2021

ECONOMICS — HONOURS

Third Paper

(Group - A)

Full Marks : 50

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

SECTION – A

1. Answer **any five** questions :

   (a) Find the optimal commodity bundle for a consumer whose utility function and the budget constraint

   are $u(x_1, x_2) = x_1^{1.5} x_2$ and $3x_1 + 4x_2 = 100$ respectively. 4

   (b) A person likes soft drinks but does not distinguish between brands *A* and *B*. He wants to have 14 bottles of soft drinks in a week. He would not drink any more even if they were free.

   (i) Draw his indifference curves showing brands *A* and *B* on two axes.

   (ii) Draw his indifference curves showing soft drinks and other goods on two axes. 2+2

   (c) Distinguish between Income consumption curve and Engel curve. 4

   (d) A firm's production function is $x = -0.1 L^3 + 6L^2 + 12L$, where *x* is output and L is the number of workers employed.

   (i) How many workers are employed if the average product of labour is maximised?

   (ii) How many workers are employed if the marginal product of labour is maximised? 2+2

   (e) A firm's production funtion is $x = -0.2 L^3 + 18 L^2 + 1620 L$, where L is the number of persons employed and *x* is the output. At what output does marginal cost equal the average variable cost?

   4

   (f) A firm in a perfectly competitive industry has the following long-run cost function :

   $$C(x) = x^3 - 60x^2 + 1500x$$

   What are the long-run average and marginal costs? 2+2

   (g) Why are barriers to entry necessary for a monopoly to be maintained? Give some examples of different kinds of barriers to entry. 2+2

   (h) Assuming given preferences and a given wage-rate, use an indifference curve approach to show how the individual who can supply labour will choose between leisure and income. What happens to the amount of leisure taken as wage increases? 4

Please Turn Over

SECTION – B

2. Answer *any five* questions :

(a) In what respects do the Engel curves differ from the Income consumption curves? Derive Engel curves for normal and inferior goods.   3+3

(b) If leisure is a normal good, can a rise in wage rate lead to fewer hours worked? How would the result be modified if higher wages are paid only for overtime work?   3+3

(c) If the marginal product of a factor is falling, does it mean that its average product is also falling? Explain using diagram.   6

(d) The long-run cost function for each firm that supplies output is $C = q^3 - 4q^2 + 8q$. Firms will enter the industry if profits are positive and leave the industry if profits are negative. Describe the industry's long-run supply function. Assume that the corresponding demand function is $D = 2000 - 100P$. Determine equilibrium price, aggregate quantity and number of firms.   6

(e) In a constant cost industry with zero costs, the demand is given as $P = 16 - Q$. Estimate price and output assuming the firm to be a (i) monopoly, (ii) Cournot's duopoly firm and (iii) competitive firm.   6

(f) 'The size of monopsonistic exploitation depends on the structure of the commodity market'— Do you agree?   6

(g) What is bilateral monopoly? Is it true to say that equilibrium is indeterminate in a bilateral monopoly?   2+4

(h) What is meant by externality in consumption? 'In the presence of consumption externalities; a competitive equilibrium hardly attains Pareto-efficiency'. — Do you agree?   2+4

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