

BACHELOR OF ARTS EXAMINATION, 2019

(2nd Year, 4th Semester)

ECONOMICS (HONOURS)

INTERMEDIATE MICROECONOMICS - II

Time : Two hours

Full Marks : 30

Attempt Question no. 1 and any one from the rest:

(1). Consider two firms 1 and 2, with their output levels denoted by q_1 and q_2 respectively. Suppose both have identical linear cost function given by $C(q_i) = q_i$, $i = 1,2$. Let the market demand function be $q = 10 - p$ where q denotes aggregate output and p market price.

(i). Suppose both the firms simultaneously decide on their output levels. Solve for the reaction functions of both the firms? Using these find the optimal quantity and optimum profit for both the firms? (4+3)

(ii). Now suppose that the above firms still simultaneously compete over quantities, but both have a capacity constraint at output level 2. What will be the market price and total industry output in such a situation? Also find the optimal profit for both the firms in this situation? (3+3)

(iii). Can you compare the above industry output (with capacity constraint) with the collusive industry output of the unconstrained case? (3)

(2). (a). Consider a monopolist who faces two groups of consumers (high type and low-type) in the same market with demand functions for different units of these goods given by:

$$P_H = 120 - Q_H$$

and

$$P_L = 80 - Q_L$$

Let N_H and N_L denote the number of consumers of each type (High-type and Low-type respectively). The monopolist can produce this product at a constant marginal cost equal to zero.

[Turn over

(a). Find the optimal nonlinear pricing scheme i.e. menus (P_L, Q_L) and (P_H, Q_H) (Total price and total quantity in the package) when $\frac{N_H}{N_L} = \frac{1}{2}$

(9)

(b). Explain whether the following statements are true false or uncertain:

(i) "A static game of complete information will always have perfect information".

(ii). "A monopoly will never supply the Pareto optimal quantity".

(3+3)

(3). (a). Find the non-degenerate Mixed strategy equilibrium of the following Battle of Sexes game:

		<u>Wife</u>	
		Sumo	Ballet
<u>Husband</u>	Sumo	3, 1	0, 0
	Ballet	0, 0	1, 3

Also find the degenerate mixed strategy equilibrium (equilibria), if any, of the above game.

(5+1)

(b). "One should always tax an externality producing activity" – Explain true false or uncertain.

(4)

(c). Explain (briefly) the following concepts:

(i). Free-riding (ii). Market failure.

(2.5+2.5)