CLASS: IMSc   SEMESTER: 2nd
BRANCH: QEDS   SESSION: SP 2023

SUBJECT: ED115 INTRODUCTORY MICROECONOMICS

TIME: 3 Hours   FULL MARKS: 50

INSTRUCTIONS:
1. The question paper contains 5 questions each of 10 marks and total 50 marks.
2. Attempt all questions.
3. The missing data, if any, may be assumed suitably.
4. Before attempting the question paper, be sure that you have got the correct question paper.
5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
6. Sequence of the questions must be maintained to avoid penalty.

		CO	BL
Q.1(a)	Derive the market demand curve from individual demand curves. Explain with suitable diagram.	[5]	1
Q.1(b)	Show mathematically why an individual cannot survive only with luxurious goods using concepts of elasticity.	[5]	1
Q.2(a)	The production function for personal computers of Dell is given by $q=10K^{0.5}L^{0.5}$, where q is the number of computers produced per day, K is the hours of machine time, and L is the hours of labor input. Dell's competitor, HP is using the production function $q=10K^{0.6}L^{0.4}$. If both companies use the same amount of capital and labor, which will generate more output?	[5]	2
Q.2(b)	Assume that capital is limited to 9 machine hours but labor is unlimited in supply. In which company is the marginal product of labor greater? Explain.	[5]	2
Q.3(a)	Suppose that a firm's production function is $q=10L^{1/2}K^{1/2}$. The cost of a unit of labor is Rs. 200 and the cost of a unit of capital is Rs. 800. Find the marginal rate of technical substitution.	[5]	3
Q.3(b)	Find the optimal level of capital and labor required to produce 140 units of output.	[5]	3
Q.4(a)	Can a firm in perfectly competitive market enjoy supernormal profit or incur loss in the short run? Explain with suitable diagram.	[5]	4
Q.4(b)	Can the same situations continue in the long run? Explain with suitable diagram.	[5]	4
Q.5(a)	A firm faces the following average revenue (demand) curve: P=120-0.02Q. The firms cost function is given by C=60Q+25000. Assume that the firm maximizes profits. What is the level of production, price and total profit per week?	[5]	5
Q.5(b)	If the government decides to levy a tax of Rs.14 per unit of the product, what will be the new level of production, price and profit?	[5]	5

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