

CHUKA



UNIVERSITY

UNIVERSITY SUPPLEMENTARY/SPECIAL EXAMINATIONS.

FIRST YEAR EXAMINATION FOR THE AWARD OF BACHELOR OF SCIENCE IN
ECONOMICS AND SOCIOLOGY

ECON 111: PRINCIPLES OF MICROECONOMICS

STREAMS:

TIME: 2 HOURS

DAY/DATE: WEDNESDAY 25/07/2018

11.30 A.M - 1.30 P.M

INSTRUCTIONS:

- Answer ALL Questions.
- Do not write anything on the question paper

QUESTION ONE [30 MARKS]

- (a) Discuss 3 exceptions of the law of demand. [10 Marks]
- (b) Using an illustration, explain the short run and long run equilibrium for a firm under perfect competition. [10 Marks]
- (c) Discuss the factors that determine elasticity of supply. [10 Marks]

QUESTION TWO [20 MARKS]

- (a) The average revenue and average cost functions for a firm are given as follows: - [10 Marks]

$$AR = 4 - 0.25Q \text{ and } AC = \frac{4}{Q} + 2 - 0.3Q + 0.05Q^2$$

Find the level of Q and P that maximize profits for the firm

- (b) Discuss 3 types of equilibrium. [6 Marks]
- (c) Distinguish between the following pair of terms [4 Marks]
- Marginal rate of substitution and marginal rate of technical substitution
 - Short run and long run periods in production

QUESTION THREE [20 MARKS]

(a) Highlight the properties of indifference curves. [4 Marks]

(b) Returns to scale for a homogenous production function is given by the power of its exponents. Prove. [5 Marks]

(c) Given the following information
 $Q_Y = 5000 - 0.5P_Y - 2.3P_W + 0.2P_X + 0.000001P_Z + 0.0037I$

$$P_y = 30,000 \quad Q_y = 15,000 \quad \text{income (I)} = 60,000$$

Compute

1. Price elasticity of demand
2. Income elasticity of demand
3. Interpret your results
4. From income elasticity of demand, what type of product would y be.
5. State the relationship between commodities w, x, z and y.

QUESTION FOUR

(a) With the aid of a diagram, discuss the 3 stages of production. [10 Marks]

(b) Explain 5 sources of barriers to entry in a monopoly. [5 Marks]

(c) The total cost of function of a firm is given as follows; [5 Marks]
 $TC = 0.035Q^3 - 0.5Q^2 + 1.5Q + 7$
Find the AC, AVC, TVC, TFC and MC for the firm.

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