ECON 605, Spring 2018
Intermediate Microeconomics
Midterm 1
Instructor: Travis Freidman

Part 1: Multiple Choice(10 points)

1. Refer to Figure below, when the minimum imposed price is P2, areas B + C are

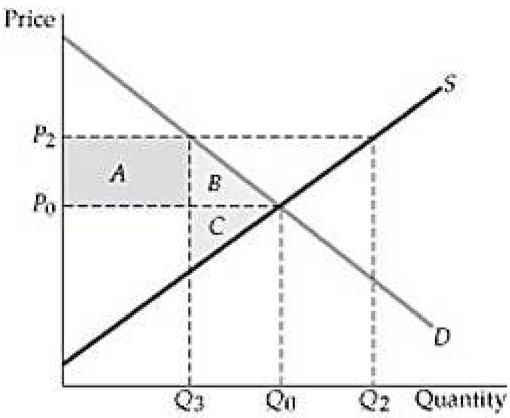

Figure 1:

   (a) The deadweight loss to producers as a result of the price control.

   (b) The deadweight loss to both producers and consumers as a result of the price control.

   (c) Gains transferred from consumers to producers.

   (d) The deadweight loss to consumers as a result of the price control.

2. In 1994, the Walt Disney Corporation ran a special promotion on tickets to Disneyland. Residents of southern California who lived near the amusement park were offered admission at the special price of \$22. Other visitors to Disneyland were charged about \$30. This practice is an example of:

   (a) Tying.

   (b) Bundling.

   (c) Collusion.

   (d) Price discrimination.

   (e) Two-part tariff.

3. The marginal cost of a monopolist is constant and is \$10. The marginal revenue curve is given as follows: $MR = 100 - 2Q$. What is the profit maximizing price?

   (a) \$65
   (b) \$50
   (c) \$70
   (d) \$55
   (e) \$60

4. Refer to Figure 2 below. At price E and quantity Q^*, consumer surplus is the area:

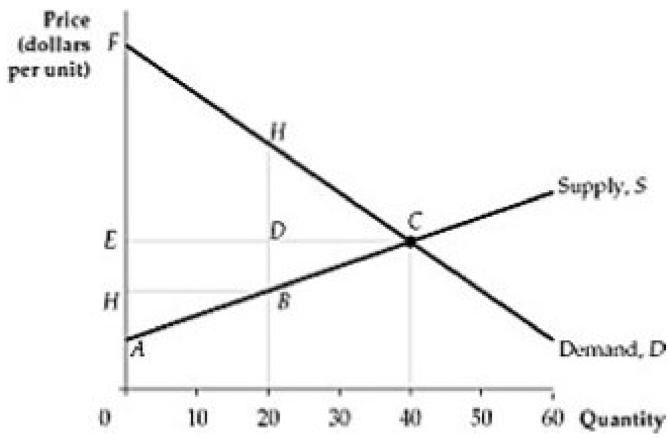

Figure 2:

   (a) AEC
   (b) EFC
   (c) $0FCQ^*$
   (d) AFC
   (e) None of the above

5. The amount of output that a firm decides to sell has no effect on the market price in a competitive industry because:

   (a) The firm's output is a small fraction of the entire industry's output.

   (b) The firm supplies a different good than its rivals.

   (c) The demand curve for the industry's output is downward sloping.

   (d) The short run market price is determined solely by the firm's technology.

   (e) The market price is determined (through regulation) by the government.

6. If current output is less than the profit-maximizing output, then the next unit produced:

   (a) Will decrease profit.

   (b) Will increase revenue without increasing cost.

   (c) May or may not increase profit.

   (d) Will increase cost more than it increases revenue.

   (e) Will increase revenue more than it increases cost.

7. Read the following statements. Then select the correct multiple choice answer given the statements below:

   - The firm's decision to produce zero output when the price is less than the average variable cost of production is known as the shutdown rule.
   - The firm's supply decision is to generate zero output for all prices below the minimum AVC.

   (a) The first and second are false.

   (b) The second is true and the first is false.

   (c) The first and second are true.

   (d) The first is true and the second is false.

8. The total cost of producing a given level of output is:

   (a) Minimized when the marginal products of all inputs are equal.

   (b) Maximized when a corner solution exists.

   (c) Minimized when marginal product multiplied by input price is equal for all inputs.

   (d) Minimized when the ratio of marginal product to input price is equal for all inputs.

9. Which one of these is **not** a reason that leads to a firm acquiring enough market power to become a monopoly?

   (a) Product differentiation.

   (b) Absolute cost advantage or control of key inputs.

   (c) Free entry and exit to the market.

   (d) Government regulations.

   (e) Extreme scale economies.

10. Consider the following production function $Q = K^{.25}L^{.25}$, this production function exhibits "______________.":

    (a) Economies of Scale.

    (b) Constant Returns to Scale.

    (c) Decreasing Returns to Scale.

    (d) Diseconomies of Scale.

    (e) Increasing Returns to Scale.

Part 2: Short Answer (40 points)

1. Draw a typical short run cost graph that has price on the y-axis and output on the x-axis for a potato farm. Draw on this graph a typical AVC, ATC, some equilibrium price P^* that is between AVC and ATC, and an upward sloping MC curve. Label the optimal output as Q^*. Please depict and answer the following:

   (a) Illustrate on the graph where the firms short run supply curve is. Also state the "firm shut down rule" formally.

   (b) Now let's say that there is a an increase on the mortgage on their land. Which curves will be affect, what direction will they move, will it change Q^*, & will the firm shut down because of this change? Explain and depict your answer.

2. We've talked a lot about costs during these last few chapters. Define what is sunk cost, fixed cost, and opportunity cost. Explain to me in two sentences or less why fixed cost is not the same as sunk cost.

Part 3: Long Answer (50 points)

3. The market demand for a shag rug has been estimated as: $P_D = 40 - 0.25Q$ where P is price (\$/yard) and Q is rate of sales (hundreds of yards per month). The market supply is expressed as: $P_S = 5 + 0.05Q$. A typical firm in this market has a total cost function given as: $C = 100 - 20q + 2q^2$ and a marginal cost function of $MC = -20 + 4q$.

    (a) Determine the equilibrium market output rate and price.

    (b) Determine the output rate for a typical firm.

    (c) Determine the rate of profit (or loss) earned by the typical firm.

4. John Gardner is the city planner in a medium-sized southeastern city. The city is considering a proposal to award an exclusive contract to Clear Vision, Inc., a cable television carrier. Mr. Gardner has discovered that an economic planner hired a year before has generated the demand, marginal revenue, and marginal cost functions given below:

    - $P = 28 - 0.0008Q$
    - $MR = 28 - 0.0016Q$
    - $MC = 0.0012Q$

    where Q = the number of cable subscribers and P = the price of basic monthly cable service. Conditions change very slowly in the community so that Mr. Gardner considers the cost and demand functions to be reasonably valid for present conditions. Mr. Gardner knows relatively little economics and has hired you to answer the questions listed below.

    (a) What price and quantity would be expected if the firm is allowed to operate completely unregulated?

    (b) Mr. Gardner has asked you to recommend a price and quantity that would be socially efficient(*Hint*: think maximizing consumer and producer surplus). Recommend a price and quantity to Mr. Gardner using economic theory to justify your answer.

    (c) Compare the economic efficiency implications of (a) and (b) above. Your answer should include numerical calculations, but should also include relevant diagrams to demonstrate deadweight loss.