

## Research Methodology Exam 2

1. Random sampling or probability sampling includes all the following techniques, except:
  - A. Simple random sampling
  - B. Stratified random Sampling
  - C. Cluster sampling
  - D. Purposive Sampling
  
2. Gender, religion, type of disease, and blood group are measured on:
  - A. Nominal scale of measurement
  - B. Ordinal scale of measurement
  - C. Interval scale of measurement
  - D. Ratio scale of measurement
  
3. The variable which is influenced by the intervention of the researcher is called:
  - A. Independent
  - B. Dependent
  - C. Discrete
  - D. Extraneous
  
4. In qualitative research, a guiding principle in deciding sample size is:
  - A. Effect size
  - B. Number of variables
  - C. Data saturation
  - D. Sub-group analysis
  
5. The type of research focused on finding a solution to an immediate practical problem is termed as:
  - A. Basic research
  - B. Applied research
  - C. Explanatory research
  - D. Descriptive research
  
6. Which of the following is one of the features of quasi-experimental research design?
  - A. Manipulation, control group, randomization
  - B. Manipulation, but no control group or randomization
  - C. No manipulation of independent variable
  - D. Use of correlational approach
  
7. The term used to indicate the placebo effect in which the knowledge of being included in a study cause people to change their behaviours, thereby obscuring the variable of interest:
  - A. Internal validity
  - B. Maturation
  - C. Manipulation
  - D. Hawthorne effect

8. Which of the following data collection method has better subjectivity?

- A. Self-reports
- B. Observation
- C. Biophysiologic measures
- D. Questionnaires

9. A fundamental ethical principle that seeks to prevent harm and exploitation of, to maximize benefits for, study participants is:

- A. Justice
- B. Beneficence
- C. Nonmalificence
- D. Coercion

10. A method of data collection in which several rounds of questionnaires are mailed to a panel of experts, focusing on their opinions or judgment concerning a specific topic of interest is:

- A. Focus group interview
- B. Meta-analysis
- C. Delphi technique
- D. Secondary analysis

11. The degree of consistency with which an instrument measures the attribute it is supposed to be measuring is called:

- A. Validity
- B. Reliability
- C. Sensitivity
- D. Objectivity

12. A careful appraisal of the strengths and weaknesses of the study is:

- A. Research proposal
- B. Action Research
- C. Research critique
- D. Evidence-based practice

13. The probability that a given effect will be detected using a sample of a specified size, with the probability level of the statistical test being set at a predetermined level: is

- A. Power of a statistical test
- B. Internal validity
- C. External validity
- D. Reliability of a study

14. A hypothesis which a researcher tries to disprove is:

- A. Research hypothesis
- B. Null hypothesis
- C. Alternate hypothesis
- D. Positive hypothesis

15. When subpopulations within an overall population vary, the best method of data collection is:

- A. Simple random sampling
- B. Stratified random sampling

- C. Cluster sampling
- D. Purposive sampling

16. Data collection about everyone or everything in group or population and has the advantage of accuracy and detail:

- A. Census
- B. Survey
- C. Probability sampling
- D. Cluster sampling

17. A sampling method which involves a random start and then proceeds with the selection of every kth element from then onwards (where  $k = \text{population size} / \text{sample size}$ ):

- A. Simple random sampling
- B. Stratified random sampling
- C. Systematic sampling
- D. Snowball sampling

18. Declaration of Helsinki (1964/1975) is related to:

- A. Qualitative research
- B. Genetics research
- C. Ethical standards in research
- D. Statistical methods in research

19. "Above all, do no harm".

This principle encompassed in the ethical dimension of:

- A. Human dignity
- B. Justice
- C. Beneficence
- D. Anonymity

20. When the researcher is not allowed control of the treatment variable and cannot achieve randomization because of ethical considerations, institutional policies or other situational factors, the researcher chooses:

- A. True experimental studies
- B. Quasi experimental studies
- C. Exploratory studies
- D. Qualitative studies

## SECTION II: SHORT ANSWER QUESTIONS – 40 MARKS

1. Briefly state the difference between cross-sectional survey and experimental study design (6 Marks)

2. Use the statement to formulate Null, Directional and Non-directional hypotheses: Previous studies have reported a relationship between high alcohol content in blood and the reaction time among drivers in Kenya. (9 Marks each)

3. Differentiate between descriptive and exploratory research by giving examples (5 marks)

4. In conducting a survey on immunization coverage, it is recommended the researcher draws the sample from the community. Give the justification for this choice of study site using two main

sampling methods to argue your case (10 marks)

## PART THREE: LONG ANSWER QUESTION (40 MARKS)

1. What are the advantages and disadvantages of face-to-face interview. In your explanation give examples using open- and closed-ended questions. (20 marks)
  
2.
  - i) Define internal and external validity in quantitative research (4 marks)
  - (ii) Explain how the researcher can control those factors that could interfere with the relationships. Use example to clarify your points. (16 marks).