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**KIRIRI WOMENS' UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**UNIVERSITY EXAMINATIONS, 2022/2023 ACADEMIC YEAR**  
**FOR THE DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY**  
**DCU 1008 - RESEARCH METHODOLOGY**

Date: 12<sup>th</sup> April, 2022  
Time: 2.30pm – 4.30pm

**INSTRUCTIONS TO CANDIDATES**

**ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS**

**QUESTION ONE (COMPULSORY) (30 MARKS)**

- a) Distinguish between the following as used in research
  - i) Research methods and research methodology (2 Marks)
  - ii) Cluster and area sampling (2 Marks)
  - iii) Experiment and survey (2 Marks)
  - iv) Simple hypothesis and composite hypothesis (2 Marks)
- b) Explain the circumstances under which the following can be used: (6 Marks)
  - i) A non-probability sample
  - ii) A probability sample
  - iii) A stratified sample
- c) Explain Four problem likely to be experienced by a researcher when conducting research (4 Marks)
- d) Describe the techniques of defining a research problem (6 Marks)
- e) Explain Three Characteristics of Scientific Research (6 Marks)

**QUESTION TWO (20 MARKS)**

- a) Describe Two observational techniques used in research (4 Marks)
- b) State Three merits and three demerits of direct personal interviews (6 Marks)
- c) Explain Three sources of research problems (6 Marks)
- d) Explain the importance of literature review in research (4 Marks)

**QUESTION THREE (20 MARKS)**

- a) Outline the major steps followed in conducting a research (6 Marks)
- b) Differentiate between collection of data through questionnaires and schedules (8 Marks)
- c) Explain the importance of defining a research problem (6 Marks)

**QUESTION FOUR (20 MARKS)**

- a) Describe Four types of analysis of data pointing out the significance of each (8 Marks)
- b) Explain the significance of a Research design (4 Marks)
- c) Explain the procedure of selecting a random sample (6 Marks)
- d) Describe a research hypothesis (2 Marks)

**QUESTION FIVE (20 MARKS)**

- a) Explain Four guiding considerations in the construction of questionnaire (8 Marks)
- b) Describe Four types of research that can be conducted (8 Marks)
- c) Describe Two characteristics of a good research hypothesis (4 Marks)