CHUKA UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF COMMERCE

ECON 212: INTERMEDIATE MICROECONOMICS

STREAMS: BCOM Y2S1 **TIME: 2 HOURS**

DAY/DATE: TUESDAY 06/08/2019 **8.30 A.M. – 10.30 A.M.**

INSTRUCTIONS:

- **Answer question ONE and any other TWO questions**

QUESTION ONE

(a) Write short notes on the following

(i) Marginal rate of technical substitution. (2 marks)

(ii) Budget constraint. (2 marks)

(iii) Cobb- Douglas technology. (2 marks)

(iv) Homogenous functions (2 marks)

(b) Suppose the utility function of the consumer consuming two products X and Y with income Ksh. 400 is given by

$U = 2X^{0.7}Y^{0.3}$

If the price of X is Ksh. 10 and price of Y is Ksh. 20.

(i) Compute Marshallian demand functions for utility maximization. (7 marks)

(ii) Find the maximum utility. (3 marks)

(c) Using a well-labelled diagram, explain the difference between income and substitution effect following a decrease in price of a normal good. (6 marks)

(d) Clearly explain price discrimination and discuss three types of price leadership by Cartels experienced in the market. (6 marks)

QUESTION TWO

(a) Suppose the production function of firm is $Q = 20L^{0.2}K^{0.8}$. If the maximum production expenditure is Ksh. 500. Wage rate is Ksh 20 and interest rate Ksh. 30.

(i) Find the profit maximizing levels of labour and capital employment. (7 marks)

(ii) Compute maximum output. (3 marks)

(b) Given the following

$Q = 8L^{0.3}K^{0.7}$, find the following;

(i) Elasticity of substitution. (3 marks)

(ii) Marginal rate of technical substitution and return to scale. (3 marks)

(c) Discuss the assumptions of technologies. (4 marks)

QUESTION THREE

(a) Given that

$U = X_1^{\frac{1}{3}}X_2^{\frac{2}{3}}$ and $P_1X_1 + P_2X_2 = M$

(i) Calculate the ordinary demand functions that minimizes expenditure. (7 marks)

(ii) Compute minimum expenditure. (3 marks)

(b) Using a well-labelled diagram, discuss the equilibrium of the consumer under ordinalist using the concept of budget line and indifference curve. (10 marks)

QUESTION FOUR

(a) Given the following information about a certain monopoly.

$Q = 40 - P$
$TC = 50 + Q^2$

(i) Find profit maximizing price, output and hence maximum profit. (7 marks)

(ii) If the monopoly is charged Ksh 20 as lump sum tax, find the effect on price, output and profit. (3 marks)

(iii) If the firm is taxed a profit tax of 10%, find the effect on price, output and profit. (3 marks)

(b) Given the following production function

$$Q = \frac{3L^2K^3+K^5}{LK^2}$$

(i) Find the degree of homogeneity and comment on returns to scale. (4 marks)

(c) Distinguish between indifference curve and an isoquant. (3 marks)
