EC3322
Industrial Organization I
Semester 1, 2015-2016
Midterm Exam

MATRICULATION/REGISTRATION NUMBER: _____

Instructions

1. Write your matriculation number in the space provided above. Do not write your name on the exam.

2. This exam will last 75 minutes.

3. There are a total of 10 questions on 10 pages.

4. Include all work and derivations that you wish to be graded in the space provided after each question.

5. You MAY NOT use calculators. If you have a calculator on your desk, please remove it.

Questions 1 to 6 are multiple-choice questions. *CIRCLE* the correct answer. No explanation is necessary.

1. (5 marks) If a 1% increase in price leads to a 2% decrease in quantity demanded, then demand is

    (a) inelastic

    (b) unit elastic

    (c) elastic

    (d) infinite

2. (5 marks) Which of the following is an example of a damaged good?

    (a) A firm manufactures two different types of copiers, one designed for high-demand offices and one for low-demand offices.

    (b) A publisher sells a best seller in both hardcover and paperback.

    (c) An office supply retailer targets discounts to small business owners by offering coupons in the local newspaper.

    (d) None of the above.

3. (5 marks) Suppose a monopolist faces inelastic demand. If the monopolist lowers price, then

    (a) total revenue increases.

    (b) total revenue decreases.

    (c) total revenue does not change.

    (d) total revenue will become negative.

4. (5 marks) Furniture stores often set prices high and then allow their sales personnel to offer discounts to customers depending on their perceptions of a customer's willingness to pay. This pricing strategy is an attempt to implement

   (a) first degree price discrimination

   (b) second degree price discrimination

   (c) third degree price discrimination

   (d) a two-part tariff

5. (5 marks) Which of the following is true of the Hotelling model?

   (a) A monopolist can always increase profits by introducing a new product variety.

   (b) A customer's preference for a product characteristic is represented as a location on a line.

   (c) Hotelling preferred his cider to be rather sweet.

   (d) A monopolist under-provides variety relative to a social planner.

6. (5 marks) What pattern describes how a market with a dominant firm and competitive fringe typically evolves over the long run?

   (a) The dominant firm maintains a high market share and there is little entry of fringe firms.

   (b) The dominant firm slowly loses market share as fringe firms enter.

   (c) The market share of the dominant firm increases as fringe firms exit.

   (d) None of the above.

7. (35 marks total) **CIRCLE** True or False to indicate your answer.

(a) (5 marks) Suppose that an industry has $CR_5 = 100$ (note the 5 subscript!). Then the HHI cannot be less than 2500. **True False**

(b) (5 marks) The US breakfast cereal market is not very concentrated. **True False**

(c) (5 marks) From a cost perspective, Canadian electricity providers should merge with other utilities to benefit from economies of scope. **True False**

(d) (5 marks) From a cost perspective, libraries in Indiana should not merge because they are already too big. **True False**

(e) (5 marks) Staples and Office Depot argued that they were just a small part of the market for office supplies. **True False**

(f) (5 marks) Starbucks opens many outlets so that customers do not have to walk too far to buy their coffee. **True False**

(g) (5 marks) Recall the HMT/SSNIP test used to defined markets. The test treats the products under consideration as being owned by many different firms. **True False**

8. (10 marks total) Consider Hotelling's model. The street has length **2**, there are N consumers uniformly distributed along the street, and transportation costs are td. Suppose that there are two shops. One is located at 1/6 and one is located at 5/6.

(a) (5 marks) What are total transportation costs if the market is covered?

(b) (5 marks) Let $U = V - p - td$. What is the maximum price that a monopolist can set and have the market covered?

9. (10 marks total) You are the only seller of two goods, each which costs 2 per unit to produce. The willingnesses to pay of 5 potential customers for these two goods are given below.

Customer	WTP for good 1	WTP for good 2
1	6	3
2	3	6
3	8	2
4	2	8
5	5	6

When answering the questions below, assume, as usual, that if price = willingness to pay, then the customer makes the purchase.

(a) (5 marks) If you set separate prices for each good, what prices would you set and how much profit would you make?

(b) (5 marks) What price would you set if you bundled the items? How much would profit be?

10. (15 marks) A monopoly has two types of customers, H and L. The individual demand function for each H type is $q_H(p) = 60 - 3p$ and for each L type is $q_L(p) = 60 - 6p$. Marginal cost is 4.

Suppose the monopoly practices first-degree price discrimination using block pricing. What are the quantities and fees of the profit-maximizing packages?