

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

**EXAMINATION FOR THE AWARD OF DEGREE OF
BACHELOR OF ECONOMICS AND STATISTICS, BACHELOR OF ECONOMICS
AND SOCIOLOGY, BACHELOR OF AGRIBUSINESS MANAGEMENT, BACHELOR
OF SCIENCE IN AGRICULTURAL ECONOMICS AND BACHELOR OF COMMERCE**

ECON 212: INTERMEDIATE MICROECONOMICS

STREAMS: AS ABOVE Y2S1

TIME: 2 HOURS

DAY/DATE: MONDAY 03/12/2018

8.30 AM – 10.30 AM

INSTRUCTIONS:

Answer Question One and any other Two Questions

QUESTION ONE

- (a) Differentiate between the following terms as used in microeconomics. [6 marks]
- (i) Budget line and isocost
 - (ii) Elasticity of substitution and marginal rate of technical substitution
 - (iii) Non-linear pricing and perfect price discrimination
- (b) With the aid of diagrams, discuss four types of production functions. [8 marks]
- (c) A firm under perfect competition has the following demand function $P = 140 - 4Q$. The firm's cost function is given as $TC = 10 + 5Q^2$. Find the firm's profit maximizing output and price. [8 marks]
- (d) Price will be higher and output lower if a firm behaves monopolistically rather than competitively. Use a diagram to prove this claim. [8 marks]

QUESTION TWO

- (a) The following is the utility function of a consumer

$$U = x_1^{\frac{1}{2}} x_2^{\frac{1}{2}}$$

Let the price of the two commodities X_1 and X_2 be P_1 and P_2 respectively and the consumers income be represented by M .

Required:

- (i) Find the Marshallian demand functions [4 marks]
- (ii) Derive the indirect utility function [12 marks]
- (iii) Suppose the price of commodity X_1 is kshs. 20 and the consumer's initial income is kshs. 100. If the price of X increases to kshs. 25, by how much should the consumer be compensated with to enjoy the same utility? Calculate the substitution and income effect of the price change. [8 marks]
- (iv) With the aid of a well labeled diagram, distinguish between the substitution and income effects of an increase in price of a normal good. [6 marks]

QUESTION THREE

- (a) Distinguish between the types of price discrimination practiced by monopolies. [6 marks]
- (b) You are provided with the following Cobb-Douglas production function.

$$Q = AL^{\frac{1}{3}}K^{\frac{2}{3}}$$
 - (i) Is the function homogenous? Show your workings. [3 marks]
 - (ii) What is the returns to scale of the above function? [3 marks]
 - (iii) Find the marginal rate of substitution and hence the elasticity of substitution for the function. [8 marks]

QUESTION FOUR

- (a) Discuss the assumptions of ordinal and cardinal approaches of measuring utility. [10 marks]
 - (b) A consumer's utility function is given by $U = X^2 + Y^2$ with X and Y as the two goods that he consumes. Given that the price of good X is kshs. 5, price of good Y is kshs. 10 and the consumer's income is kshs. 100; calculate the quantities of X and Y that maximize his utility and hence calculate his maximum utility. [6 marks]
 - (c) Once prices are determined in an oligopolistic market, they tend to remain rigid. Discuss this statement using a diagram. [4 marks]
-