Sample Midterm
1101 Principles of Microeconomics, Summer 2004
Jaromir Nosal

Part 1: Multiple choice (choose 10 questions) Each question is worth 1 point.

1. In the model of perfect competition firms it is assumed that there are numerous producers and the good is homogenous, which leads us to
   (a) Price taking behavior
   (b) To the fact that MC always = the market price
   (c) All of the above
   (d) None of the above

2. "It does not matter that the subsidy is actually paid by the government to farmers, anyway the market equilibrium determines who actually gets it"
   (a) The statement is false according to what we studied in class
   (b) The statement is correct according to what we studied in class
   (c) One can not determine whether it is false or true, because it depends on the size of the subsidy (e.g. if small than it is true)

3. The PED measures:
   (a) By how much the revenue changes as price goes up
   (b) By how much the quantity demanded changes as price goes up by $1
   (c) What is the percentage change in the quantity demanded induced by a 1% increase in the price of the good
   (d) None of the above

4. If AVC < P (& MC=P) at some production plan , then it means
   (a) The firm should produce in the short-run at this production plan
   (b) The firm should discontinue production in the short-run.
   (c) None of the above

5. Suppose one could take a car or take a train to go to Chicago from DC. If the price of train tickets increases
   (a) demand for train tickets will increase
   (b) demand for rental cars will increase
   (c) demand for train tickets will decrease

(d) demand for rental cars will decrease

6. Suppose all firms in a perfectly competitive industry are experiencing economic losses to varying degrees. One can predict that

   (a) market supply will increase
   (b) market demand will decrease
   (c) market demand will increase
   (d) equilibrium price will rise

7. For entry into a particular perfectly competitive industry to occur, which of the following must be true?

   (a) accounting profits=0
   (b) accounting profits>0
   (c) economic profits<0
   (d) economic profits=0
   (e) economic profits>0

8. An external cost of an activity is one that is

   (a) borne by those not directly involved
   (b) borne by those directly involved
   (c) included in the private marginal cost curve
   (d) present only if the activity yields pollution
   (e) transferred from consumers to producers

9. Pure monopoly exists when

   (a) many firms produce a good with no close substitutes
   (b) a single firm produces a good with no close substitutes
   (c) a single firm is present in the market
   (d) a single firm produces a good with many close substitutes
   (e) a few firms dominate an industry

10. Marginal revenue is

    (a) total revenue divided by output
    (b) the extra revenue that results from selling one extra unit
    (c) always equal to price
    (d) never equal to price

11. The demand curve for a perfectly competitive firm is ____________________while the demand curve to a monopolist is ______________.

   (a) perfectly elastic; downward sloping
   (b) vertical; downward sloping'
   (c) perfectly elastic; perfectly inelastic
   (d) perfectly inelastic; perfectly elastic

12. If the monopolist's demad curve is P=70 - 14Q, then the slope of the marginal revenue curve is

   (a) -28
   (b) -14
   (c) -7
   (d) -1
   (e) insufficient information is provided to determine slope

13. The profit maximizing rule P=MC applies to

   (a) all firms
   (b) monopolists only
   (c) monopolists and perfect competitors
   (d) perfect competitors only

14. Price discrimination means charging

   (a) the same consumers the same price
   (b) different prices to different consumers because production costs are different
   (c) the same price to all consumers because production costs are different
   (d) different prices to different consumers when production costs are the same

15. When a consumer must take some sort of additional action to receive a lower price, the consumer is being subjected to

   (a) the what - a - hassle method of price discrimination
   (b) perfect price discrimination
   (c) the hurdle method of price discrimination
   (d) the rebate and wait method of price discrimination
   (e) the long jump method of price discrimination

Part 2

1. (4) Consider the following scenarios in for a perfectly competitive firm:

   (a) Minimum ATC = \$26.00, minimum AVC = \$24.50, and P= \$23.75.

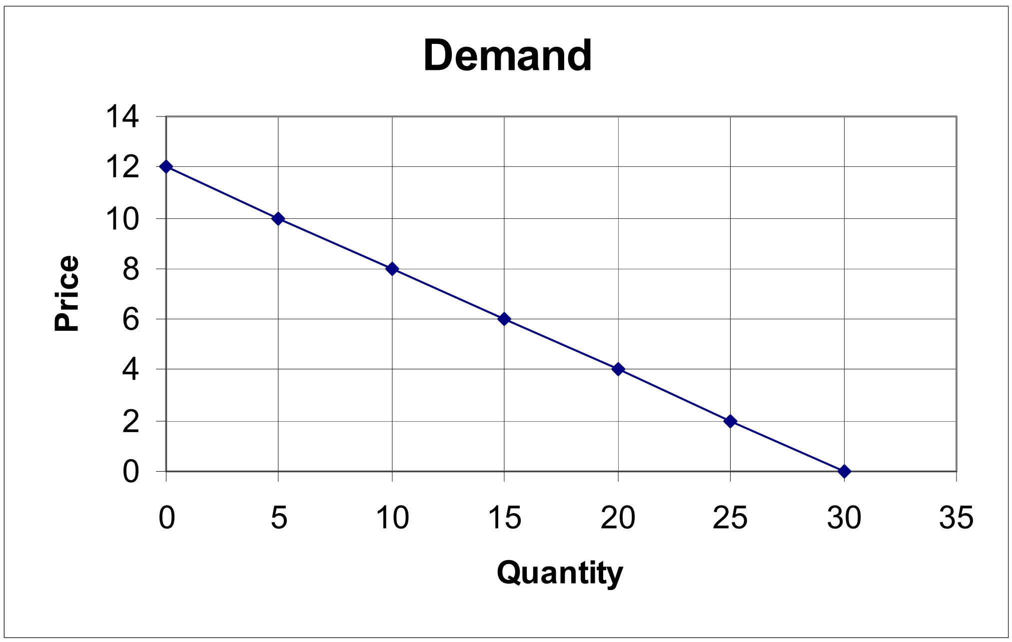
   (b) Assume, TR is a straight line, minimum ATC = \$15.00, minimum AVC = \$13.50, market price P = \$14.00.

   For each of the scenarios above

   i. Draw a schematic diagram to accurately illustrate the scenario

   ii. Explicitly indicate the amount of output produced by the firm. Graphically indicate the profit of the firm, if possible.

2. (2) Based on the following graph of the demand curve for garlic,



   What is the price elasticity of demand at the point (30, 0)?

3. (12) Assume the demand function for new apartments in Minneapolis is P=100-0.5Q. The supply of new apartments is horizontal in the long-run, given by equation: P=\$50. This is because in the long run suppliers have a lot of flexibility to adjust supply, and because of competition (entry and exit of new developers) the long-run supply curve is horizontal.

   (a) (1) Define competitive equilibrium.

   (b) (2) Compute the competitive equilibrium. Explain your answer carefully, and depict graphically.

   (c) (1) Now assume the government imposes taxes on consumers (i.e. obliges them to pay additionally \$5 for each unit they buy). Define competitive equilibrium with taxes.

(d) (2) Compute the competitive equilibrium with taxes defined above. Explain your answer carefully, and depict graphically.

(e) (2) What is the size of the deadweight loss here (give the exact value in \$) and depict on the graph.

(f) (1) Who actually pays the tax in this situation?

(g) (1) What is the elasticity of supply?

4. (8) For each of the following scenarios, graph the market supply and demand curves for each good before and after the event listed occurs. State the effect of this event on competitive equilibrium in each market. There is NO need to explain WHY.

   (a) Services A and B are complements. The number of firms in industry B decreases. Draw both markets.

   (b) The two markets are for Cars and Public transportation. The cross price elasticity for cars in terms of buses is 1/3. The price to ride the bus increases. Draw the market for Cars.

   (c) The market demand curve for Good U is perfectly inelastic. There is an increase in the price of inputs to make U. Draw the market for Good U.

   (d) There is 1 good, Televisions. Televisions are normal. Income decreases.

5. (4) Suppose "Slumber land" is a firm that produces wooden furniture. It uses trees as input in their production process such that each unit of furniture requires cutting one tree. Suppose that each tree that is cut imposes a cost to the natural environment of \$15.

   (a) Is the competitive equilibrium in the case of the above externalities efficient? (I.e., is the total surplus being maximized?). Explain with the use of a fully labeled diagram of a market for wooden furniture.

   (b) If your answer to a is "Yes", then provide a proof. If your answer to a is "No", then suggest a corrective tax that will result in the optimal output. Determine the size of the tax and illustrate its effect on the market for wooden furniture.