



**MACHAKOS UNIVERSITY**  
University Examinations for 2019/2020 Academic Year  
**SCHOOL OF HUMANITIES AND SOCIAL SCIENCES**  
**DEPARTMENT OF SOCIAL SCIENCES**  
**THIRD YEAR SECOND SEMESTER EXAMINATION FOR**  
**BACHELOR OF SCIENCE (STATISTICS AND PROGRAMMING)**  
**SST 303: RESEARCH METHODOLOGY**

**DATE: 9/11/2020**

**TIME: 8.30-10.30 AM**

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**INSTRUCTIONS: Answer QUESTION ONE and any other TWO QUESTIONS**

**QUESTION ONE (30 MARKS)**

- a) Identify a research topic and do the following:
  - i. State the general objective. (2 marks)
  - ii. State two specific objectives. (4 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 a researcher in conducting literature review. (8 marks)
- b) Evaluate the following types of non-probability sampling techniques and situations they could 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 clearly showing what is contained in each of the sections.