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**KIBABII UNIVERSITY**

**SPECIAL/SUPPLEMENTARY EXAM**

**UNIVERSITY EXAMINATIONS  
2017/2018 ACADEMIC YEAR**

**THIRD YEAR FIRST SEMESTER EXAMINATIONS  
FOR THE DEGREE  
OF  
BACHELOR OF SCIENCE IN BIORESOURCE MANAGEMENT AND  
CONSERVATION**

**COURSE CODE: SBC 311**

**COURSE TITLE: ECOLOGICAL DESIGN AND ANALYSIS**

**DATE: 2/10/2018**

**TIME: 11:30 -1:30 p.m.**

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**INSTRUCTIONS TO CANDIDATES**

Answer Question One **compulsory (30mks)** and any other Two Questions (**20mks**) each.

TIME: 2 Hours

KIBU observes ZERO tolerance to examination cheating

This Paper Consists of 2 Printed Pages. Please Turn Over. ►

### QUESTION ONE (30MKS)

- a. State five reasons why it is necessary to develop a hypothesis for any ecological research (5marks)
- b. State the five basic postulates of a scientific method (5marks)
- c. State giving examples in each case categories of questions that are considered while designing a questionnaire (5marks)
- d. Give five differences between a research proposal and a research project (5marks)
- e. State five factors that must be considered in the design of ecological experiments (5marks)
- f. State five reasons why it is important to discuss on the appropriate sampling strategy to employ in an ecological research (5marks)

### QUESTION TWO

In an ecological study, data was recorded on fresh and dry weights for a sample of an experimental material. The data obtained is as recorded below

Fresh Weight(gms)	6	10	12	4	15	12	14	8	7	5
Dry weight (gms)	3	3	4	1	5	3	3	2	2	2

- a. Determine whether there is correlation between fresh weight and dry weight (12 marks)
- b. Distinguish between a correlation and regression analysis (8 marks)

### QUESTION THREE

Describe the process of determining sample size of a population in ecological data (20marks)

### QUESTION FOUR

Describe the process of conducting comprehensive literature review for any ecological research (20marks)

### QUESTION FIVE

Defining a research problem properly and clearly is a crucial part of a research study. Based on the statement, describe the steps used in defining a research problem (20marks)