



*(KNOWLEDGE FOR DEVELOPMENT)*

**KIBABII UNIVERSITY**

**UNIVERSITY EXAMINATIONS**

**2017/2018 ACADEMIC YEAR**

**THIRD YEAR FIRST SEMESTER**

**SPECIAL/SUPPLIMENTARY EXAMINATION**

**FOR THE BACHELOR OF EDUCATION ARTS**

**COURSE CODE: ECO 314**

**COURSE TITLE: MANAGERIAL ECONOMICS**

**DATE: 18/10/2018 TIME: 3.00 – 5.00 P.M**

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**INSTRUCTIONS TO CANDIDATES**

**ANSWER QUESTION ONE IN SECTION A AND ANY OTHER TWO (2) QUESTIONS  
IN SECTION B**

**TIME: 2 HOURS**

KIBUCO observes ZERO tolerance to examination cheating

This Paper Consists of 3 Printed Pages. Please Turn Over.

## SECTION A (COMPULSORY)

### QUESTION ONE

Suppose a firm has a cost function that depends on the levels of output of commodities X and W as follows:

$$C=4X^2+10W^2$$

The production manager wants to determine the quantities of each commodity that should be produced to minimize cost if the total output of X and W must equal to 800 units thus the cost must be minimized subject to the constraint.

- i. Find the first order condition (6mks)
- ii. Check the second order condition.(6mks)
- iii. What is the optimal cost. (3mks)
- iv. Explain reasons for capital budgeting (5 mks)
- v. Explain five methods of demand forecasting (10 Marks)

## SECTION B (CHOOSE ANY TWO QUESTIONS)

### QUESTION TWO

a) The sales of a product over the years is as given below:

| Year  | 2002  | 2003  | 2004  | 2005  | 2006  | 2007  | 2008   | 2009   | 2010   | 2011  |
|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|-------|
| Sales | 22734 | 24731 | 31489 | 44685 | 55319 | 91021 | 146234 | 107887 | 127483 | 97275 |

Using normal equations:

$$\Sigma Y = na + b \Sigma x \dots \dots \dots (1).$$

$$\Sigma XY = A \Sigma X + b \Sigma X^2 \dots \dots \dots (2).$$

Estimate sales for 2012 and 2015 and fit a linear regression equation. (10 Marks)

- vi. Explain the equilibrium (Point of least cost combination) for a producer using graphical and mathematical approach.(10 Marks)

### QUESTION THREE

- a) Discuss the factors affecting demand of a product in a given market (6 Marks).
- b) Discuss the factors affecting the demand of a product in a given market. (6 Marks).
- c) Explain elasticity and its application (8mks)

#### QUESTION FOUR

- a. Discuss pricing strategies used by firms (10 Marks)
- b. Explain four main periods of production (10 Marks)

5.

A monopoly firm is faced with two markets A and B with two different demand functions:

$$P_b = 32 - 2Q_a.$$

$$P_b = 32 - Q_b.$$

Total cost function is given as:

$$TC = 10 + 2Q + 2Q^2$$

Find

- I.  $P_a$  and  $P_b$  (5 Marks).
- II.  $Q_a$  and  $Q_b$  (5 Marks).
- III. Maximum profit for the total market (10 Marks).