ST. JOSEPH'S COLLEGE (AUTONOMOUS), BANGALORE-27
B.Sc. ECONOMICS– I SEMESTER
SEMESTER EXAMINATION: OCTOBER 2019
ECS 1118: 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 and explain the price consumption curve (PCC) and the underlying demand curve for perfect substitutes.
2. "Tangency between indifference curve and budget line is a necessary condition but not a sufficient one for a bundle to be optimal" – Comment on the statement.
3. What is the relation between marginal revenue (MR), average revenue (AR) and elasticity of demand? Show and explain.
4. Define producer's surplus. Explain with diagram.
5. Explain the difference between arc and point price elasticity of demand.
6. What is Vebleneffect? What happens to demand curve under Veblen effect? Explain with diagram.
7. What is the difference between short run and long run production function?
8. Define isoquant and derive its slope.
9. Define returns to scale and also explain different types of returns to scale in production process.
10. What do you mean by diminishing returns to factors?
11. Draw the total cost and total product curves and explain the relation between them.
12. Define and explain elasticity of substitution.

Part B. Answer any TWO of the following   **5 x 2 =10**

13. The demand function is given by, $Q_1 = KP_1^{a11}P_2^{a12}I^{b1}$ is called a constant elasticity demand function (a_{11}, a_{12} and b_1 are constants, P_1 is own price, P_2 is cross price and I is income). Compute the three elasticities (own price, cross price and income) and show that they are all constants.
14. What is the relation between total product, average product and marginal product in the production process? Explain graphically.
15. Derive the compensated demand functions of q_1 and q_2 given the utility function, $U = q_1q_2$ and the budget constraint is $P_1q_1 + P_2q_2 = M$.

Part C. Answer any TWO of the following   **15x 2 = 30**

16. 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.

17. a. If the production function is $Q = X_1^{1/2}X_2^{1/2}$ and prices per unit of X_1 and X_2 are Rs. 2 and Rs. 4 respectively, determine the maximum output subject to the cost constraint of Rs. 80.

    b. The production function is given as, $q = 7K^{0.5}L^{0.3}$. If the prices of K and L are Rs. 2 and Rs. 3 respectively, obtain the equation of expansion path.

18. a. Using suitable diagram, draw and explain the long run average cost and marginal cost curves.

    b. Using suitable diagram, explain equilibrium of the firm given the firm's objective is to minimize cost subject to given output.