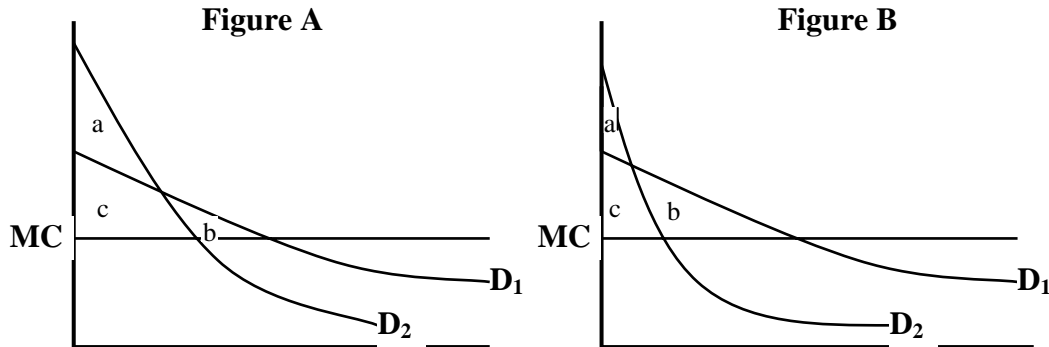


**MIDTERM**

Wednesday, May 17, 2006

Answer any 3 of the following 4 questions.



1) Suppose there are two different consumers in the market with demand curves  $D_1$  and  $D_2$ , respectively. There is a monopolist serving this market with constant marginal costs,  $MC$ . In figure A, the demand curves are such that area  $a$  is larger than area  $b$ , whereas in Figure B, area  $b$  is larger than area  $a$ . Answer the following parts using this information.

A) Assume the market scenario displayed in Figure A. Suppose that  $(a+c) > 2(b+c)$ . If the firm can charge discriminatory two-part tariffs, what will these be and why? If the firm is constrained to set a uniform two-part tariff, what will this be and why?

B) Now suppose that  $(a+c) < 2(b+c)$  in Figure A. Explain and diagram why the uniform two-part tariff in **Figure A** may involve a price-per-unit below  $MC$ . Be careful to show the gains and losses that occur for such a price-per-unit versus a price-per-unit set at  $MC$ .

C) Suppose again that  $(b+c) < 2(a+c)$  in Figure B. Explain whether or not the uniform two-part tariff in **Figure B** may involve a price-per-unit below  $MC$ . Explain and diagram whether or not the uniform two-part tariff in **Figure B** may involve a price-per-unit above  $MC$ .

D) How would the monopolist determine optimal prices if it could not use two-part tariffs, but instead had to charge per-unit-prices only, though these could be discriminatory? Would it gain as much profits as a uniform two-part tariff? Would it gain as much as a discriminatory two-part tariff?

2) Summarize the empirical evidence on predatory pricing we discussed in class, including data and methodologies used. Explain advantages and disadvantages of the various approaches and how conclusive you think the overall evidence is in supporting or disproving the existence of predatory pricing in the real world.

**Turn over for additional questions**

**Ph.D. 607 Midterm cont.**

3) Assume you sell apple cider with consumers uniformly distributed along a street of length from 0 to 1, which also represents increasing sweetness of the cider as one travels the street. Consumers incur transportation costs of  $t(d)=1d$  when they “travel” to a brand to the right of their ideal location, and incur transportation costs of  $t(d)=2d$  when they “travel” to a brand to the left of their ideal location. Variable costs are normalized to 0. Fixed costs are 0.3.

A) Suppose your firm has one cider it offers that is located at  $\frac{1}{2}$  and it is a protected monopolist. Suppose the government mandates that you need to serve all the customers in the market to maintain your protected monopolist status and the reservation price for all consumers is \$2. What price would the firm charge and what profits would it make?

B) Now suppose that the government drops its restriction that you must serve all the market. Solve for the price you charge, demand at that price, and the profits you make.

C) Suppose the government now allows entry. Your firm must stay located at  $\frac{1}{2}$ . Would another firm choose to enter this market and where would they locate? Rather than go through the calculations, explain the most likely entry location and conditions you would have to check to make sure it would happen and be an equilibrium. If entry occurs would you expect prices charged by the firms to be identical? Why or why not?

4) Briefly describe the progression of ideas in the transactions cost literature from Coase to Williamson to Grossman and Hart. Highlight the modifications/extensions the latter papers made to the previous literature and how this crucially changed the implications of the theory. A friend suggests that the Grossman and Hart framework is perfect for describing what happens when two economists consider co-authoring. To what extent do you agree? Be specific about which features you think apply and which ones do not.