



**KIBABII UNIVERSITY**

**2016/2017 ACADEMIC YEAR**

**THIRD YEAR SECOND SEMESTER**

**Supplementary/Special EXAMINATIONS**

**FOR THE DEGREE OF BACHELOR OF SCIENCE IN RENEWABLE ENERGY  
AND BIOFUELS TECHNOLOGY**

**COURSE CODE: IET 391**

**COURSE TITLE: RESEARCH METHODS**

**DATE: 25<sup>TH</sup> SEPTEMBER 2017**

**TIME: 11:30 Am – 1:30 Pm**

**INSTRUCTIONS TO CANDIDATES**

Answer question ONE and any other two questions

This paper consists of 2 printed pages. Please Turn over

**SECTION A (compulsory)**

***QUESTION ONE***

- A) Briefly outline difference between a research proposal and a project proposal. (6mks)
- B) Identify a research topic, write one paragraph problem statement and four objectives (20mks)
- C) Discuss the importance of literature review (4mks)

**SECTION B (ATTEMPT ANY TWO QUESTIONS)**

***QUESTION TWO***

i) Discuss the following items

A) Population validity

b) Accessible population

c) Target population

d) Probability sampling

e) Sampling error

ii) Discuss the properties of a standard normal curve

***QUESTION THREE***

- a) Define the term response rate and why is it important to have a high response rate in research study. (6mks)
- b) Compare and contrast questionnaires and interviews as research instruments (8mks)
- c) Differentiate between descriptive and inferential statistics (6mks)

***QUESTION FOUR***

- a) What are advantages of standard deviation over other measures of variability. (8mks)
- b) Give examples of studies in which it is appropriate to use Chi square test and analysis of variance and give reasons for your choice. (12mks)

***QUESTION FIVE***

- a) Give an example of situation where one might carry out a qualitative study instead of a quantitative study (8mks)

b) State the characteristics of a good

a) Purpose statement (6mks)

b) Hypothesis (6mks)