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KIRIRI WOMEN'S UNIVERSITY OF SCIENCE AND TECHNOLOGY
UNIVERSITY EXAMINATION, 2023/2024 ACADEMIC YEAR
THIRD YEAR, FIRST SEMESTER EXAMINATION
FOR THE BACHELOR OF SCIENCE IN COMPUTER SCIENCE
KCS 400 – RESEARCH METHODOLOGY

Date: 11TH December 2023
Time: 2:30PM – 4:30PM

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS

QUESTION ONE (30 MARKS)

Read the following excerpt carefully and answer the questions that follow

A general observation can be made that the democratic leadership in Kenya is partitioned into national and county governance. The 47 county governance has faced challenges and thus has to partially rely on the national government in disbursing money for development. The county governance need to improve on service delivery that has been poor. There has been lack of sufficient water, power outages and garbage is not collected on time. Some people think that the devolved government structure, leadership competency, cultural practices and political interferences are affecting service delivery. As person with research methods knowledge you are consulted to do a research study on the report

Required:

- a) Suggest a suitable research topic for the above narrative (2 Marks)
- b) Identify specific research objectives for the study (6 Marks)
- c) Explain the following terms as used in research methods (4 Marks)
 - i) Target Population
 - ii) Research hypothesis
 - iii) Data analysis
- d) Describe any three sampling techniques that can be used in the study (6 Marks)
- e) Explain any six ethical issues that need to be considered in this study (6 Marks)
- f) Discuss the role of the literature review in such a study (6 Marks)

QUESTION TWO (20 MARKS)

- a) Explain what is meant by 'Sample frame' and why this concept is important (4 Marks)
- b) Define the term Research Proposal and state its function (8 Marks)
- c) State and Explain sources of research problem (8 Marks)

QUESTION THREE (20 MARKS)

- a) Describe the reasons why sampling is preferred over census in research design (4 Marks)
- b) A Researcher must observe certain standards which guide the research work
Explain five such standards (8 Marks)
- c) Describe the various types of data scale levels highlighting the difference between them and providing an example of each. (8 Marks)

QUESTION FOUR (20 MARKS)

- a) Discuss various types of validity highlighting the difference between them. (4 Marks)
- b) As an expert in research you have been invited to have a talk on how to prepare a research report. What could you cover as regards to the format of a research report? (8 Marks)
- c) Describe a secondary data search strategy that you would apply to a specified hypothetical problem (8 Marks)

QUESTION FIVE (20 MARKS)

- a) List and describe the criteria for evaluating a measurement tool (4 Marks)
- b) Generate five ways in which inferential research can be demonstrated (8 Marks)
- c) Briefly explain threats to reliability and validity aspects of a research (8 Marks)