



# MASENO UNIVERSITY

## UNIVERSITY EXAMINATIONS 2011/2012

SECOND YEAR FIRST SEMESTER EXAMINATIONS FOR  
THE DEGREE OF BACHELOR OF BUSINESS  
ADMINISTRATION AND BACHELOR OF ARTS  
(ECONOMICS) WITH INFORMATION TECHNOLOGY  
(CITY CAMPUS -EVENING & DAY)

### AEC 201: INTERMEDIATE MICROECONOMICS

*Date: 13<sup>th</sup> April, 2012*

*Time: 5.30 – 7.30 p.m.*

#### INSTRUCTIONS:

1. Attempt QUESTION ONE and any OTHER TWO questions.
2. Question one carries 30 marks and the rest 20 marks each.

1 (a). Briefly explain the consumer equilibrium from the cardinalists point of view. (6marks)

(b). Highlight the postulates of ordinal utility theory. (4marks)

(c). Prove that the marginal rate of substitution between commodities  $X_i$  and  $X_j$  is equal to their marginal utilities given the utility function  $U = f(X_i, X_j)$  and that the equation of indifference curve is given by  $U = f(X_i, X_j) = c$  where  $c$  is constant. (3marks)

(d). Assume a demand function for bread is:  $X_1 = 10 + (M \div 10P_1)$ . If originally his income is kshs. 45000 per month and the price of bread ksh 45.

i) What is his demand for bread? (1marks)

ii) Due to the strengthening of the Kenyan shilling, the price of bread falls to Kshs. 30, what is the total effect of the fall in price of milk on his Consumption. (2marks)

(e). Find the consumer's surplus at equilibrium price level for the following price demand and price supply equations:

$$P_d = 200 - 0.5Q$$

$$P_s = 20 - 0.002Q^2. \quad (8marks)$$

(f). Cabinet ministers are now considering raising the exercise duty on petrol in Kenya. Such a tax increase will increase the price of petrol to petrol consumers. Will it necessarily reduce petrol consumption? In giving your answer, be sure to distinguish the substitution effect of the price rise from the income effect. (6marks)

2.(a). With the help of a well labeled diagram, explain the three stages of classical production function. (10marks)

(b). Assuming you are a production manager of a given Company, which stage would you recommend? Give reasons for your answer. (4marks)

(c). Assuming that a monopolist demand curve is given by  $P = \alpha_0 - \alpha_1 Q$ , show that the firm's marginal revenue curve is not only downward sloping but is also twice as steep as average revenue curve even though they have the same intercept. (6marks)

3. (a). Identify and explain any four characteristics of indifference curve. (8marks)

(b). With the help of a well labeled diagram, explain leisure income trade off and the need to provide higher wage rate than the normal wage rate. (6marks)

(c). If the government imposes a specific tax on a product supplied by a monopolist, what would happen to prices (assume the marginal cost facing the monopolist has a positive slope). Use a diagram to illustrate (6marks)

4.(a). Distinguish between explicit and implicit costs. (2marks)

(b). Geometrically derive marginal cost, fixed cost and average cost curves. (6marks)

(c). Using a diagram, explain the relationship between marginal cost curves in (4b) above. (6marks)

(d). A firm's total cost function is given as  $TC = 200 + 50Q + 250Q^3$ , determine the firm's:

(i) Average fixed cost. (1marks)

(ii) Marginal cost function. (2marks)

(iii) Average total cost function. (3marks)

5. (a). Define Pareto optimality. (2marks)

(b). Using well labeled diagrams, explain Pareto efficiency in production and consumption. (18marks)