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KIRIRI WOMENS' UNIVERSITY OF SCIENCE AND TECHNOLOGY
UNIVERSITY EXAMINATIONS, 2024/2025 ACADEMIC YEAR
FOURTH YEAR, FIRST SEMESTER EXAMINATION
FOR THE DEGREE OF BACHELOR OF SCIENCE (COMPUTER SCIENCE)

KCS 2400: RESEARCH METHODOLOGY

DATE: 10TH DECEMBER, 2024

TIME: 8:30AM-10:30AM

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS

QUESTION ONE: COMPULSORY (30 MARKS)

- a) A researcher aims to investigate the impact of social media on student learning. Based on the scenario, explain the significance of research methodology in guiding this study. **(6 Marks)**
- b) A finalist Masters student faces challenges in defining the objectives of a study on employee performance in IT firms. Identify three key functions of research methodology that can help the student address these challenges. **(6 Marks)**
- c) A marketing research team is tasked to choose between a descriptive and an experimental design for a study on customer satisfaction in e-commerce. Based on the study objectives, justify the most suitable design. **(6 Marks)**
- d) An ethical dilemma arises during the design of a medical research study involving children. Explain two ethical considerations the researcher should prioritize. **(6 Marks)**
- e) A healthcare practitioner and seasoned researcher are conducting a national survey on healthcare access and prefer to use stratified random sampling. Explain the rationale behind choosing this sampling technique. **(6 Marks)**

QUESTION TWO: 20 MARKS

- a) A study on the correlation between job stress and employee turnover lacks a clear research design. Suggest an appropriate research design and justify your choice. **(6 Marks)**
- b) A researcher conducting a study on the impact of work-from-home policies decides to use questionnaires and interviews. Discuss the validity and reliability of these data collection methods in this context. **(6 Marks)**
- c) An economic expert uses archival data for a study on past economic crises. What are the advantages and limitations of using secondary data for this research? **(8 Marks)**

QUESTION THREE: 20 MARKS

- a) A research team conducting a case study on business startups faces ethical concerns about data privacy. Identify two ethical issues related to the data collection process. **(6 Marks)**
- b) In a study about the opinions of university students on remote learning, the researcher uses convenience sampling. Discuss the advantages and ethical concerns associated with this sampling method. **(8 Marks)**
- c) A researcher is trying to determine the sample size for a study on customer behavior in retail. What factors should be considered when determining an appropriate sample size? **(6 Marks)**

QUESTION FOUR: 20 MARKS

- a) A student is writing a research proposal on climate change adaptation strategies. Identify three critical components that should be included in the research proposal and justify their importance. **(8 Marks)**
- b) A sales manager is conducting a quantitative study on sales trends and uses regression analysis method to analyze data collected. Explain why this method is appropriate for analyzing the data in this scenario. **(6 Marks)**
- c) A researcher faces challenges in writing a clear research problem statement for a study on Information Communication Technology (ICT) policies on organizational performance. Provide three strategies for formulating a concise problem statement. **(6 Marks)**

QUESTION FIVE: 20 MARKS

- a) Considering the future directions in research methodology and emerging trends, discuss at least two emerging trends and how they could be applied to improve data collection, analysis, and the dissemination of findings. **(8 Marks)**
- b) An ICT firm against digital divide plans to conduct interviews with vulnerable populations in a conflict zone. Discuss ethical principles that must be considered before proceeding with the research. **(6 Marks)**
- c) A researcher encounters unexpected obstacles in accessing data during a study on rural healthcare. Describe two strategies the researcher could employ to overcome this limitation and improve future studies. **(6 Marks)**