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“Investing in Africa’s future”

COLLEGE OF HEALTH, AGRICULTURE AND NATURAL SCIENCES

SHS 204: RESEARCH METHODS AND ETHICS

END OF SECOND SEMESTER FINAL EXAMINATIONS

APRIL/MAY 2019

LECTURER: Mrs Chituku S

DURATION: 3 HRS

INSTRUCTIONS

Answer **ALL** questions in Section A on the question paper

Answer any **three** questions in Section B on separate answer sheets provided

Write legibly.

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Section A

Indicate in front of the statement whether it is true (T) or false (F)

1. A variable is
 - a. any entity that can take on different values
 - b. anything that can vary can be considered a variable
 - c. A study variable is one that is recognized by the research and either controlled or manipulated in the experiment.
 - d. It is either a result of some force or is itself the force that causes a change in another variable.
2. A discrete variable
 - a. One that has two or more categories, but there is no intrinsic ordering to the categories.
 - b. gender is a categorical variable
 - c. male and female are two categories of a discrete variable
 - d. Has no intrinsic ordering to the categories.
3. A Continuous variable
 - a. One that can take any value between two numbers
 - b. Height
 - c. weight,
 - d. Age
4. concerning dependent and independent variables
 - a. Determined by the statement of the problem and the objectives of the study
 - b. Dependent variable measures the problem under study
 - c. Independent variable describe or measure the factors that are assumed to cause or influence the problem
 - d. Anything that brings difference among concepts
5. Advantages of a descriptive research design are:
 - a. An efficient and effective means of collecting a large amount of data about a problem area.
 - b. Short time only.
 - c. No bio physiologic or other measures are needed.
 - d. Has an intrinsic appeal for the solution of many practical problems.
6. Case control study design:
 - a. Examines the relationship between a suspected causal factor and a disease or other outcome
 - b. Compares persons who have a disease or outcome of interest (cases) with those who do not have the disease or outcome (controls)

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- c. Controls must be representative of the population where the cases are coming from
 - d. Looks back retrospectively to compare how frequently the exposure to a risk factor is present in each group to determine the relationship between the risk factor and the disease.
7. Below are strengths of case control research designs:
- a. Relatively quick and inexpensive
 - b. Particularly well suited to the evaluation of diseases with long latent periods
 - c. Is optimal for the evaluation of rare diseases
 - d. Can examine multiple etiology factors for a single disease i.e. a variety of exposures
8. The following are data collection instruments:
- a. Focus group discussion
 - b. Retrospective cohort
 - c. Questionnaire
 - d. Observational
9. The other name for cohort study is
- a. Follow-up study
 - b. Longitudinal study
 - c. Incidence study
 - d. Nominal ratio
10. The following are advantages of a prospective cohort study design:
- a. The temporal sequence between exposure and disease can be more clearly established
 - b. Suited for assessing the effects of rare exposure
 - c. Allows the researcher adequate numbers of exposed and non-exposed subjects
 - d. Allows for the examination of multiple effects of a single exposure
11. Limitations of a prospective cohort studies are:
- a. Time consuming and expensive
 - b. Potential for biases associated with losses to follow-up
 - c. The exposed may be followed more closely than the unexposed
 - d. Inefficient for evaluating rare diseases
12. Below is the scope of qualitative study approach:
- a. Case studies, participatory research, action research and surveys.
 - b. Generally broad holistic and comprehensive
 - c. Includes more than excludes
 - d. researcher studies real world situations as they unfold naturally

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13. Below is the scope of qualitative study approach:

- a. Experiments, survey, quasi experiment.
- b. Particularistic, narrow and limited focus, controlled.
- c. Excludes more than includes
- d. Researcher deliberately and systematically manipulates factors

14. Sampling is:

- a. The process of selecting a group of people, events, behaviors, or other elements with which to conduct a study
- b. Sampling is the selection of a given number of subjects from the defined population as a representative of the population
- c. Since this is only a representative and not the whole population the sampling method is specified so that anybody taking over would select in exactly the same manner as the original researcher would have done.
- d. Research design

15. Probability sampling:

- a. Increases sample representativeness
- b. Decreases sampling error and sampling bias
- c. Can be replicated thus making the research more reliable
- d. Increases validity.

16. Simple random sampling

- a. Elements are selected at random
- b. Each element has the same probability of being selected.
- c. Replacing each sampled element before selecting subsequent elements is called sampling with replacement.
- d. Is commonly used in quantitative research type

17. Systemic random sampling

- a. A modified form of the simple random sampling
- b. Elements chosen at regular intervals
- c. Reduces sampling errors
- d. Is a probability sampling method

18. Following are the advantages of stratified sampling method

- a. Reduces the potential for selection bias
- b. The sample is highly representative
- c. Allows for generalisations (i.e., statistical inferences)
- d. High external validity

19. Indicate true or false concerning Cluster sampling

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- a. Selection of groups of study units rather than individuals study units
- b. Population is divided into non-overlapping clusters or areas
- c. Each cluster is a miniature of the population
- d. A subset of the clusters is selected randomly for the sample

20. In purposive sampling:

- a. The researcher handpicks the cases to be included in his sample on the basis of his judgment of their typically
- b. The researcher builds up a sample that is satisfactory to his specific needs
- c. Elements are selected for a purpose.
- d. Names are put in a box and are hand picked

Section B

Answer any 3 questions on separate answer sheets provided

1. Write notes on

- a. Limitations of the study (5)
- b. Scope of the study (5)
- c. Significance of the study (5)
- d. Data analysis (5)

2. Describe the following

- a. Convenience sampling (5)
- b. Stratified sampling (5)
- c. Systematic sapling (5)
- d. Quota sampling (5)

3. Compare and contrast qualitative and quantitative research type (20)

4. Describe one example of each of the following:

- a. Probability sampling (10)
- b. Non probability sampling (10)