QUIZ 2 VERSION B
"Competitive Firms"

INSTRUCTIONS: This exam is closed-book, closed-notes. Simple calculators are permitted, but graphing calculators or calculators with alphabetical keyboards are NOT permitted. Mobile phones or other wireless devices are NOT permitted. Points will be subtracted for illegible writing or incorrect rounding.

Multiple choice: Circle the one best answer to each question. [10 pts each]

> The next two questions refer to the following information. Suppose a firm's long-run total cost function is given by $TC(q) = 0.5q^3 - 50 q^2 + 1270 q$.

(1) The firm's average cost function is
$AC(q) =$
a. $0.5 q^3 - 50 q^2 + 1270 q$.
b. $0.5 q^2 - 50 q + 1270$.
c. $1.5 q^2 - 100 q + 1270$.
d. $3 q - 100$.
e. $q - 50$.

(2) The firm's marginal cost function is
$MC(q) =$
a. $0.5 q^3 - 50 q^2 + 1270 q$.
b. $0.5 q^2 - 50 q + 1270$.
c. $1.5 q^2 - 100 q + 1270$.
d. $3 q - 100$.
e. $q - 50$.

(3) Suppose that at a firm's current level of output, its marginal cost is *less* than its average cost. Then its average cost curve must
a. slope up.
b. slope down.
c. be horizontal.
d. be vertical.
e. cannot be determined from information given.

(4) "Diseconomies of scale" mean that the firm's average cost curve
a. slopes up.
b. slopes down.
c. is horizontal.
d. is vertical.

(5) A firm's so-called "efficient scale" is the level of output where
a. marginal cost is minimized.
b. total cost is minimized.
c. average cost is minimized.
d. output is maximized.

(6) Suppose a competitive firm is now producing 500 units of output per day. Its marginal cost is $5, its average cost is $10, and it can sell its output at a price of $8. This firm can increase its profit by
a. increasing its output by one unit.
b. decreasing its output by one unit.
c. It cannot increase its profit by small changes in output.
d. cannot be determined from information given.

(7) In the short run, a firm should shut down immediately if its
a. revenue is less than fixed cost.
b. profit is negative.
c. revenue is less than producer surplus.
d. revenue is less than variable cost.

(8) If price is greater than minimum average cost in a competitive industry,
a. firms will try to lower the price.
b. firms will try to raise the price.
c. new firms will enter the industry.
d. existing firms will leave the industry.

(9) Suppose that in a certain industry, cost curves for each firm tend to rise as other firms enter the industry and fall as other firms leave the industry. In this case, the long-run supply curve
a. is horizontal (zero slope).
b. is vertical (infinite slope).
c. slopes up (positive slope).
d. slopes down (negative slope).
e. cannot be determined from information given.

(10) Price equals marginal cost in
a. short-run competitive equilibrium.
b. long-run competitive equilibrium.
c. both short-run and long-run competitive equilibrium.
d. none of the above.

[end of quiz]