



Register Number: .

**DATE: 11-01-2021**

**ST. JOSEPH'S COLLEGE (AUTONOMOUS), BANGALORE-27**  
**B.Sc. ECONOMICS- I SEMESTER**  
**SEMESTER EXAMINATION: JANUARY 2021**  
**ECS 118: MICROECONOMICS-I**

Time: 2hrs. 30min

Maximum marks: 70

This question paper has 2 printed pages and 3 parts

**Part A. Answer any TEN of the following**

**3 X10=30**

1. Draw the indifference curve when one commodity is good and the other commodity is bad.
2. What is the relation between marginal revenue (MR), average revenue (AR) and elasticity of demand? Show and explain.
3. Define producer's surplus. Explain with diagram.
4. Describe a situation when axiom of dominance gets violated.
5. What is bandwagon effect? What happens to demand curve under bandwagon effect? Explain with diagram.
6. What is the difference between short run and long run production function?
7. Explain the difference between partial and general equilibrium with examples.
8. Define returns to scale and also explain different types of returns to scale in production process.
9. Draw and explain ridge lines in the production function.
10. Draw the total cost and total product curves and explain the relation between them.
11. What is isocost line? Derive the slope of isocost line.
12. Explain the difference between indifference curve and isoquant.

**Part B. Answer any TWO of the following**

**5 x 2 =10**

13. The demand function is given by,  $Q_1 = K_1 P_1^{a11} P_2^{a12} I^{b1}$  is called a constant elasticity demand function (given  $a11$ ,  $a12$  and  $b1$  are constants). Compute the three elasticities (own price, cross price and income) and show that they are all constants.
14. What can be the shape of price consumption curve and the underlying demand curve when two goods are perfect substitutes?
15. Find the optimum commodity purchased by a consumer (x and y) whose utility function and budget constraint are the following:  
 $U = 4xy - x^2$  and  $6 = 2x + y$  respectively.

**Part C. Answer any TWO of the following**

**15x 2 = 30**

16. a. Define strong axiom of revealed preference theory. Using suitable diagram, explain why complete ranking of bundles is impossible if one considers weak axiom of revealed preference. (8)
- b. Prove that price effect (P.E) is the summation of substitution effect (S.E) and income effect (I.E) using compensating variation of income. (Assume that consumer has two commodities,  $q_1$  and  $q_2$ , where  $q_1$  is inferior and  $q_2$  is normal. Prove the above scenario if price of  $q_1$  falls.) (7)
17. a. What is the relation between total product, average product and marginal product in the production process? Explain graphically. (10)
- b. If the production function is given by,  $q = K^{1/2} L^{1/2}$  and price of capital (K) is Rs. 4 and price of labour (L) is Rs. 8, derive the equation of expansion path of the firm. (5)
18. a. Explain with diagram, the equilibrium condition of the consumer using Marshallian theory of consumer behaviour. (8)
- b. Let the production function as:  $Q = 7K^{0.3} L^{0.7}$ . If the unit prices of K and L are Rs. 3 and Rs. 7 respectively and the firm is ready to spend Rs. 100, find out the maximum level of output that the firm can produce. (7)

**ECS118\_A\_20**