

EGERTON



UNIVERSITY

UNIVERSITY EXAMINATIONS

NJORO CAMPUS

SECOND SEMESTER 2012/2013

**FOURTH YEAR EXAMINATION FOR THE DEGREE OF BACHELOR OF
SCIENCE IN AGRICULTURAL ENGINEERING AND BACHELOR OF SCIENCE
IN WATER AND ENVIRONMENTAL ENGINEERING**

AGEN 462: RESEARCH METHODS

STREAM: 2009 (Y4) B. SC. AGEN & WEEN

TIME: 2 hours

DAY/TIME: TUESDAY, 03.00 – 05.00 PM

DATE: 21-05-2013

INSTRUCTIONS:

1. The paper consists of **FOUR (4)** questions.
 2. Answer **ALL** questions.
 3. All questions carry equal marks.
 4. Marks for each question are shown in parenthesis ()
 5. Use clear and well-labeled diagrams/illustrations where necessary
 6. **EACH QUESTION SHOULD BE STARTED ON A NEW PAGE.**
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QUESTION ONE

- (a) Explain the meaning of research and give **SIX** purposes for conducting research. **(15 marks)**
- (b) How does Type I error occur in hypothesis testing? **(3 marks)**
- (c) State the characteristics of a good research hypothesis. **(7 marks)**

QUESTION TWO

- (a) Describe the basic structure of a research report clearly indicating the relevant content for each part of a report structure. **(15 marks)**
- (b) Write short notes on the following terms:
- (i) Population.
 - (ii) Hypothesis.
 - (iii) Data.
 - (iv) Sample. **(10 marks)**

QUESTION THREE

- (a) What is literature review? **(3 marks)**
- (b) Describe the reasons for reviewing available literature and other information during the preparation of a research protocol. **(12 marks)**
- (c) (i) Explain the meaning of referencing and reasons for accurately citing references in a research study. **(6 marks)**
- (ii) State any **FOUR** characteristics of a good sample design **(4 marks)**

QUESTION FOUR

- (a) Explain the meaning and significance of research ethics. **(12 marks)**
- (b) What does defining a research problem entail? **(5 marks)**
- (c) (i) State the **FIVE** fundamental sources of knowledge **(5 marks)**
- (ii) State the **THREE** basic principles of experimental designs commonly accepted **(3 marks)**
