

**JARAMOJI OGINGA ODINGA UNIVERSITY OF SCIENCE AND  
TECHNOLOGY  
MAIN CAMPUS  
UNIVERSITY EXAMINATIONS 2017/2018  
YEAR 1 SEMESTER 1 EXAMINATION FOR THE DEGREE OF  
MASTER OF BUSINESS ADMINISTRATION  
MBA 802: MANAGERIAL ECONOMICS.  
(PART TIME – EVERNING)**

**Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_

**INSTRUCTIONS:**

Attempt any **FOUR** questions in this Question Paper.

Each Question carries **15** marks.

**QUESTION ONE**

- (a) In Managerial Economics, the importance of decision making is underscored. Briefly describe a scientific approved procedure that a managerial economist will follow while making a rational decision. (5mks)
- (b) Give **ANY FIVE** distinctions between Economics in general and Managerial economics (5mks)
- (c) **DESCRIBE** the features of Managerial Economics (5mks)

**QUESTION TWO**

- i) State **ANY FIVE** distinctions between a perfect market and a monopolistic market. (5mks)
- ii) A Company sells a single product with annual fixed cost of Sh. 70 Million and variable cost per unit of Sh. 7000. The current selling price has been set at sh. 16000 per unit and at this price the demand per year is 10000 units. It is estimated that for every increase in price of sh. 200 demand will reduce by 500 units and vice versa.

Required

Determine the optimal output and selling price assuming

- a) Profit is to be maximized (5mks)  
b) Revenue to be maximized (5mks)

### **QUESTION THREE**

- a) Briefly discuss the concept of Least cost input combination (5mks)
- c) The two most important forms of production functions used in economic literature in analyzing input-output relationships are the Cobb-Douglas production function and the Constant Elasticity of Substitution (CES) production function.
- i) Briefly state **ANY FIVE** properties of the Cobb-Douglas production function. (5mks)
- ii) Given the Cobb-Douglas production function:  $Q = 500K^{0.4}L^{0.6}$ , obtain the output elasticities of capital (K) and labour (L). (5mks)

### **QUESTION FOUR**

Given that the cost function of a particular firm is given by;  $C = 1000 + 10Q^{\frac{1}{2}} + Q + 2Q^2$  and total variable cost of the same firm is given by;  $TVC = 10Q^{\frac{1}{2}} + Q + 2Q^2$

Derive

- (i) The average total cost (ATC) function. (2mks)
- (ii) The average fixed cost (AFC) function. (3mks)
- (iii) The marginal cost (MC) function (2mks)
- (iv) At 5 units of output, what are the values of ATC, AFC and MC. (5mks)
- d) Explain the shape and relationship between AC and MC. (3mks)

### **QUESTION FIVE**

a) W. J. Baumol introduced the hypothesis of Sales Revenue maximization as an alternative to the profit-maximization objective. Briefly discuss the factors listed by Baumol lists that justifies the managers' pursuance of this goal. (6mks)

b) HBC Ltd. manufactures and sells two interdependent products; Bora and Kizuri. The demand functions for the products are given by  $P_1 = 800 - X - 2Y$  and  $P_2 = 1100 - X - 2.5Y$

Where  $P_1$  = The unit price of Bora and  $P_2$  = the unit price of Kizuri  
 $X$  and  $Y$  are the number of units sold for Bora and Kizuri respectively

The total cost of producing both products is given by the function

$$TC = 150X + 50Y$$

#### **Required**

Determine the number of units of each product required to maximize total profit. (9mks)

## **QUESTION SIX**

- a) Define the following terms (5mks)
- i) Sales revenue maximization
  - ii) Balanced growth rate
  - iii) Marginal revenue
  - iv) Break-even output level
  - v) Elasticity of demand
- b) The production function represents the technology of a firm. State **ANY FIVE** assumptions that a production function should be based. (5mks)
- c) A firm has the following short-run production function;
- $$Q = 150L + 18L^2 - 1.5L^3$$
- Where;
- $Q$  = Quantity of output per week
- $L$  = Number of workers employed
- When does the law of diminishing return take effect? (5mks)