



MACHAKOS UNIVERSITY
University Examinations for 2022/2023 Academic Year
SCHOOL OF HUMANITIES AND SOCIAL SCIENCES

**THIRD YEAR SECOND SEMESTER EXAMINATION FOR BACHELOR OF
ACTUARIAL SCIENCE/BACHELOR OF STATISTICS & PROGRAMMING
SST303: RESEARCH METHODOLOGY**

Date:

Time:

INSTRUCTIONS: Answer QUESTION ONE and any other TWO QUESTIONS.

QUESTION ONE (30 MARKS)

- a. Identify a research topic of your choice and illustrate a conceptual framework clearly showing the dependent and independent variables. (6 marks)
- b. Demonstrate how you could reference work published by Dickson Kamau and Mary Atieno in a peer review journal as per APA. (6 marks)
- c. Using a suitable example, explain how you would carry out systematic random sampling on a target population of 200 items and a sample of 20. (4 marks)
- d. Research can be classified according to purpose. Discuss this statement making reference to relevant examples. (6 marks)
- e. Explain any four factors to be considered when determining the sample size in a study. (8 marks)

QUESTION TWO (20 MARKS)

- a. Examine any five research designs giving examples of research studies where they would be applied. (10 marks)
- b. Using examples, discuss the various sources of reference material when conducting research. (10 marks)

QUESTION THREE (20 MARKS)

- a. Discuss the factors considered by researcher while conducting literature review. (8 marks)
- b. Evaluate the following types of non-probability sampling techniques and situations they would most be applied in research. (12 marks)
 - i. Voluntary sampling
 - ii. Convenience sampling
 - iii. Purposive sampling

iv. Snowball sampling

QUESTION FOUR (20 MARKS)

- a. Explain the term finite population as used in research. (2 marks)
- b. Describe the four steps of developing a statement of the problem making reference to relevant examples where possible. (8 marks)
- c. Identify any ten rules applied when setting questions for data collection instruments. (10 marks)

QUESTION FIVE (20 MARKS)

Analyze the structure of a research proposal briefly showing what is contained in each of the sections. (20 marks)