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MASENO UNIVERSITY
UNIVERSITY EXAMINATIONS 2016/2017

**FIRST YEAR SECOND SEMESTER EXAMINATIONS FOR THE
DEGREE OF BACHELOR OF ART IN ECONOMICS WITH
INFORMATION TECHNOLOGY**

CITY CAMPUS—EVENING/REGULAR

AEC 101: INTRODUCTION TO MICROECONOMICS

Date: 5th June, 2017

Time: 5.30 - 8.30 pm

INSTRUCTIONS:

- Answer question ONE and any other THREE questions
- Question one carries 25 marks and the rest 15 marks each.
- Do not write on a question paper.



Question one (Compulsory)

a) Write short notes on the following fundamental concepts:

- (i) Scarcity and Choice (4 marks)
- (ii) Opportunity cost (3 marks)
- (iii) Production possibility frontier (3 marks)
- (iv) Positive and normative economics (4 marks)

b) The following economic functions have been derived by the Finance Manager of the Kenya Tea Limited:

$$Q_A = 3P^2 - 4P \text{ and } Q_B = 24 - P^2 \text{ where } p \text{ represents price and } Q \text{ is quantity}$$

Required:

- (i) Which of the two functions represents a demand curve, supply curve and why? (3 marks)
- (ii) At what values of price and quantity is the market in equilibrium? (4 marks)
- (iii) Explain, with the aid of a diagram, the effect on the demand and supply functions indicated in (a) above of a simultaneous decrease in cost of production and an increase in the price of a complementary good. (4 marks)

Question Two

- a) Discuss what you understand with consumer sovereignty and indicate its limits (6 marks)
- b) (i) Define an indifference curve (2 marks)
- (ii) Illustrate and clearly explain the nature of indifference curves for perfect substitutes and for complementary goods (4 marks)
- (iii) Explain the property of convexity to the origin of an indifference curve (3 marks)

Question Three

- a) State the law of variable proportions and highlight its key assumptions (7 marks)
- b) Using an illustration discuss the main stages of production associated with the law of variable proportion. Which stage will you recommend for production (8 marks)

Question Four

The total cost equation in the production of bacon at some hypothetical factory is

$$C = 1000 + 100Q - 15Q^2 + Q^3$$

Where C = Cost measured in shillings, while Q = quantity measured in kilograms.

- Compute the total and average costs at output level of 10 and 11 kilograms. (4 marks)
- What is the Marginal cost of the 12th Kilogramme? (4 marks)
- Explain the shape and relationship between AC, AVC, MC and AFC curves using relevant diagrams. (7 marks)

Question Five

A monopoly firm is faced with the following demand function

$$P = 13 - 0.5Q$$

The Marginal Cost function for the firm is given by $3 + 4Q$ and the total fixed cost is 4.

Determine:

- The profit maximizing output. (5 marks)
- The level of supernormal profit if any. (2 marks)
- The output level at the break-even point. (2 marks)

A firm operating in a perfectly competitive market has to sell all its output at the price of Sh.10 per unit. Its marginal cost function is given by $Q + 4$ and the total fixed cost is 1.

Determine:

- The profit maximizing output level. (4 marks)
- The level of supernormal profit if any. (2 marks)

Question Six

- What is wage differential? Discuss the factors responsible for wage differentials within the same occupation (7 marks)
- Explain what is meant by the terms transfer earnings and economic rent of a factor of production. (4 marks)
- Differentiate between economies of scale and returns to scale (4 marks)