Econ5026 – Strategic Business Relationships.

Midterm – 14 September 2016

Answer all questions in the answer booklets provided..

Time allowed: 1 hour 30 minutes (90 minutes) plus 5 minutes reading time.

Students are allowed to use non-programmable calculators.

Written answers should be done in pen, however diagrams may be drawn in pencil.

In your answers please show all working.

NOTE THAT THE EXAM IS WORTH 50 MARKS IN TOTAL. TAKE CARE TO NOTE HOW MANY MARKS ARE ALLOCATED FOR EACH QUESTION AND ALLOCATE YOUR TIME ACCORDINGLY.

Name: ______________________________

Student number: ______________________________

Signature: ______________________________

1. *9 marks in total*

(i) Describe what is meant by first degree price discrimination. Describe what is meant by third degree price discrimination. What challenges might a firm face in implementing either first degree price discrimination or third degree price discrimination? (3 marks)

(ii) Consider a firm that sells two products, namely washing machines and tumble dryers. There are 4 customers each which as the valuation indicated in the table below:

Customer	**Washing Machine**	**Dryer**
Arnie	900	800
Beatrice	1100	600
Colm	1300	400
Doris	1500	200

The marginal and average cost of making a washing machine is $1000, and the marginal and average cost of making a dryer is $300.

Suppose the firm sells each tem individually. Which set of prices will maximize profit? (2 marks) *Note this is a multiple choice question but you need to show working to get full marks.*

(a) P_w=900; P_D=400;
(b) P_w=1300; P_D=600;
(c) P_w=1500; P_D=600;

What is the profit maximizing price if a pure bundle is offered? (2 marks) *Note this is a multiple choice question but you need to show working to get full marks. The price of the bundle is given by* P_B.

(a) P_B=1500.
(b) P_B=1600.
(c) P_B=1700.

What is the monopolists profit maximizing strategy if a mixed bundling strategy is used? (2 marks) *Note this is a multiple choice question but you need to show working to get full marks. The price of the bundle is given by* P_B.

(a) P_w=1299; P_D=699; P_B=1000.
(b) P_w=1499; P_D=799; P_B=1700.
(c) P_w=1699; P_D=799; P_B=1700.

2. 5 marks.

Consider firms that can choose where to locate along a linear product space indicated by the line [0,1]. The total number of customers along the product space is equal to M and we assume that M=1. Assume that firms can enter a market but doing so incurs a fixed cost equal to *f* where *f*=(1/6). These fixed costs are sunk and cannot be recovered once entry occurs. New firms enter the market if they expect positive economic profit. Finally, assume that the price of the good is fixed and equal to 1.

Show that if three firms enter the market and space themselves at 1/6, 3/6 and 5/6, no other firm can profitably enter the market. How much profit will each of the three firms earn?

3. 8 marks

Consider the following game played between Jetstar and Virgin. Each can make a decision about installing some navigation software on their planes. The two types of software are called Alpha and Omega. The payoffs from the choices made (in $ millions) are presented in the following payoff matrix. Note that Jetstar's payoff is shown first:

		Virgin	
		Alpha	Omega
Jetstar	*Alpha*	(*1*, **16**)	(*4*, **6**)
	Omega	(*2*, **20**)	(*3*, **40**)

Is there a pure strategy Nash Equilibrium in this game? (2 marks)

What is the mixed strategy Nash Equilibrium in this game? (4 marks)

Jointly, Virgin and Jetstar get higher payoffs when Jetstar chooses Omega. Why does Virgin not always choose Omega. How might such an outcome, Virgin choosing Omega, be achieved? (2 marks)

4. 8 marks in total

(i) Describe what is meant by a tough commitment by a firm. What might be an example of a tough commitment under Bertrand and Cournot competition? (4 marks)

(ii) Using a set of diagrams, show how a tough commitment might harm a competitor and whether or not it should be undertaken should depends on any direct effect and the strategic response on the part of the competitor. (4 marks)

5. *Essay question (20 marks)*

Describe what is meant by the following:

- The neo-classical view of the firm.
- The transactions costs view of the firm.
- The property rights view of the firm.

What are the strengths and weaknesses of each theory of the firm?

Jensen and Meckling (1995) discuss general and specific knowledge. Describe what is meant by each of these and how they help explain the appropriate structure of a firm. What tradeoffs do firms face and how might they resolve them?