



W1-2-60-1-6
JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY
University Examinations 2016/2017

**EXAMINATION FOR THE DEGREE OF BACHELOR OF LAND RESOURCE
PLANNING AND MANAGEMENT**

ALP 2314: RESEARCH METHODOLOGY

DATE: December 2016

TIME: 2 HOURS

INSTRUCTIONS:

Illustrate your answers using suitable examples

SECTION A: Answer ALL Questions (30 Marks)

1. Explain why research is considered to be a systematic and iterative process based on observable experience and empirical evidence (5 marks)
2. Although each research study has its own specific purpose, research objectives can be categorized based on the purpose of the study. Briefly explain the various categories that research objectives fall into (5 marks)
3. In a study, a researcher attempts to investigate the impact of conservation tillage and conventional tillage on soil moisture conservation and maize yield. From the above statement,
 - a) Formulate three research hypotheses and briefly show how they adhere to the qualities of effective hypotheses. (10 marks)
 - b) Outline an experimental design to test one of the three research hypothesis and show how the principles of replication and randomization are factored in. (10 marks)

SECTION B: Answer ANY TWO Questions (40 Marks)

4. a) To be able to correctly analyze data, we have to understand the levels of data measurements. Provide a briefly synopsis of levels of data measurements (8 marks)
 - b) Discuss the common methods of data analysis (8 marks)
 - c) Outline the steps involved in data collection (4 marks)
5. a) Discuss the techniques involved in defining a research problem (8 marks)
 - b) Explain the sources of research problem (12 marks)
6. Sampling is selecting a portion of the population in a given research area, which will be a representative of the whole population.
 - a) Outline the Strategies for determining sample size (7 marks)
 - b) Discuss the criteria used to determine appropriate sample size (7 marks)
 - c) Outline the sampling protocol (6 marks)