Miderm Examination II

ECON 2020E Intermediate Microeconomics-Market structure and producers

Instructor:Wen Ci Nov. 22, 2012

Instructions: 1) You must answer all the questions. 2) The exam will last for 2.5 hours. 3) Please write your answers on the booklets clearly. 4) There are **3** pages of the exam

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Question 1 multiple choice questions. (Each 2 points)

1) At the current level of output a firm's marginal cost equal 16 and marginal revenue equals 10. The firms
A) is producing the profit-maximizing amount.
B) should produce more.
C) should produce less.
D) Not enough information.

2) If the inverse demand curve a monopoly faces is p = 100 - 2Q, then profit maximization
A) is achieved when 25 units are produced.
B) is achieved by setting price equal to 25.
C) is achieved only by shutting down in the short run.
D) cannot be determined solely from the information provided.

3) The ability of a monopoly to charge a price that exceeds marginal cost depends on
A) the price elasticity of supply.
B) price elasticity of demand.
C) slope of the demand curve.
D) shape of the marginal cost curve.

4) If the inverse demand curve a monopoly faces is p = 100 - 2Q, and MC is constant at 16, then the firm's Lerner Index equals
A) 58/16.
B) 16/42.
C) 58/42.
D) 42/58.

5) The government prefers an ad valorem tax to a specific tax that reduces the monopoly output by the same amount because
A) consumers are not harmed by the ad valorem tax.
B) the monopoly prefers the ad valorem tax.
C) consumers prefer the ad valorem tax.
D) the ad valorem tax transfers more revenue from the monopoly to the government.

6) In a Bertrand model, graphically, the intersection of all firms' best-response curves determines
A) the Nash equilibrium prices.
B) the dominant strategy for each firm.
C) the degree of product differentiation.
D) the price of the market leader.

7) Which of the following market models results in the highest price assuming a fixed number of firms with identical costs and a given demand curve?
A) Cournot
B) Stackelberg
C) Monopoly
D) Price is the same in all three markets.

8) Theatres charge lower prices for a daytime showing and usually don't accept coupons for the night showing of movies because
A) consumers that attend the daytime show have a higher price elasticity of demand.
B) consumers that attend the night show have a lower price elasticity of demand.
C) it increases profits compared to charging a single price.
D) All of the above.

9) At many municipal golf courses, local residents pay a lower fee to play than other golfers do. One necessary condition for the golf course to be able to successfully price discriminate according to residency is that
A) they can check the identification cards of golfers.
B) local resident golfers and other golfers have the same price elasticity of demand to play at the municipal course.
C) there are many golf courses nearby from which golfers can choose.
D) they require all golfers to rent a cart.

Question 2 Long questions

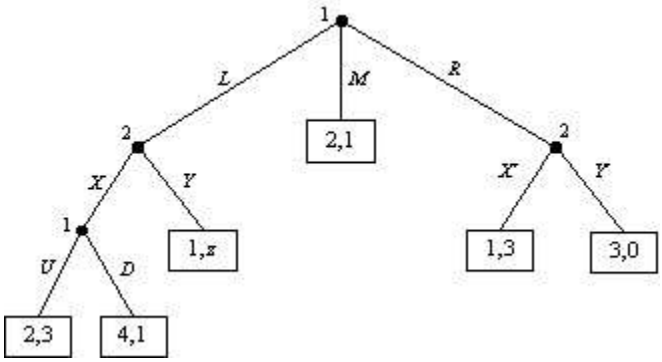
1) (20 marks) Suppose that market demand for a good is Q = 480 - 2p. The marginal cost is MC = 2.
   a. Calculate the price and quantity a monopoly will set in this market.
   b. Using the graph to find the quantity and price in part (a).

2) (22 marks) Suppose the demand for pizza in a small isolated town is p = 40-4Q. There are only two firms, A and B, and each has a cost function $TC = 4 + q_{i,}\ i = A, B$. Compare the firm A's profits in the following situations: 1) they behave as Cournot duopolists, 2) as stackelberg duopolists with A as the leader, 3) they form a cartel and share the market.

3) (20 marks) Suppose the demand for Pepsi is $q_p = 50 - 2p_p + 1p_c$. The firm faces

a constant marginal cost of m, and p_C denotes the price of Coke. Assuming Bertrand behavior, derive Pepsi's best-response function and explain how the firm changes price in response to changes in its own marginal cost.

4) (20 marks) Consider the following sequential move game:



a. If z=0, find any subgame perfect Nash Equilibrium, explain in details.
b. For what values of z will M occur in the subgame perfect equilibrium?