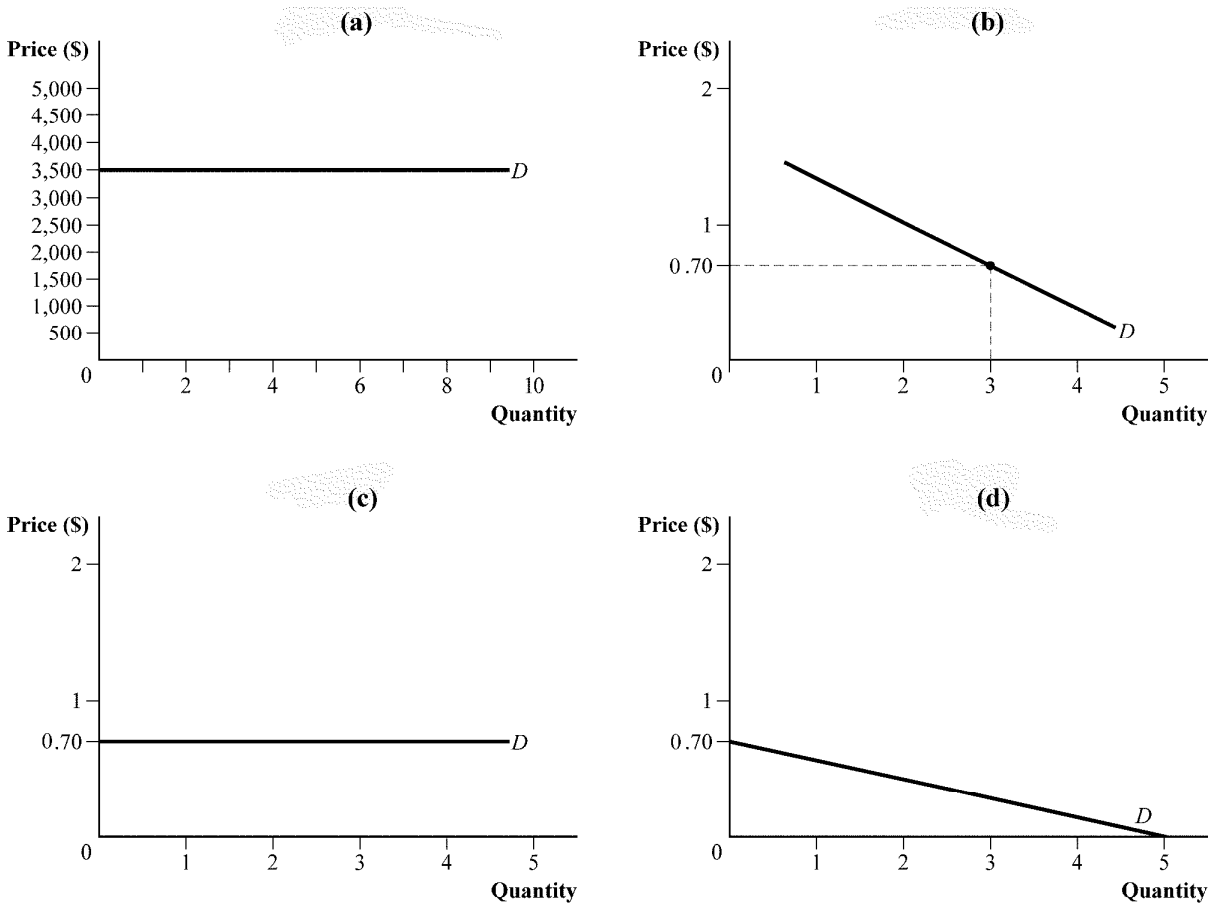
Quiz #5 -- March 26, 2020

Use the answer sheet to answer the questions. Choose the best answer for each question. You may keep the exam booklet.

Use the following to answer question 1.

Figure 8.4



1. (Figure 8.4) In a perfectly competitive market with 5,000 firms, the equilibrium price and quantity are $0.70 and 3.0 million units. The demand curve facing a firm in this market is represented by:
   A) panel a.
   B) panel b.
   C) panel c.
   D) panel d.

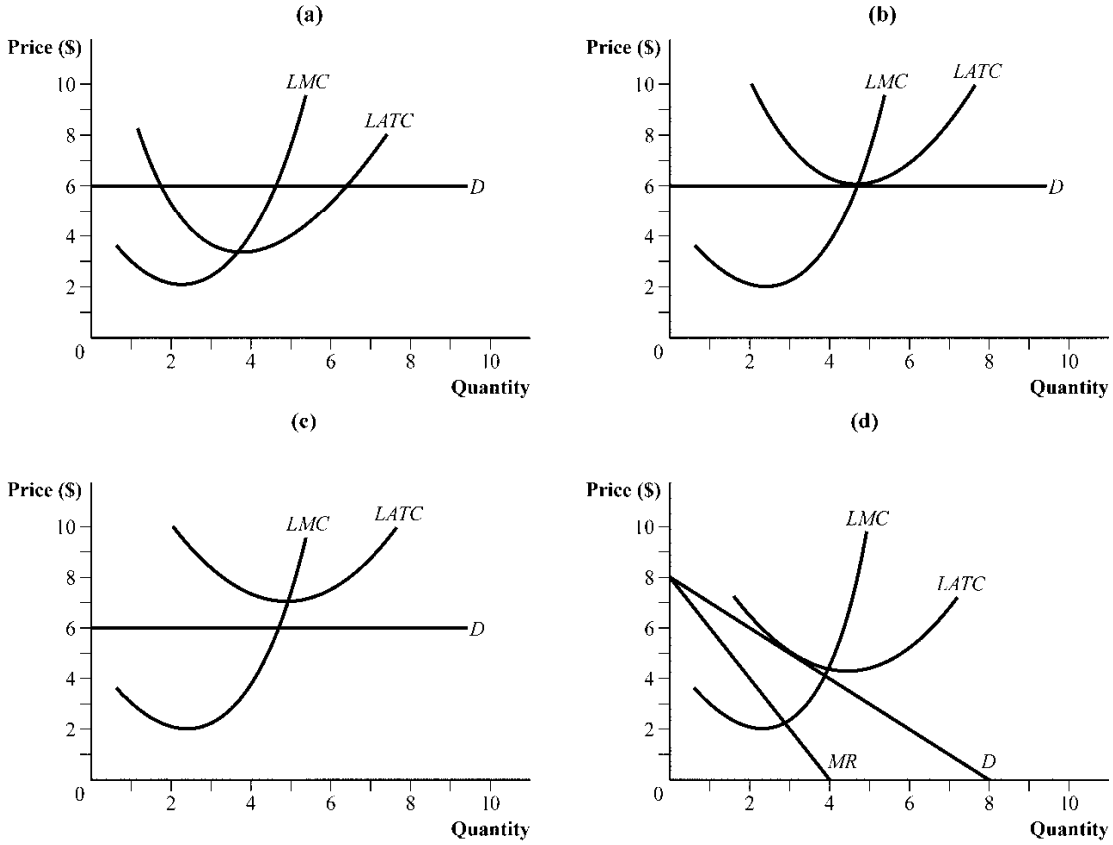
2. Suppose the market for relay switches is considered perfectly competitive and is in equilibrium at a price of $5,000 per pallet of relay switches. Callahan Relay produces relay switches at an average total cost given by $ATC = 1{,}500{,}000 + Q^2$ and marginal cost given by $MC = 2Q$, where Q measures pallets of relay switches. If Callahan Relay maximizes profit, how much profit will it earn?
   A) $125,000
   B) $88,000
   C) $2.5 million
   D) $4.75 million

3. A street vendor's annual license fee was recently increased by the city. The street vendor's:
   A) marginal cost curve will shift out, along with her average variable cost curve.
   B) marginal cost curve will shift in, along with her average variable cost curve.
   C) marginal and average variable cost curves will not be affected.
   D) total variable cost curve will rotate upward.

4. Suppose that a firm is earning a 12% return on capital in a perfectly competitive industry, and the market return outside the industry is 9.5%. Which of the following statements is (are) TRUE?
   A) In the short run, the firm is making a below-market return of 2.5%.
   B) In the short run, the firm is making a negative return on capital of 2.5%.
   C) In the long run, the firm's return on capital will be 0%.
   D) In the long run, the firm's return on capital will be 9.5%.

Use the following to answer question 5.

Figure 8.16



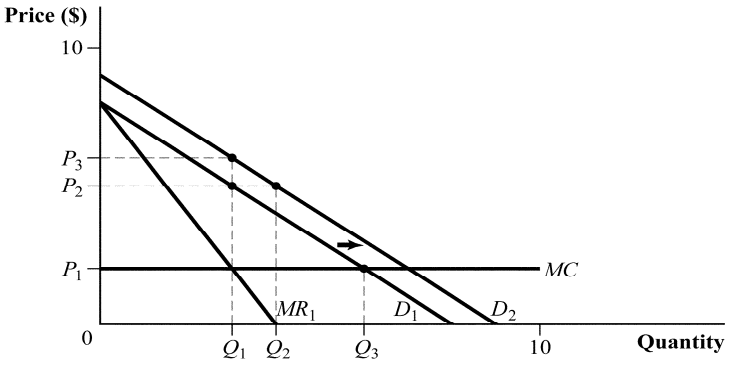
5. (Figure 8.16) Which panel shows a representative firm (operating in a perfectly competitive industry) in a long-run equilibrium?
   A) panel a
   B) panel b
   C) panel c
   D) panel d

6. In a perfectly competitive market, each firm has a long-run total cost given by $LTC = 100Q - 10Q^2 + 1/3Q^3$ and long-run marginal cost curve given by $LMC = 100 - 20Q + Q^2$. What is the market's long-run equilibrium price?
   A) $8.50
   B) $33
   C) $70
   D) $25

7. At the profit-maximizing quantity, the firm's marginal cost is $40 and it charges a price of $60. What is the price elasticity of demand at the profit-maximizing quantity?
   A) –0.67
   B) –1.5
   C) –3
   D) –0.5

Use the following to answer question 8.

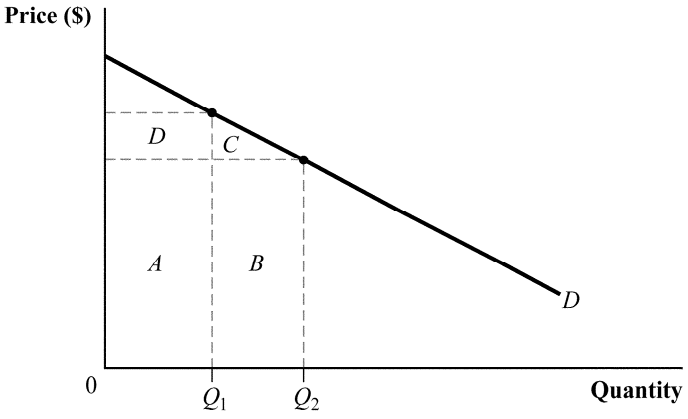
Figure 9.5



8. (Figure 9.5) What happens to the firm's profit-maximizing price and quantity following the increase in demand from D_1 to D_2?
   A) The firm will increase the price to P_3 and sell Q_1 units of output.
   B) The firm will raise the price from P_2 to less than P_3 and increase output from Q_1 to less than Q_2.
   C) The firm will sell Q_2 units of output at a price of P_2.
   D) The firm will reduce output from Q_3 to Q_2 and raise price from P_2 to P_3.

Use the following to answer question 9.

Figure 9.2



9. (Figure 9.2) The marginal revenue from expanding output from Q_1 to Q_2 is represented by area:
   A) C.
   B) $B + C$.
   C) $B - D$.
   D) $A + D - B$.

10. Market power occurs when a firm:
   A) can sell additional units of output without lowering the price of its product.
   B) must sell additional units of output at a constant marginal cost.
   C) can influence the price of its product.
   D) maximizes profit at the output level where $P = MC$.

Answer Key - S20-5

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