

EC3322
Industrial Organization I
Semester 1, 2014-2015
Midterm
October 9, 2014

MATRICULATION/REGISTRATION NUMBER: _____

TUTORIAL GROUP: _____

Instructions

1. Write your matriculation number and your tutorial group number (or time and day) in the space provided above RIGHT NOW. Do not write your name on the exam.
2. This exam will last 75 minutes.
3. There are a total of 7 questions on 12 pages.
4. Write your answers in the answer boxes provided for each question.
5. Include all work and derivations that you wish to be graded in the space provided after each question.
6. You MAY NOT use calculators. If you have a calculator on your desk, please remove it.

Questions 1 to 3 are multiple-choice questions. Circle your answer to each question in the answer boxes provided.

1. (10 marks) James wants to sell two flavors of ice cream, chocolate and vanilla, to three consumers: A, B, and C. The reservation price for each flavor is given below. The marginal cost of each ice cream is 1. What are the maximum profits James can earn by using mixed bundling? (Assume that consumers buy if they are indifferent between consuming and not consuming.)

	Vanilla	Chocolate
A	1	4
B	1	4
C	3	3

- (a) 10
- (b) 9
- (c) 8
- (d) 6
- (e) None of the above
2. (10 marks) We showed in lecture that a monopoly over-provides quality.
- (a) True
- (b) False
- (c) It depends on demand.
- (d) It depends on cost.
- (e) None of the above

3. (10 marks) We showed in lecture that a monopoly provides too little variety.

- (a) True
- (b) False
- (c) It depends on demand.
- (d) It depends on cost.
- (e) None of the above

Questions 4 and 5 are short answer questions. Write your answer and a brief explanation in the answer boxes below.

4. (10 marks) Why is it generally easier for firms to price discriminate for services than for goods?
5. (10 marks) Assume that all petrol stations in a small town are owned by one person and initially all charge the same price for petrol. If the owner raised the price of petrol in one station by 10 cents per litre, would this particular petrol station lose all its customers?

Questions 6 and 7 are long questions. Write your answers in the answer boxes.

6. (15 marks) A key factor that affects demand for new films is the timing of other releases. Suppose that both Disney Studios and Warner Brothers Studios are releasing a new film. They must choose between the two release dates December 11 and December 18. If both films open on December 11, each will sell 200,000 tickets. If one opens on December 11 and the other on December 18, then the early release will sell 350,000 tickets and the later release will sell 150,000. If both open on December 18, each will sell 100,000 tickets.

Suppose that the studios choose their release dates simultaneously. Write the game in normal form (i.e., in a matrix) and find the Nash Equilibrium (or equilibria).

7. (35 marks total) A monopolist serves a market with aggregate demand $Q = 36 - 3P$ and cost function $C(Q) = 2Q$.
- (a) (10 marks) How much profit does the monopolist earn under first-degree price discrimination? What is the associated DWL?
- (b) (15 marks) Suppose that the monopolist can partition its market into two separate submarkets. The demand function for submarket 1 is $Q_1 = 20 - 2P_1$ and the demand function for submarket 2 is $Q_2 = 16 - P_2$. What prices would the monopolist set under third-degree price discrimination? What is profit? Is total welfare higher than in part (a)?
- (c) (10 marks) Suppose that the monopolist has to pay a start up fee of S dollars before it enters the market. What can you say about the value of S if the monopolist enters the market if it can practice third-degree price discrimination but does not enter the market if it has to set a single uniform price?