



**MASENO UNIVERSITY**  
**UNIVERSITY EXAMINATIONS 2013/2014**

**THIRD YEAR SECOND SEMESTER EXAMINATIONS FOR THE  
DEGREE OF BACHELOR OF SCIENCE IN EARTH SCIENCES WITH  
INFORMATION TECHNOLOGY  
(MAIN CAMPUS)**

**NGA 311: RESEARCH METHODS**

*Date: 14<sup>th</sup> July 2014*

*Time: 11.00 - 1.00 p.m*

**INSTRUCTIONS:**

- Answer Question ONE (1) and any other TWO (2) questions
- Illustrations should be used where appropriate



**NGA 311: RESEARCH METHODS**

- Q1 a) Write short notes on:
- (i) Criteria of a good research. (6 marks)
  - (ii) Research hypothesis. (4 marks)
  - (iii) A survey. (8 marks)
  - (iv) An Experiment. (6 marks)
- b) Examine the various types of research studies. (6 marks)
- Q2 a) Explain the significance of a research design. (10 marks)
- c) Examine the factors to consider when collecting data for research. (10 marks)
- Q3 Examine different types of data analysis and their significance. (20 marks)
- Q4 The following ten values represent random observations from a population:  
2, 6, 7, 9, 5, 1, 0, 3, 5, 4.  
Determine the following:
- a) Mean. (4 marks)
  - b) Median. (3 marks)
  - c) Mode. (3 marks)
  - d) 99% confidence interval of the parent population. (10 marks)
- Q5 a) Examine the scales of measurement used in research studies. (8 marks)
- b). Examine the merits and limitations of the observation method in research studies. (12 marks)
- Q6 Describe four operations of data processing techniques and their significance in the context of research study. (20 marks)