



MAASAI MARA UNIVERSITY

REGULAR UNIVERSITY EXAMINATIONS

2023/2024 ACADEMIC YEAR

FIRST YEAR FIRST SEMESTER

**SCHOOL OF PURE, APPLIED AND HEALTH
SCIENCES**

MASTER OF SCIENCE IN CHEMISTRY

COURSE CODE: CHE 8104

COURSE TITLE: SEMINAR TOPICS

DATE: 30/1/2024

TIME: 0830-1130 HRS

INSTRUCTIONS TO CANDIDATES

1. Answer any **THREE** questions.

*This paper consists of **THREE** printed pages. Please turn over.*

QUESTION ONE

- a) Define the following terms as used in research
- i) Sample
 - ii) Null Hypothesis
 - iii) Variable
 - iv) Population
- (4 marks)**
- b) Distinguish between primary, secondary and tertiary data sources as used in research work, in each case give relevant examples. **(8 marks)**
- c) What is the difference between qualitative and quantitative research? Include mention of possible differences in purpose, method, data sources and data analysis. **(8 marks)**

QUESTION TWO

- a) Discuss the essential elements required in the methodology section of a research study. **(10 Marks)**
- b) Name any five types of sampling methods used in research and provide a descriptive example of instances in which each method may be used. **(10 Marks)**

QUESTION THREE

- a) Literature review plays a critical role in a research proposal and the resultant execution of research. Discuss why it is necessary to review literature before conducting research. **(5 Marks)**
- b) Discuss the characteristics of a well outlined research objectives as used in both quantitative and qualitative research. **(10 Marks)**
- c) Picking a topic of your choice, break down the objectives considering the characteristics outlined above. **(5 Marks)**

QUESTION FOUR

- a) A proposal is an essential tool to the success of any research. List and discuss each of the components of a research proposal. **(10 Marks)**
- b) Name and discuss the reference styles available in documentation of research and in each case give an example as it may appear in the text and in the reference section. **(10 Marks)**

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