M.A. Examination, 2018
Semester-III
Economics
Course – OP-1 (Optional)
(Industrial Organization)

Time: Three Hours **Full Marks: 40**

Questions are of value as indicated in the margin

Answer ***any four*** from the following

1. Consider two oligopoly firms competing in quantities in a market with a linear demand curve P = a – bQ and different unit costs c_1 and c_2. Use the comparative statics for oligopoly to show how the output and profits of the two firms would be affected if the cost of one firm (say c_1) is reduced by an amount "t", $ć_1 = c_1 - t$. 10

2. (a) Consider at least one method by which an incumbent monopolist attempts to prevent a potential intent from entering the market.

   (b) Under what conditions will such an attempt be successful in the specific context?

   6+4=10

3. (a) Why are quantities considered to be 'strategic substitutes' but prices considered to 'strategic complements' in the context of a differentiated duopoly.

   (b) When are profits higher in Cournot than in Bertrand competition? 5+5=10

4. Consider a firm A that is a monopolist in market 1 with an infinitely elastic demand curves and a duopolist in market 2 with firm B. The demand curves are

   Market 1 p = 50

   Market 2 $P_2 = 200 - q_2^A - q_2^B$

   Cost functions of firms are

   $C^A = F + {}^1\!/_2\,(q_1^A + q_2^A)^2$
   $C^B = F + {}^1\!/_2\,(q_2^B)^2$
   } F > 1512½

   (a) Find the firm's equilibrium output and profits

   (b) What is the effect on output and profits if a demand shock raises the price in market 1 to p = 53. 5+5

5. Show how owners under Cournot duopoly have the incentive to delegate decision making to managers who are paid through an incentive contract that rewards sales as well as profits. 10

P.T.O.

6. Consider n identical firms competing in quantities (Cournot-Nash. Competition). Does horizontal merger of any two firms result in profits for the merging firms? How are the profits of non-merging firms affected? 7+3

7. Suppose that one firm out of the n + 1 firm competing in a oligopoly market develops a cost reducing innovation which is *patented*. Assume that the innovation is non-drastic and the firm decides to licence the innovation = 2.

   (a) If k firms buy the patent and (n – k) do not, explain how the output and profits one affected if the licensing is through a fixed fee.

   (b) Can you explain why licensing through a fixed fee is preferable to licensing through royalties. 6+4

8. Show that if owners of firms are free to delegate output decisions to managers appointed by them, then in the sub game perfect equilibrium a duopoly may lead to a Stackelberg outcome. 10

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