ECON 180 - Regulation & Antitrust Policy
Drake University, Spring 2015
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Signature: _____

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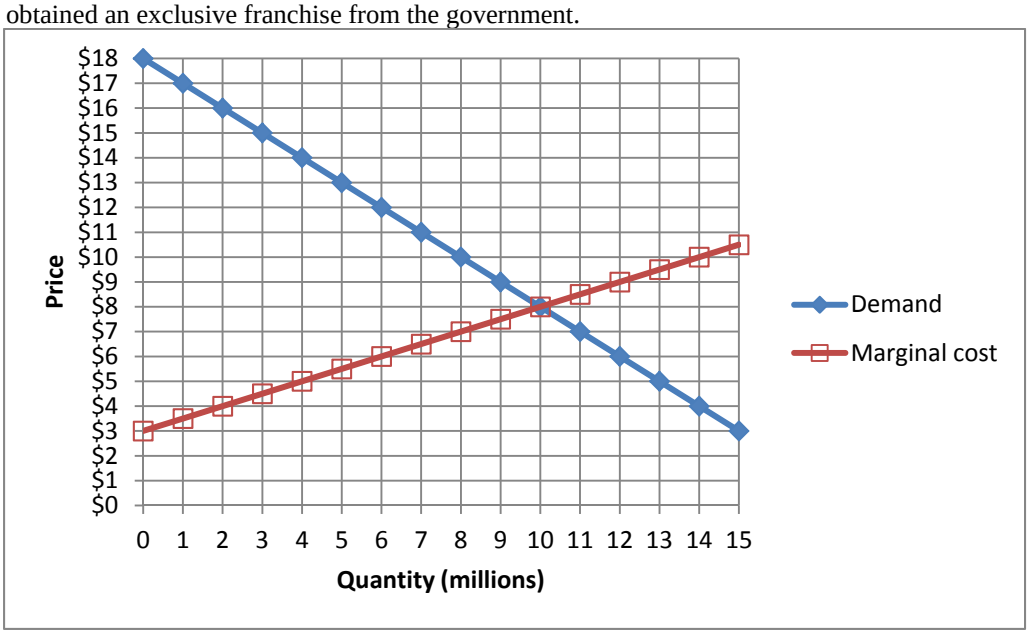
TEST 4 VERSION A
"Introduction to Antitrust"

INSTRUCTIONS: This exam is closed-book, closed-notes. Simple calculators are permitted, but graphing calculators or calculators with alphabetical keyboards are NOT permitted. Mobile phones or other wireless devices are NOT permitted. Points will be subtracted for illegible writing or incorrect rounding. Point values for each question are noted in brackets.

I. Problems: Insert your answer to each question below in the box provided. Feel free to use the margins for scratch work—only the answers in the boxes will be graded. Work carefully—partial credit is not normally given for questions in this section.

(1) [Monopoly: 24 pts] The market for throw pillows has been monopolized by Acme Throw Pillows Company, which has obtained an exclusive franchise from the government.



a. According to the graph above, how much will Acme's total cost increase if it increases the quantity of pillows that it makes from 8,000,000 to 8,000,001? (Give an answer to the nearest dollar.)

$ _____

b. Plot and label Acme's marginal revenue curve in the graph above.

c. Compute the quantity of pillows that Acme must produce and sell to maximize profit.

_____ million

d. Compute the price that Acme will set to maximize profit.

$ _____

e. Compute the loss of consumer surplus from monopoly pricing of throw pillows.

$ _____ million

f. Compute the social deadweight loss from this monopoly price.

$ _____ million

(2) [Marginal revenue: 12 pts] Suppose a coffee vendor with market power is now selling 20 lattes per hour at a price of $3.00. If she cuts the price to $2.90, she can sell one more latte per hour (that is, a total of 21 lattes per hour).

a. Compute the vendor's marginal revenue for the 21st latte. $

Suppose the marginal cost of making a latte is $2.00 per latte, and suppose the vendor does indeed lower her price to $2.90 to sell 21 lattes per hour.

b. Will the vendor's hourly profit *increase* or *decrease*?

c. By how much? $

(3) [Monopoly, markup formula, Lerner index: 8 pts] Acme Movie Theatre enjoys a local monopoly. Its marginal cost per customer is $4.00. The management believes the elasticity of demand for admissions is -3.

a. What admission price should Acme set, to maximize profit? $

b. Compute Acme's Lerner index (also called the "price-cost margin" or the "markup ratio").

(4) [SCP paradigm: 10 pts] Classify each of the following as industry "structure," "conduct," or "performance" under the Structure-Conduct-Performance paradigm.

a. Degree of price competition.

b. Advertising.

c. Industry concentration.

d. Spending on research and development.

e. Technical barriers to entry.

(5) [Monopoly, profit maximization: 28 pts] Suppose a monopolist has total cost function given by $TC(Q) = Q + (Q^2/40)$. This monopolist faces a demand curve given by $P = 13 - (Q/20)$. Show your work in the boxes below and circle your final answers.

a. Find the monopolist's marginal cost function.

b. Find the monopolist's average cost function.

c. Find the monopolist's marginal revenue function.

d. Compute the monopolist's profit-maximizing level of output Q*.

e. Compute the monopolist's profit-maximizing price P*.

[Problem continues on next page.]

f. Compute the monopolist's profit.

g. Compute the social deadweight loss caused by the monopolist. (Use the graph for scratch work.)

II. Critical thinking [8 pts]

Pop song A cost $5,000 up front to produce. Demand for it is expected to be $Q = 20{,}000\ P^{-10/9}$. By contrast, pop song B cost $1,000,000 up front to produce. Demand for it is expected to be $Q = 10{,}000{,}000\ P^{-10/9}$. The marginal cost of selling either song via internet download is expected to be $0.05 per copy. Compute the profit-maximizing internet price for each song.

[end of quiz]