



University of Choice

**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY (MMUST)**

MAIN CAMPUS

UNIVERSITY EXAMINATIONS

2021/2022 ACADEMIC YEAR

MAIN EXAMINATION

FIRST YEAR SECOND SEMESTER EXAMINATIONS

FOR THE DEGREE OF

MSC. PUBLIC HEALTH NUTRITION

COURSE CODE: PHN 800 / HMD 800

COURSE TITLE: RESEARCH METHODS

DATE: 21ST APRIL 2022

TIME: 9.00AM- 12.00PM

INSTRUCTIONS TO CANDIDATES

There are three sections in the paper, answer questions in **ALL** the three sections.

1. **QUESTION PAPER** comprises of 5 essay type questions. Answer **ALL**

TIME: 3 Hours

MMUST observes ZERO tolerance to examination cheating.

This Paper Consists of 2 Printed Pages. Please Turn Over

Answer any FOUR Questions

LAQ 1

Research can be defined as the search for knowledge or any systematic investigation to establish facts. Outline the main components, content and purpose of the following four chapters of a research proposal:

- i) Introduction,
- ii) Literature review,
- iii) Study Methodology and
- iv) Conclusions
- v) Recommendations

(25 marks)

LAQ 2

You wish to undertake a study in Uasin Gishu County to address reported cases of a rare form of peripheral neuropathy (nerve disorder). You note that majority of the cases reported are from a farming community where feeding on manioc (cassava) is common. You become suspicious that this could be responsible for nerve disorder. You further note that all farmers do not use manioc as their staple. After data collection, you found out that out of 60 individuals with the nerve disorder, 30 of them are from households who feed on manioc almost daily, and another 90 without the disorder had 15 households feed on manioc on an almost daily basis.

Use the information to answer the following questions:

- a) With explanation, name the study design you would recommend for this study
- b) Name the exposure and the outcome of interest for this study
- c) State the measure of association to be used to determine the association between the exposure and the outcome in this study
- d) Represent the information given above in a 2X2 table
- e) Calculate the measure of association in (c) above

(25 marks)

LAQ 3

You are employed as a school Nutritionist in a county that has a broad range of family income levels and sources of food. The county has just started a School Feeding Programme for Early Childhood and Development (ECD) pupils in the Schools. The programme is scheduled for once a week feeding in the schools throughout the county

You have been asked to evaluate the effectiveness of this Programme in improving the nutritional status of the pupils.

Describe how you would evaluate the effectiveness of a programme like this one. Provide your answer using sentences and paragraphs using the following headings:

- a) **Research Design** to be used and why this design was chosen,
- b) **Population and sampling** to be used,
- c) **Variables and Measures** to be used and why these measures are chosen,
- d) **Procedures** you will use,
- e) **Data Analysis** proposed and why this method of data analysis is chosen

(25 marks)

LAQ 4

- a) Discuss the objectives of pre-testing a questionnaire.
- b) Discuss five (5) main shortcomings that you will be looking for in the completed questionnaires

25 marks

LAQ 5

- a) Discuss the three (3) principles essential for ethical conduct of health research with human subjects
- b) A competitive international research grant for HIV has been advertised to study the effectiveness of a new combination drug COMBO 21 whose efficacy and safety in man is still very little understood but animal trials are very promising. It will be compared with the standard 3TC/TDF/ EFV.

Discuss your application of the three basic ethical principles of research involving human subjects in your proposal, which in the first instance, will be conducted among inmates at the maximum security prison in the capital city in a developing country

25 marks