



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF MEDICAL SCIENCES

UNIVERSITY EXAMINATION FOR:

BMLS15S

AML 4311: RESEARCH METHODS

END OF SEMESTER EXAMINATION

SERIES: APRIL 2016

TIME: 2 HOURS

DATE: Pick Date Select Month Pick Year

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of TWO Section(s). Attempt ALL questions.

Circle the correct answer in section A.

Section A

1. Why do you need to review the existing literature?
 - a. To make sure you have a long list of references
 - b. Because without it, you could never reach the required word-count
 - c. To find out what is already known about your area of interest
 - d. To help in your general studying
 - e. For data analysis
2. What is a research design?
 - 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
3. What is a cross-sectional design?
 - a. A study of one particular section of society, e.g. the middle classes
 - b. One that is devised when the researcher is in a bad mood
 - c. The collection of data from more than one case at one moment in time
 - d. A comparison of two or more variables over a long period of time

4. People who are available, volunteer, or can be easily recruited are used in the sampling method called _____.
 - a. Simple random sampling
 - b. Cluster sampling
 - c. Systematic sampling
 - d. Convenience sampling
 - e. Snow ball sampling
5. A good qualitative problem statement:
 - a. Defines the independent and dependent variables
 - b. Conveys a sense of emerging design
 - c. Specifies a research hypothesis to be tested
 - d. Specifies the relationship between variables that the researcher expects to find
 - e. Shows how to analyze data
6. One step that is not included in planning a research study is:
 - a. Identifying a researchable problem
 - b. A review of current research
 - c. Statement of the research question
 - d. Conducting a meta-analysis of the research
 - e. Developing a research plan
7. The research participants are described in detail in which section of the research plan?
 - a. Introduction
 - b. Method
 - c. Data analysis
 - d. Discussion
 - e. Budget
8. Sources of researchable problems can include the following except:
 - a. Researchers' own experiences as educators
 - b. Practical issues that require solutions
 - c. Theory and past research
 - d. All of the above
 - e. None of the above
9. A review of the literature prior to formulating research questions allows the researcher to do which of the following except?
 - a. To become familiar with prior research on the phenomenon of interest
 - b. To identify potential methodological problems in the research area
 - c. To develop a list of pertinent problems relative to the phenomenon of interest
 - d. All of the above
 - e. None of the above
10. A study is conducted to determine the lack of exercise on cardiovascular disease. In this study, the dependent variable is the
 - a. Cardiovascular disease.
 - b. Lack of exercise
 - c. Exercise
 - d. Both A and B
 - e. None of the above

11. In an experimental design, the independent variable is:
 - a. The one that is not manipulated and in which any changes are observed
 - b. The one that is manipulated in order to observe any effects on the other
 - c. A measure of the extent to which personal values affect research
 - d. An ambiguous concept whose meaning depends on how it is defined
 - e. Is constant
12. What type of the interview that is in which questions are already prepared?
 - a. Telephonic interview
 - b. Personal interview
 - c. Unstructured interview
 - d. Structured interview
 - e. None of the above
13. If a nominal scale is used, it is permissible to calculate which of the following statistics?
 - a. Mean
 - b. Range
 - c. Percentile
 - d. Mode
 - e. None of the above
14. When may a participant withdraw from a study?
 - a. When the study is complete
 - b. With the permission of the researcher
 - c. At any time they feel they wish to withdraw
 - d. As soon as they have provided enough data for conclusions to have been made
 - e. A participant can never withdraw
15. An experimental research design normally involves
 - a. Manipulating the independent variable
 - b. Manipulating the dependent variable
 - c. A number of repeated measures
 - d. Data collected over an extended time period
 - e. Descriptive analysis only
16. Which of the following is a non probability sampling method?
 - a. Random sampling
 - b. Systematic sampling
 - c. Stratified sampling
 - d. Snowball sampling
 - e. Cluster sampling
17. Determining the sample interval (represented by k) and including each k th element in your sample are the steps for which form of sampling?
 - a. Simple Random Sampling
 - b. Stratified Random Sampling
 - c. Systematic Sampling
 - d. Cluster sampling
 - e. Purposive sampling

18. What is a type 1 error?
- When you reject the null hypothesis when it is true
 - When you accept the null hypothesis when it is true
 - When you reject the null hypothesis when it is false
 - When you accept the null hypothesis when it is true
 - When the P value is less than 0.005
19. What p value is normally used to identify a statistically significant result?
- 0.01
 - 0.05
 - 0.1
 - 0.5
 - 100
20. What will normally be the last of the following sections to be written?
- Abstract
 - Literature review
 - Results
 - Conclusion
 - Data analysis
21. What should be the content of an abstract?
- The topic under examination and the research question or hypothesis
 - The topic under examination, the research question or hypothesis, objectives, and methods of the study
 - The topic under examination, the research question or hypothesis, objectives and a brief résumé of the conclusions
 - The topic under examination, the research question or hypothesis, objectives, and methods of the study, a brief résumé of the conclusions
 - The topic under discussion, data analysis

22. What should not be included in the introduction?
- The aim of the research
 - A statement justifying the importance of the research
 - An indication of the key findings
 - An outline of the structure of the report
 - Conclusion of research
23. What should not be included in a research proposal?
- A summary of existing work in the area
 - The proposed methods to collect data
 - The results that will be obtained
 - An acknowledgement of any ethical issues
 - The objective of the study
24. You would like to repeat a study that has just been published. Which would not be an appropriate way to make such a study original?
- Geographically
 - Temporally
 - Socially
 - Contextually
 - None of the above
25. When assessing Internet based literature, which of the following is NOT important?
- The credibility of the author
 - The purpose of the site
 - The intended audience of the site
 - The layout of the site
 - None of the above
26. Peer-reviewed literature
- Is assessed by the readers of the journal to ensure quality
 - Is assessed before publication to ensure quality
 - Is not available on the internet
 - Is unlikely to be of better quality than non-peer reviewed literature
 - Is never assessed

27. Which of the following is NOT a function of referencing?
- To demonstrate breadth of reading
 - To attribute a quotation
 - To ensure a sufficiently long reference list
 - To justify your approach
 - All of the above
28. If we took the 500 people attending a school in Mombasa, divided them by gender and then took a random sample of the males and a random sampling of the females, the variable on which we would divide the population is called the _____.
- Independent variable
 - Dependent variable
 - Stratification variable
 - Sampling variable
 - Cluster variable
29. The process of drawing a sample from a population is known as _____.
- Sampling
 - Census
 - Survey research
 - None of the above
 - Snow ball sampling
30. Hypothesis refers to
- The outcome of an experiment
 - A conclusion drawn from an experiment
 - A form of bias in which the subject tries to outguess the experimenter
 - A tentative statement about the relationship
 - The objectives used in the study

Section B

- Discuss the following techniques:
 - Random sampling (10 mks)
 - Stratified random sampling (10 mks)
- Compare between pure and applied research (10 mks)
 - Outline the advantages and disadvantages of questionnaires (10 mks)