IES/ISS EXAM, 2010

4801

S. No.

B-HLR-K-HFA

GENERAL ECONOMICS – I

Time Allowed : Three Hours | *Maximum Marks : 200*

INSTRUCTIONS

The question paper consists of three Sections. Candidates should attempt FIVE parts of the question in Section I, SEVEN questions from Section II and TWO questions from Section III.

Candidates should attempt questions as per the instructions given in each Section.

The number of marks carried by each question is indicated in each Section.

Answers must be written only in ENGLISH.

Any assumptions made for answering a question must be mentioned clearly.

Section – I

Attempt any ***five*** parts of the following question. Answer to each part should be of about 50 words. 7×5=35

1. (a) Define consumer's surplus. Derive an expression for it using integral calculus.

(b) Why is short-run average cost curve U-shaped ? Show that marginal cost curve intersects the average cost curve at latter's minimum point.

(c) Compare long-run equilibrium of the firm under perfect competition with that under monopolistic competition using suitable diagram.

(d) What is a social welfare function ? State the underlying assumption in its formulation.

(e) State and explain the assumptions of two-variable linear regression model.

(f) What is log-normal distribution ? Where is it used in economic analysis ?

Section – II

Attempt any ***seven*** of the following questions. Each answer should be in about 150 words. 15×7=105

2. Derive consumer's expenditure function by minimising total expenditure; $y = p_1q_1 + p_2q_2$ subject to utility constraint $\bar{u} = q_1q_2$.

3. Draw consumer's indifference curve from revealed Preference Theory.

4. Separate income effect from substitution effect of a price change for a Giffen type good. Use suitable diagram.

5. What is elasticity of factor substitution ? Give various forms of production function based on this concept.

6. "Asymmetric or incomplete information leads to market failure". Examine lemons' problem in the above context with the help of pricing of used cars.

7. What is Hicks-Kaldor criterion of compensation ? What are its weaknesses ? Give Scitovsky's suggestion for improvement.

8. Distinguish between positive and negative externalities and explain with examples. Why does government provide some goods which are not public goods ?

9. What are type I and type II errors ? Why is probability of type I error fixed in a hypothesis testing problem ?

10. Four products *A*, *B*, *C*, *D* are to be bought to satisfy minimum requirements of calories and Vitamin (which are 18 and 10 units respectively) at minimum cost. Formulate linear programming problem using additional information given below :

Product type	*A*	*B*	*C*	*D*
Calorie content	2	0	1	3
Vitamin content	0	3	1	4
Price per unit	5	10	12	15

Section – III

Attempt any *two* of the following questions in about 500 words each : 30×2=60

11. What is Peak-load Pricing ? How is it different from third degree price discrimination ? Give diagrams to illustrate your answer.

12. Define production function. The production function for a product is given by $Q = 100$ KL.

If price of capital (K) is \$ 120 per day and that of labour (L) is \$ 30 per day, what is the minimum cost of producing 400 units of output ?

13. Describe Leontief's static input-output model. Calculate outputs of two industries from following input-output table if final use for outputs of the two industries increase to 15 and 20 units, respectively.

	Industry I	*Industry II*	*Final use*	*Total output*
Industry I	20	9	11	40
Industry II	12	6	12	30

Figures are in physical units.