MAASAI MARA UNIVERSITY
REGULAR UNIVERSITY EXAMINATIONS
2022/2023 ACADEMIC YEAR
THIRD YEAR SECOND SEMESTER
SCHOOL OF PURE APPLIED AND HEALTH SCIENCES
THE DEGREE OF BACHELOR OF SCIENCE IN APPLIED STATISTICS

STA 3234-1 RESEARCH METHODS AND ANALYSIS

Instructions to candidates:

Answer Question 1. And any other TWO.

All Symbols have their usual meaning

DATE: TIME:

Question 1(20 Marks)

(a) (i) Give the definition of a research **(2 Marks)**

   (ii) Give and describe two types of research **(6 Marks)**

(b) List three main components of a research **(3 Marks)**

(c) List conditions which makes a problem to require a research **(3 Marks)**

(d) Describe any three criteria used for selecting a research topic **(6 Marks)**

Question 2 (15 Marks)

(a) (i) Give considerations that a research has to make when formulating a problem statement **(2 Marks)**

   (ii) Give three reasons why it is necessary to have a systematic analysis of the problem **(3 Marks)**

(b) Why is it important to state and define the problem well? **(3 Marks)**

(c) Mention information included in the statement of a problem **(7 Marks)**

Question 3 (15 Marks)

(a) List four uses of literature review **(4 Marks)**

(b) (i) Define general objectives in a research study **(1 Marks)**

   (ii) What are specific objectives? **(3 Marks)**

(c) When a researcher is stating his/her objectives, what considerations should he/she put into account? **(5 Marks)**

(d) Define a hypothesis **(2 Marks)**

Question 4 (15 Marks)

(a) (i) Define a study design **(2 Marks)**

   (ii) Mention and describe two types of a study design **(4 Marks)**

(b) (i) What do we mean by cohort studies **(2 Marks)**

   (i) What is a variable? **(2 Marks)**

   (iii) Differentiate between a numerical variable and a categorical variable **(2 Marks)**

(c) Describe the following scales of measurement

    (i) Nominal scale   (**1 Marks**)

   (ii) Ordinal scale   (**1 Marks**)

 (iii) Interval scale   (**1 Marks**)