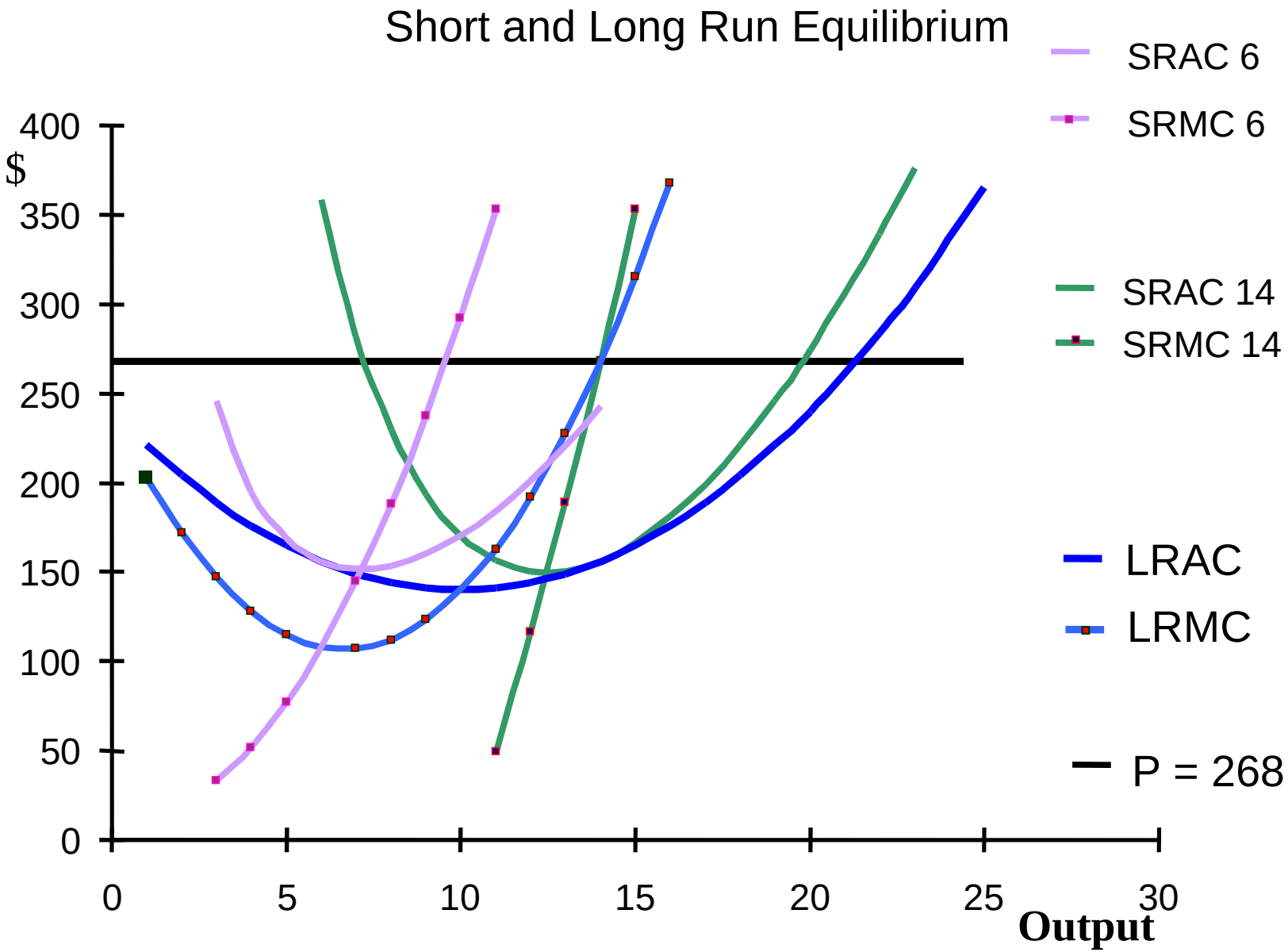
4. How much output would be produced if this was a competitive industry?
   a. 3
   b. 4
   c. 5
   d. 6
   e. 8

5. In which of the following markets is the firm ***not*** a price maker.
   a. Monopoly (bad choice)
   b. oligopoly (think again)
   c. monopolistic competition (keep going)
   d. perfect competition (stop)

6. Consider the figure on the next page. It contains a long run average cost curve (LRAC), a long run marginal cost curve (LRMC), and short run average (SRAC) and marginal cost curves (SRMC) for plant sizes designed for 6 and 14 units of output. The price of output is assumed to be fixed at a level of $268. Which of the following statement is true?
   a. The firm should produce approximately 9 units of output
   b. The firm should chose the size 14 plant over the size 6 plant because LRAC = SRAC at price = $268
   c. The size 14 plant will be the long run equilibrium size in this industry if price stays at $268 regardless of entry or exit
   d. The long run equilibrium for this industry with free entry and exit will have each firm producing greater than 15 units
   e. Both b and c are correct

7. If the firm produces 7 units of output, which of the following is true?
   a. It will make money with a price of $200 regardless of which plant it chooses
   b. If price is $125, the firm should produce between 5 and 10 units in the long run
   c. The firm will make money with a price of $175 and a plant size of 6
   d. The firm cannot make money at any price
   e. Because SRMC 6 and LRMC are equal at 6 units of output for the size 6 plant, the firm should build this size plant in the long run

8. Which of the following are common barriers to entry in imperfectly competitive markets?
   a. Economies of scale
   b. Control of scarce inputs
   c. Special knowledge
   d. Legal protection
   e. All of the above


Short and Long Run Equilibrium
SRAC 6
SRMC 6
SRAC 14
SRMC 14
LRAC
LRMC
P = 268
$
400
350
300
250
200
150
100
50
0
0
5
10
15
20
25
30
Output

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Solutions

1. b
2. c
3. c
4. d
5. d
6. e
7. c
8. e