**SOUTH EASTERN KENYA UNIVERSITY**

**UNIVERSITY EXAMINATIONS 2016/2017**

**FIRST SEMESTER EXAMINATION FOR THE DEGREE OF**

**BACHELOR SCIENCE IN ELECTRONICS**

**ELC 304: RESEARCH METHODS**

8TH **DECEMBER, 2016**

**INSTRUCTIONS TO CANDIDATES**

**TIME:10.30-12.30 P.M**

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This paper consists of FIVE questions.

Answer question **ONE** and any other **TWO** questions.

Question **ONE** carries 30 mark while the other **TWO** questions carry 20 marks

each

**QUESTION ONE (COMPULSORY)**

**(30 MARKS)**

(a).

Define the following terms.

(i).

(ii).

(iii).

Research

Research methods

Research methodology

(2 marks)

(2 marks)

(2 marks)

(b).

Explain any four qualities of a good research.

(4 marks)

(c).

Objectives are the goals you set out to attain in your study. Explain any three

characteristics of a well stated objective.

(3 marks)

(d).

Explain the advantages and disadvantages of using journals for literature review over

books.

(4 marks)

(e).

Differentiate between a concept and a variable.

(3 marks)

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(f).

Explain any two characteristics of a good hypothesis.

(4 marks)

(g).

Processing of data implies editing, coding, classfication and tabulation. Explain briefly

any three operations pointing out the significance of each in context of research study.

(6 marks)

**QUESTION TWO (20 MARKS)**

(a).

Briefly explain any five types of research.

(10 marks)

(b).

Selecting a research problem is the foundation of research. Chronologically outline the

steps that should be followed in selecting a research problem.

**QUESTION THREE (20 MARKS)**

(10 marks)

(a).

Explain the importance of a literature review in research.

(10 marks)

(b).

Measurement is the central to any research inquiry. State and explain the types of

measurement scales.

**QUESTION FOUR (20 MARKS)**

(10 marks)

(a).

(b).

(c).

Define the term research design.

Explain the three basic principles of any research design.

Explain any three methods of data collection.

(2 marks)

(9 marks)

(9 marks)

**QUESTION FIVE (20 MARKS)**

(a).

Define the following terms

(i). Mean deviation

(ii). Standard deviation

(iii). Skewness

(iv). Regression

(1 marks)

(1 marks)

(1 marks)

(1 marks)

(b).

(c).

Explain three importance of standard error in analysis.

Explain the steps to be followed in report writing.

(6 marks)

(10 marks)

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