



"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, <i>etc</i>). |
| 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)