



"Investing in Africa's Future"

**COLLEGE OF HEALTH, AGRICULTURE & NATURAL SCIENCES
DEPARTMENT OF HEALTH SCIENCES
BACHELOR OF MEDICAL LABORATORY SCIENCES HONOURS**

**NSHA 204 RESEARCH METHODS AND HEALTH ETHICS THEORY
EXAMINATION**

END OF FIRST SEMESTER EXAMINATIONS

NOVEMBER 2019

LECTURER: Dr S. MUTAMBU

DURATION: 3 HOURS

INSTRUCTIONS

The paper comprises of three sections (A, B and C).

Section A (20 marks)

Answer all questions in this section.

Circle the correct answer

Section B (20 marks)

Answer all questions in this section.

Section C (60 marks)

Choose **three** questions. Credit will be given for logical, systematic and neat presentations.

SECTION A: TRUE (T) OR FALSE (F) QUESTIONS [20 MARKS]

A1. The logical steps of conceptualization of the research process can either be a systematic or cyclic series of these logical steps:

- T F a. Identifying the problem
- T F b. Formulating a hypothesis
- T F c. Developing the research plan
- T F d. Collecting and analysing the data

A2. A theory:

- T F a. Is a belief or assumption about how things relate to each other
- T F b. Establishes a cause-and-effect relationship between variables with a purpose of explaining and predicting phenomena
- T F c. Is based on inductive reasoning
- T F d. Applies to only quasi-experimental research designs

3. A hypothesis:

- T F a. Is a belief or prediction of the final outcome of the research
- T F b. Is a concrete, specific statement about the relationships between phenomena
- T F c. Is based on deductive reasoning
- T F d. Applies to only qualitative studies

4. Types of research can be based on:

- T F a. A study system
- T F b. Study application
- T F c. Study objectives
- T F d. Study inquiry mode employed

5. The Quantitative Research Approach has:

- T F a. Clearly stated questions
- T F b. Developed research procedures
- T F c. Large samples
- T F d. Traditional statistical analyses

6. Ethics are:

- T F a. Moral Principles
- T F b. What is good and bad
- T F c. What is right and wrong
- T F d. Based on value system

7. The following are unethical acts:

- T F a. A doctor prescribing or dispensing secret remedial agents of which he does not know (composition, manufacture, use, *etc*).
- T F b. A doctor assisting or being a party to either infliction of mental or physical trauma or concealment of torture by another person.
- T F c. Practising euthanasia
- T F d. Dispensing of drugs and appliances by physicians

8. These are considered Acts of Misconduct

- T F a. Violation of regulations
- T F b. Adultery or improper conduct
- T F c. Conviction in court of law
- T F d. Signing false professional certificates, reports and other documents

9. All of these are ethical codes:

- T F a. Hippocratic Oath – 5th century BC
- T F b. Declaration of Geneva - 1948
- T F c. Universal Declaration of Human Rights-1948
- T F d. Helsinki Declaration -1964

10. Institutional Ethics Committees:

- T F a. Ensure competent review of proposals.
- T F b. Ensure execution free of bias and influence.
- T F c. Provide advice to researchers.
- T F d. Are composed of researchers and medical practitioners only

11. These are types of Experimental Designs:

- T F a. Pre-Experimental
- T F b. Quasi Experimental
- T F c. True Experimental
- T F d. Ethnography Research

12. The following are true experimental designs:

- T F a. Post test only design
- T F b. Pretest-posttest only design
- T F c. Solomon four group design
- T F d. Randomised block design

13. Some of the tools used to collect data are:

- T F a. Focus group discussions
- T F b. Case studies
- T F c. Interviews
- T F d. Expert opinion

14. Analysed data can be presented in the form of:

- T F a. Histograms
- T F b. Frequency distribution
- T F c. Root and leaf plots
- T F d. Bar graphs

15. Sample size depends on:

- T F a. Population size
- T F b. Study area
- T F c. Confidence Interval
- T F d. Confidence Level

16. A data collection plan is a document that defines all the details of the data to be collected including:

- T F a. The reason for collecting the data

- T F b. Where the data will be collected
- T F c. The type of data that will be collected
- T F d. How the right data will be collected

17. The four main areas that health care providers must consider when evaluating justice are:

- T F a. Fair distribution of scarce resources
- T F b. Competing needs
- T F c. Rights and obligations
- T F d. Potential conflicts with established legislations

18. These terminologies are used in sampling:

- T F a. **Sampling Unit** - If for example we select households from a list of all units in the population, the sampling unit is in this case the household
- T F b. **Sampling Universe** is the population from which we are sampling
- T F c. **Respondent** is the person responsible for responding to questionnaires in the field.
- T F a. **Survey Subject**: Entity or person from whom we are collecting data.

19. Key Questions to be answered about a proposal include:

- T F a. Does it specify the conditions one wishes to change?
- T F b. Does it define the gaps in existing programs, services, or knowledge?
- T F c. Does it include appropriate statistical data about the frequency and severity of the problem?
- T F d. Does it clarify what will happen if nothing is done about this problem?

20. What does the term 'longitudinal design' mean?

- T F a. A study completed far away from where the researcher lives
- T F b. A study which is very long to read
- T F c. A study with two contrasting cases
- T F d. A study completed over a distinct period of time to map changes

SECTION B: SHORT ANSWERS [20 MARKS]

Answer all questions in this section

B1. Write short notes on descriptive studies. (6 marks)

B2. Write brief notes on each of the main components of a research proposal. (6 marks)

B3. You have been given a list of values shown below:

11,15,17,19,24,27,29,30,33,35,36,38,41,45.

- a. Construct a stem and leaf plot using these values. (4 marks)
- b. Make a frequency distribution table showing how many tens, twenties, thirties, and forties you have. (4 marks)

SECTION C: LONG ANSWERS (60 MARKS)

Choose three questions in this section

C1. Discuss in full qualitative research methods. What does each method focus on? (20 marks)

C2. Illustrate and describe pre-experimental research designs. (20 marks)

C3. Compare and contrast probability sampling and non-probability sampling. (20 marks)

C4. Medical ethics may be traced to guidelines on the duty of physicians such as the

- Hippocratic Oath*. Discuss the A, B, C, D, E, of ethics. (20 marks)
- C5.** A comprehensible framework of ethical requirements with seven criteria for determining whether research is ethical has been proposed by *Emmanuel et al* (Emanuel, E., Wendler, D. & C. Grady. What makes Clinical Research Ethical? *JAMA* 2000; 283: 2701 – 2711). Discuss the seven criteria for determining whether research is ethical or not. (20 marks)