



# UNIVERSITY EXAMINATIONS

**SECOND SEMESTER 2023/2024 ACADEMIC YEAR**

**THIRD YEAR EXAMINATION FOR THE DEGREE OF BACHELOR  
OF SCIENCE (STATISTICS)**

**STAT 323: RESEARCH METHODS**

***STREAM: R***

***TIME: 2 HRS***

***DAY: FRIDAY [8.30A.M – 10.30A.M]***

***DATE: 12/04/2024***

**THIS QUESTION PAPER CONSISTS OF FOUR (4) PAGES  
PLEASE DO NOT OPEN UNTIL THE INVIGILATOR SAYS SO**



**Instructions: Answer Question One (compulsory) and any Other two questions**

- **Show your working clearly**
- **Write your registration number before you open the answer booklet**

**QUESTION ONE (30 MARKS)**

a) **Briefly explain the following terms**

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|----------------------|------------------|
| i) Problem Statement | <b>(3 Marks)</b> |
| ii) Research problem | <b>(3 Marks)</b> |

b) Study the literature below and then answer the questions that follow:

Students' Academic Performance is vital for assessing a student's standing within a university. It makes it possible for academic staff, educational administrators, and decision-makers to precisely evaluate students taking various courses throughout a semester. Additionally, it served as a cautionary tale for the students to assess their performance level and make subsequent improvements. According to official statistics in Kenya, the number of students who don't graduate on time and college dropouts rise dramatically yearly. These problems hinders Kenya's higher education mission. All stakeholders in Kenya's higher education system must pay attention to these statistics. The main objective of this study paper is to identify what factors most influence students' academic performance.

Most research papers found in the literature revealed that the student's factors which affect the student academic performance f these attributes are divided into categories such as personal, family, academic, institutional, and social. The most significant personal attributes of the student are taken into account, such as gender, age, interest in the study, admission type, and study behavior.

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| i) State <b>three</b> specific objectives of the study.   | <b>(6 Marks)</b> |
| ii) Suggest one open and one closed questions that could be used to investigate the subject choice.   | <b>(4 Marks)</b> |
| iii) Explain the descriptive and inferential statistical techniques that you may use to analyze the specific data collected from the study. | <b>(4 Marks)</b> |
- c) Njorp is a third-year student in Laikipia. He has difficulty in finding a legitimate research problem. He has come to you for advice. Discuss six pieces of advice you would offer him. **(6 Marks)**
- d) List and explain Four research instruments that can be used in your research **(4 Marks)**
- e) State **Four** common methods that you can use to disseminate your research findings **(4 Marks)**



**QUESTION TWO (20 MARKS)**

- a) Distinguish between empirical literature review and theoretical literature review (8 Marks)
- b) Explain **FIVE** reasons why literature review is important in the research process. (10 Marks)
- c) Explain what is meant by the term plagiarism (2 Marks)

**QUESTION THREE (20 MARKS)**

- a) Explain **TWO** advantages and **TWO** Disadvantages sampling techniques that may be used in data collection. (8 Marks)
- b) The research process requires the principle problem to be divided into sub problems for manageability. Discuss four characteristics of the sub problems. (8 Marks)
- c) State the stages in proposal development (4 Marks)
- d) The research process requires the principle problem to be divided into sub problems for manageability. Discuss four characteristics of the sub problems. (8 Marks)

**QUESTION FOUR (20 MARKS)**

- a) Briefly explain what is meant by hypothesis in research (5 Marks)
- b) Explain **TEN** reasons why hypothesis is important in research. (10 Marks)
- c) Explain how plagiarism can be avoided in research (5 Marks)



**QUESTION FIVE (20 MARKS)**

- a) Explain the term ‘research design’ **(4 Marks)**
- b) Explain the following research purposes
- i) Exploratory research **(3 Marks)**
  - ii) Descriptive Research **(3 Marks)**
  - iii) Explanatory research **(3 Marks)**
- c) Using examples, distinguish between basic research and scientific research **(5 Marks)**

