



KENYATTA UNIVERSITY
EXAMINATION FOR THE DEGREE OF MASTER OF SCIENCE IN MEDICAL
LABORATORY SCIENCE

HSU 822: RESEARCH METHODS

1ST SEMESTER 2022/2023

TIME: 3 HRS

INSTRUCTIONS

Answer any THREE questions (30 mks each)

1. a. Define Epistemology and Ontology 4mks
b. Describe the:
 - i. role that Epistemology and Ontology in research. 10mks
 - ii. four predominant paradigms in research 16mks

2. a. You want to study the effectiveness of vitamin D supplements on improving alertness. You design an experiment with a control group that receives a placebo pill, and an experimental group that receives the supplement.
 - i. Formulate the research question 2mks
 - ii. Identify the independent, dependent and control variables 3mks
 - iii. What does “controlling for a variable” mean? 2mks
 - iv. Formulate the null and alternative hypotheses 6mks

- b. Explain why:
 - i. some research questions may not require hypotheses 10mks
 - ii. a good research question may not be doable 7mks

3. a. Differentiate between:
- i. Population and sample 2mks
 - ii. Census and sampling 2mks
 - iii. Sampling frame and sample size 2mks
 - iv. Random sampling and systematic sampling 2mks
 - v. Likert and Guttman scale 2mks
- b. Outline the steps:
- i. Of developing a questionnaire 10mks
 - ii. Essential for effectively managing research data 10mks
4. a. Justify the use of mixed method in research 10mks
- b. Explain the role of the following sources of literature in illuminating research projects
- i. Grey Literature 5mks
 - ii. Journal articles 5mks
- c. Describe the data presentation in a thesis 10mks