

**MULIRO UNIVERSITY OF  
SCIENCE AND TECHNOLOGY**

**(MMUST)**

**MAIN CAMPUS**

**UNIVERSITY EXAMINATIONS**

**2019/2020 ACADEMIC YEAR**

**THIRD YEAR FIRST SEMESTER EXAMINATIONS**

**FOR THE DEGREE**

**OF**

**BACHELOR OF SCIENCE IN MEDICAL LABORATORY SCIENCES**

**COURSE CODE: BML 327**

**COURSE TITLE: RESEARCH METHODOLOGY**

**DATE: 10<sup>TH</sup> DECEMBER 2020**

**TIME: 8.00 -10.00 AM**

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**INSTRUCTIONS TO CANDIDATES**

- This paper consists of three (3) sections A, B and C
- Each section has relevant instructions. Read the instructions specific for each section carefully, and answer the questions accordingly

**TIME: 2 Hours**

**This Paper Consists of 5 Printed Pages. Please Turn Over**



## SECTION A: MULTIPLE CHOICE QUESTIONS (20 MKS)

1. The type of research that aims at gaining familiarity with a phenomenon is known as
  - A. Descriptive
  - B. Exploratory
  - C. Diagnostic
  - D. Hypothesis testing
2. Which of the following approaches to research is considered objective
  - A. Analytical Research
  - B. Qualitative Research
  - C. Quantitative Research
  - D. Fundamental research
3. The type of research that results in general knowledge and understanding nature and its laws is
  - A. Fundamental research
  - B. Applied research
  - C. Exploratory research
  - D. Descriptive research
4. Which of the following is NOT a category of quantitative research approach
  - A. Inferential
  - B. Experimental
  - C. Simulation
  - D. Measurement
5. Naturalistic inquiry or field studies refers to
  - A. Qualitative research
  - B. Quantitative research
  - C. Feelings and insights of participants
  - D. Interviews and focused group discussions
6. The techniques the researcher uses in conducting research activities is referred to as:
  - A. Research methodology
  - B. Research technology
  - C. Research methods
  - D. Research techniques
7. Persons who provide information by way of filling out a questionnaire are called
  - A. Subjects
  - B. Respondents
  - C. Study participants
  - D. Investigators
8. The person who undertakes the research is known as
  - A. Program director
  - B. Principal investigator
  - C. Consultant
  - D. Researcher
9. The type of variable that can be presented in a continuum is called
  - A. Categorical
  - B. Discrete
  - C. Continuous
  - D. Dependent
10. The term criterion variable is a synonym to
  - A. Dependent variable
  - B. Independent variable

- C. Continuous variable
  - D. Categorical variable
11. Which of the following refers to a report that may be required by an IRB
- A. Application for initial review
  - B. Application for continue review
  - C. Deviation from an approved study
  - D. Amendments or modifications
12. Which of the following is **NOT** important in achieving research control
- A. Allowing for no variation
  - B. Specifying allowable variation
  - C. Distributing variation equally
  - D. Generalization of research findings
13. \_\_\_\_\_ is a series of actions that are necessary to effectively conduct research
- A. Research design
  - B. Research process
  - C. Research protocol
  - D. Research problem
14. \_\_\_\_\_ refers to the subject, issue or area under discussion
- A. Title
  - B. Topic
  - C. Problem
  - D. None of the above
15. Which of the following is not an element of a research problem
- A. Literature review
  - B. Rational for developing the problem
  - C. Conceptual framework
  - D. Research design
16. \_\_\_\_\_ analysis provides statistical support for the answer to research question
- A. Descriptive
  - B. Inferential
  - C. Data
  - D. Empirical
17. If a hypothesis is tested and upheld several times, it is possible for a researcher to make
- A. Conclusions
  - B. Recommendations
  - C. Generalizations
  - D. Interpretation
18. Research problems in which participants rights and study demands are put in direct conflict pose
- A. Ethical misconduct
  - B. Ethical dilemmas
  - C. High risk/benefit ration
  - D. Ethical negligence
19. The \_\_\_\_\_ is one of the first internationally recognized efforts to establish ethical standards
- A. Nuremberge code
  - B. Declaration of Helsinki
  - C. Nazi atrocities
  - D. Tuskegee syphilis study
20. The principle of Beneficence states that
- A. Right to self-determination and right to full disclosure
  - B. Voluntary participation
  - C. Above all do not harm

D. Fair treatment of study participants

**SECTION B: SHORT ANSWER QUESTIONS (40 MKS)**

1. Describe the postulates of scientific method in relation to research [5 marks]
2. Explain the principles of research [5 marks]
3. Explore the different settings that research can be conducted [5 marks]
4. Give an account of the IRB submissions [5 marks]
5. Explain the components of hypothesis development [5 marks]
6. Elucidate the meaning of critical literature review [5 marks]
7. Describe the causes of systematic biases during sampling [5 marks]
8. Explain the qualities of an effective research topic [5 marks]

**SECTION C: LONG ANSWER QUESTIONS (40 MKS)**

1. You have been appointed to head a community health project dealing with maternal child health in a rural setting. Critically examine how research will be important in discharging your duties in the current position.  
[20 marks]
2. You are required to undertake a research project as part of the degree requirements of your studies. Illustrate how you will determine the research design to complete the project [20 marks]
3. You are at a point of selecting a title for your research project. Give a detailed account on how you will go about this task and any challenges you are likely to encounter in the process [20 marks]