



# THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

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**MAIN EXAMINATION**

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**SEPTEMBER –DECEMBER 2021**

**SCHOOL OF NURSING**

**REGULAR PROGRAMME**

**NUR 310: RESEARCH METHODS**

**Date: DECEMBER 2021**

**Duration: 3 Hours**

**INSTRUCTIONS: i) All questions are compulsory**

**ii) Indicate the answers in the answer booklet provided**

## **PART -I: MULTIPLE CHOICE QUESTIONS (MCQs)**

**(20 MARKS):**

1. What is the major attribute of Correlation Analysis?
  - a) Association among variables
  - b) Difference among variables
  - c) Regression among variables
  - d) Variations among variables
2. What is the name of the conceptual framework in which the research is carried out?
  - a) Research hypothesis
  - b) Synopsis of Research
  - c) Research paradigm
  - d) Research design
3. In order to pursue the research, which of the following is priorly required?
  - a) Developing a research design
  - b) Formulating a research question
  - c) Deciding about the data analysis procedure

- d) Formulating a research hypothesis
4. A research design is:
- a) A way of conducting research that is not grounded in theory
  - b) The choice between using qualitative or quantitative methods
  - c) The style in which you present your research findings, e.g. a graph
  - d) A framework for every stage of the collection and analysis of data
5. Mixed-method research refers to use of:
- a) Experimental and correlational methods
  - b) Quantitative and qualitative methods
  - c) Description and intervention
  - d) Group and single subject designs
6. The first step in selecting a sample should be to:
- a) define the population
  - b) decide how to stratify the population
  - c) compile a list of the population
  - d) determine how to randomize
7. The term "external validity" includes:
- a) population generalizability and ecological generalizability
  - b) population generalizability and instrument validity
  - c) internal validity and instrument validity
  - d) internal validity and ecological generalizability
8. Which of the following is the best way to control the influence of confounding variables in an experiment study?
- a) Increase the sample size for the experiment
  - b) Use a pretest as well as a posttest
  - c) Use a control group
  - d) Use subjects who have stabilized with regard to maturational level.
9. If a study is "reliable", this means that:
- a) It is conducted by a reputable researcher who can be trusted
  - b) The measurement devices are stable on different occasions

- c) The findings can be generalized to other social settings
  - d) The methods are stated clearly enough for the research to be replicated
10. Which one among the following statement is true in the context of the testing of hypotheses?
- a) Both the alternative and the null hypotheses cannot be tested.
  - b) Both the alternative and the null hypotheses can be tested.
  - c) It is only the alternative hypotheses that can be tested.
  - d) It is only the null hypotheses that can be tested.
11. What are the conditions in which Type-I error occurs?
- a) Both the null hypotheses as well as alternative hypotheses are rejected
  - b) The null hypotheses get accepted even if it is false
  - c) The alternative hypotheses are rejected when it is false
  - d) The null hypotheses get rejected even if it is true
12. What does the longitudinal research approach actually deal with?
- a) Long-term research
  - b) Short-term research
  - c) Horizontal research
  - d) Vertical research
13. Which test of significance is appropriate to test continuous variables between two groups?
- a) Chi-square test of independence
  - b) Binary logistic regression analysis
  - c) T-test of independence
  - d) Paired t-test
14. Which one among the following is the most comprehensive source of population data?
- a) National Family Health Surveys
  - b) Demographic Health Surveys
  - c) National Sample Surveys
  - d) Census

15. Which one among the following variables cannot be expressed in quantitative terms?
- a) Numerical Aptitude
  - b) Marital Status
  - c) Socio-economic Status
  - d) Professional Attitude
16. Testing hypothesis is a \_\_\_\_\_
- a) Descriptive statistics
  - b) Inferential statistics
  - c) Data preparation
  - d) Data analysis
17. The ideal number of participants in a focus group discussion is:
- a) 4-6
  - b) 6-8
  - c) 8-12
  - d) 10-15
18. \_\_\_\_\_ is a testable statement of a potential relationship between two or more variables.
- a) Research hypothesis
  - b) Research experience
  - c) Research problem
  - d) Research crisis
19. A research design that describes the present state of affairs as it exists without having any control over variables is:
- a) Analytical research
  - b) Descriptive research
  - c) Applied research
  - d) Distinctive research
20. In an experimental design, the dependent variable is:
- a) An ambiguous concept whose meaning depends on how it is defined

- b) The one that is not manipulated and in which any changes are observed
- c) The one that is manipulated in order to observe any effects on the other
- d) A measure of the extent to which personal values affect research

**PART-II: SHORT ANSWER QUESTIONS (SAQs)**

**(40 MARKS)**

1. Describe four (4) differences between quantitative and qualitative researches  
(8 marks).
2. Describe four (4) elements that are required for informed consent with human participants  
(8 marks).
3. Explain three (3) Probability sampling and three (3) non-probability sampling  
(9 marks).
4. Outline five (5) importance of research in nursing  
(5 marks).
5. As a researcher, you want to conduct a study on the relationship between dietary patterns and blood glucose level among The Catholic University of Eastern Africa (CUEA) staff. If the total number of CUEA staff is 600 and the prevalence of high blood glucose level among university staff in Kenya is 4.5%.
  - a) Calculate the required sample size for this study  
(5 marks).
  - b) Calculate the sampling interval to select the study participants  
(3 marks)
  - c) What test of significance can you use to establish the association between age and high blood glucose level in this population?  
(2 marks).

**PART III: LONG ANSWER QUESTIONS (LAQs)**

**(40 MARKS)**

1. Hypertension among Kenyan adults is a public health problem.
  - a) Identify a researchable topic to address the burden of hypertension in the adult population in Kenya  
(2 marks)
  - b) Write six (6) research questions in relation to the topic you have identified  
(6 marks).
  - c) Formulate six (6) specific objectives in relation to the research questions you have formulated  
(6 marks)

- d) With the help of a figure, indicate all the variables for this study **(6 marks)**
2. Explain the components of a research proposal **(20 marks).**

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