



W1-2-60-1-6

**JOMO KENYATTA UNIVERSITY
OF
AGRICULTURE AND TECHNOLOGY
UNIVERSITY EXAMINATIONS 2018/2019**

**THIRD YEAR SECOND SEMESTER EXAMINATION FOR THE DEGREE OF
BACHELOR OF SCIENCE IN ACTUARIAL SCIENCE, BIostatISTICS, FINANCIAL
ENGINEERING, INDUSTRIAL MATHEMATICS/OPERATION RESEARCH**

**STA 2313/HRD 2114: RESEARCH METHODOLOGY FOR STATISTICS/ RESEARCH
METHODOLOGY**

DATE: APRIL, 2019

TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES

- 1. Answer question ONE and any other two questions*
 - 2. Be neat and show all workings*
 - 3. All questions except question one carry equal marks*
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QUESTION ONE (30 Marks)

- a. Differentiate between the following types of research.
 - i. Applied and pure research
 - ii. Qualitative and quantitative research
 - iii. Descriptive and analytical(6 marks)
- b. What do you understand by 'research design' in qualitative research? (2 marks)
- c. Describe the content of a good abstract to a research manuscript. (6 marks)
- d. Literature review is a key component in a research process. Briefly discuss its main focus. (4 marks)
- e. Explain the concept plagiarism and discuss two ways that a researcher can do to avoid being accused of plagiarism. (4 marks)
- f. Briefly explain "hypothesis". Describe the functions of hypothesis in a research. (4 marks)
- g. What are the Limitations of test of significance? (4 marks)

QUESTION TWO (20 Marks)

- a. What factors influence the choice between a quantitative and qualitative research strategy? (4 marks)
- b. Barely a week after mobile phone operators switched off fake handsets, technicians in River Road Nairobi started activating the gadgets for as little as 1000/=. According to the industry regulator, Communication Commission for Kenya (CCK), the technicians are copying identity codes of original gadgets to fake phones to give them a new lease of life. In view of this problem assume you have been contracted by CCK to draft a research proposal guided by the following questions;
 - i. Give a brief background of the study (2 marks)
 - ii. Give a statement of the problem (2 marks)
 - iii. Formulate three specific objectives of the study (3 marks)
 - iv. Illustrate how you can select a systematic sample of ten mobile phone dealers from a population of 60 dealers. (3 marks)
- c. Questionnaire development is an important aspect of research method. What are the disadvantages of using Close ended-Questions? (4 marks)

QUESTION THREE (20 Marks)

- a. What is monitoring and evaluation? Why is it important? (5 marks)
- b. A researcher studies achievement by children in poorly funded schools. She develops a model that posits parent involvement as an important variable. She believes that parent involvement has an impact on children by increasing their motivation to do school work. Thus, in her model, greater parent involvement leads to higher student motivation, which in turn creates higher student achievement. Student motivation is what kind of variable in this study? (2 marks)
- c. A psychologist has heard about the usefulness of classical hypothesis testing as an indication of the importance of results. If one study rejects the null hypothesis at the .01 level and another study rejects at the .05 level, is the first indicative of a stronger effect? Discuss the concern with determining importance from classical hypothesis testing? (6 marks)
- d. Discuss any five factors that have possibly inhibited the development of indigenous African research knowledge. (7 marks)

QUESTION FOUR (20 Marks)

- a. Outline the steps in the Formulation of Research Problem (8 marks)
- b. Is the following qualitative research purpose statement "well stated" or "poorly stated"? "The focus of the present study was to explore distressing and nurturing encounters of patients with caregivers and to ascertain the meanings that are engendered by such encounters. The study was conducted on one of the surgical units and the obstetrical/gynecological unit of a 374-bed community hospital." (2 marks)
- c. Distinguish between
i) Stratified sampling and cluster sampling. (6 marks)
ii) Simple random sample and systematic sampling. (4 marks)
- d. Explain four methods of primary data collection used in research (4 marks)