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**KIRIRI WOMENS' UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**UNIVERSITY EXAMINATION, 2019/2020 ACADEMIC YEAR**  
**FIRST YEAR, FIRST SEMESTER EXAMINATION**  
**FOR THE DEGREE OF BACHELOR OF SCIENCE**  
**(BUSINESS ADMINISTRATION)**

**KFI 100 - PRINCIPLES OF MICROECONOMICS THEORY**

Date: 12<sup>th</sup> April, 2019  
Time: 8.30am – 10.30am

**INSTRUCTIONS TO CANDIDATES**

**ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS**

**QUESTION ONE (30 MARKS)**

- a) A two commodity market model is defined by the following:

$$Q_{d1} = 4 - P_1 + 1/2P_2$$

$$Q_{d2} = 10 + P_1 - P_2$$

$$Q_{s1} = -3 + 4P_1$$

$$Q_{s2} = -18 + 4P_2$$

Determine the equilibrium prices and quantities for the two commodities.

(8 marks)

- b) Determine the average product of capital and the average product of labour, wherever applicable:

i)  $Q = 5K^2 - KL + L^2$

ii)  $Q = 1/K^2$

iii)  $Q = K/L^2$

iv)  $Q = AL^{3/2}$

(9 marks)

- c) Using an illustration discuss competitive profit maximization in long-run. (6 marks)

- d) Demonstrate and explain equilibrium of a consumer in ordinal approach. (7 marks)

### **QUESTION TWO (20 MARKS)**

- a) The demand and total cost functions facing a firm are given as:

$$P_1 = 26 - 3Q_1 - Q_2$$

$$P_2 = 33 - Q_1 - 2Q_2^2$$

$$TC = Q_1^2 + Q_1Q_2 + 2Q_2^2$$

Find:

- i) The average revenue function for commodities  $Q_1$  and  $Q_2$ . (3 marks)
  - ii) The total revenue for the firm. (2 marks)
  - iii) The average cost function with respect to  $Q_1$  and  $Q_2$ . (2 marks)
  - iv) The profit function for the firm. (3 marks)
- b) Using an illustration, differentiate between a shift and a movement along a demand curve. (6 marks)
- c) Using examples, define giffen goods and inferior goods. (4 marks)

### **QUESTION THREE (20 MARKS)**

- a) Illustrate and explain free market situation under price mechanism. (10 marks)
- b) Explain the four characteristics of indifference curves. (6 marks)
- c) Describe convexity of isoquant curve. (4 marks)

### **QUESTION FOUR (20 MARKS)**

- a) Explain using an illustration, profit maximizing firm in short run under monopoly. (10 marks)
- b) Using relevant examples, explain the scope of economics. (10 marks)

### **QUESTION FIVE(20 MARKS)**

- a) Illustrate and explain the various forms of price elasticities as used in economics. (10 marks)
- b) Demonstrate with help of examples the factors responsible for low supply of loaves of bread in Kiriri Sub-county of Kiambu County. (10 marks)