## RAMAKRISHNA MISSION VIDYAMANDIRA

(Residential Autonomous College under University of Calcutta)

**SECOND YEAR**

**B.A./B.SC. THIRD SEMESTER (July – December) 2014**

**Mid-Semester Examination, September 2014**

Date : 15/09/2014

**ECONOMICS (Honours)**

Time : 2 pm – 4 pm

Paper : III

Full Marks : 50

**[Use a separate answer book for each group]**

## Group – A

(***Question No. 1*** *is compulsory and answer* ***any two*** *from the rest*)

1. Find all pure-strategy Nash equilibria and justify. [2½+2½]

a)

| | Player B | |
|---|---|---|
| Player A | L | R |
| U | 2, 3 | 4, 2 |
| D | –1, 2 | 1, 1 |

b)

| | Player B | |
|---|---|---|
| Player A | L | R |
| U | 10, 10 | 14,8 |
| D | 8, 14 | 12, 12 |

2. Suppose there is a perfectly competitive industry where all the firms are identical with identical cost curves. Furthermore, suppose that a representative firm's total cost is given by the equation $TC = 100+q^2+q$ where q is the quantity of output produced by the firm. You also know that the market demand for this product is given by the equation $P = 1000 – 2Q$ where Q is the market quantity. In addition you are told that the market supply curve is given by the equation $P = 100 + Q$.

   a) What is the equilibrium quantity and price in this market given this information?

   b) The firm's MC equation based upon its TC equation is $MC = 2q + 1$. Given this information and your answer in part(a), what is the firm's profit maximizing level of production, total revenue, total cost and profit at this market equilibrium? Is this a short-run or long-run equilibrium? Explain your answer.

   c) Given your answer in part (b), what do you anticipate will happen in this market in the long-run?

   d) In this market, what is the long-run equilibrium price and what is the long-run equilibrium quantity for a representative firm to produce? Explain your answer.

   e) Given the long-run equilibrium price you calculated in part (d), how many units of this good are produced in this market? [10]

3. a) Describe the factors that drive profits to zero in perfectly competitive markets in the long run. Explain carefully the incentives that drive the market to a long run equilibrium.

   b) Why would a firm choose to operate at a loss in the short run? Explain carefully.

   c) When do firms decide to shut down production in the short run? Explain carefully.

   d) Draw a graph for a perfectly competitive market, specifically showing the short run supply curve. What is the relationship between the short run supply curve and what we talked about in parts (b) and (c)? Explain carefully. [10]

4. a) In the long run, a specific tax imposed on a competitive decreasing cost industry will raise market price by more than the amount of the tax. Show that this is true.
   b) Explain how free market forces can lead to efficient allocation of resources.
   c) Graphically derive the long run supply curve of a decreasing cost industry. [10]

## <u>Group – B</u>

(*Answer **<u>any two</u>** questions*)

5. a) Show that in an economy the growth of output depends on the growth rate of labour, capital and technology.
   b) What happens in an economy in the long run if there is an increase in government spending? [6+6½]

6. a) Define money in terms of its functions. What are the measures of money supply?
   b) Explain fisher effect. [4+3+5½]

7. Describe in terms of Solow model the concept of Golden rule of capital accumulation. [12½]

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