



MOI UNIVERSITY

OFFICE OF THE CHIEF ACADEMIC OFFICER

UNIVERSITY EXAMINATIONS

2010/2011 ACADEMIC YEAR

THIRD YEAR FIRST SEMESTER EXAMINATION

FOR THE DEGREE OF

BACHELOR OF ARTS

**BACHELOR OF EDUCATION AND BUSINESS
MANAGEMENT**

COURSE CODE: ECO 310/BBM 211

COURSE TITLE: INTERMEDIATE MICROECONOMICS

DATE: 22TH NOVEMBER, 2010 **TIME:** 2.00 P.M. – 5.00 P.M

INSTRUCTION TO CANDIDATES

- ANSWER ANY FOUR QUESTIONS.
- ALL QUESTIONS CARRY EQUAL MARKS

QUESTION ONE

Using graphical or mathematical illustrations, demonstrate the distinction between the following:

- (a) Cardinal / ordinal approach in utility.
- (b) Weak axiom of revealed preference.
- (c) Price elasticity / cross elasticity of demand.
- (d) Substitution effect / income effect.
- (e) Indifference / Isoquant curves

(5 MKS each)

QUESTION TWO

- (a) A monopolist sells his products in two different markets which have the following demand functions:

$$Q_1 = 500 - P_1$$

$$Q_2 = 300 - P_2$$

The firm's total cost function is:

$$50,000 + 100Q$$

- (i) What are the salient features of the above model?
- (ii) Show the relationship between the price charged in each market and elasticities of demand in each market.
- (iii) Would the profits be lower or higher if there was no discrimination?

(5 MKS each)

- (b) Given a production function of the nature.

$$Q = f(L, K) = K + L + 2\sqrt{KL}$$

Determine

- (i) The nature of returns to scale of this production function and MRTS
- (ii) The MP_L and MP_K at $k = 2$ and $L = 1.5$

(5 MKS each)

QUESTION THREE

- (a) Assume the following production function:

$$Q = 4K^{0.5}L^{0.5}$$

- (i) Determine returns to scale for the function and the shape of the firm's long run ATC curve.
- (ii) Express both MP_L and MP_K in terms of AP_L and AP_K

(8 MKS each)

- (b) Compare and contrast the Cobb-Douglas production function and fixed proportions production function.

- (c) Derive the theoretical characteristic of TP, MP and AP of labour. (5 MKS)

QUESTION FOUR

- (a) A firm is faced with the following demand and cost functions:

$$Q = 2,000 - 20P$$

$$TC = 0.05Q^2 + 10,000$$

Determine

(i) The maximum profit for this firm.

(5 MKS each)

(ii) Output that minimizes costs.

(b) Suppose the production function^{of} a firm is:

$$Q = 12LK - 3K^2 - L^2$$

Now if his total cost function is

$$L + K = 16$$

Determine the level of capital labour that maximizes his output. (15MKS)

QUESTION FIVE

(a) If the budget line and utility function of a consumer are

$$P_x X + P_y Y = M, \text{ and } U = XY + Y$$

Where X and Y are goods consumed.

(i) Derive the equilibrium condition for the consumer 10

(ii) List and explain the factors that each lead to a shift in the above condition.

(b) Explain the concept of consumer surplus and show how it is used to measure welfare changes of consumer

(c) Explain how economics and diseconomies of scale determine the shape of the LAC ^{LAC}

QUESTION SIX

(a) Explain why a monopolistic competitor's equilibrium leads to economic inefficiency
redefine so a perfect competitors (8MKS)

(b) By giving practical examples, write short notes on:

(i) Homothetic functions .

(ii) Structural features of an oligopolistic market. (6MKS each)

(iii) Origin of monopolies.