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UNIVERSITY EXAMINATIONS
2022/2023 ACADEMIC YEAR

END OF SEMESTER EXAMINATIONS
YEAR ONE SEMESTER ONE EXAMINATIONS

FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN
(INFORMATION TECHNOLOGY)

COURSE CODE : **PIT 913**
COURSE TITLE : **ADVANCED DATA**
ANALYSIS

DATE: 17/08/2023

TIME: 2.00 P.M – 5.00 P.M

INSTRUCTIONS TO CANDIDATES
ANSWER QUESTIONS ONE AND ANY OTHER TWO
ALL QUESTIONS CARRY 20 MARKS EACH

QUESTION ONE (COMPULSORY) [20 MARKS]

The purpose of research is to describe and explain variance in the world, that is, variance that occurs naturally in the world or change that we create due to manipulation. Variables are therefore the names that are given to the variance we wish to explain and it is very critical to the research because the way the researcher uses or handles them in the research process could determine the nature and direction of the research.

Task. Using at least five example explain how variables can be useful to the researcher to identification of research problem and title design.

QUESTION TWO [20 MARKS]

A literature review is a survey of scholarly sources on a specific topic. It provides an overview of current knowledge, allowing you to identify relevant theories, methods, and gaps in the existing research. Writing a literature review involves finding relevant publications (such as books and journal articles), critically analyzing them, and explaining what you found.

Task. Assess the validity of the statement.

QUESTION THREE [20 MARKS]

Reliability is seen as the degree to which a test is free from measurement errors, since the more measurement errors occur the less reliable the test while validity is foremost on the mind of those developing measures and that genuine scientific measurement is foremost in the minds of those who seek valid outcomes from assessment.

Task: Discuss

QUESTION FOUR [20 MARKS]

Once quantitative data has been gathered and cleaned, the next step in the research process is to analyze the data in order to glean insights from it. This step is crucial as data must be analyzed properly before a researcher can understand which findings are significant and report on the findings or make a judgment on their hypothesis. If data is not analyzed with care, findings may

be misrepresented, which can lead to decisions being made upon statistics that did not accurately represent the entire dataset. Inferential and predictive data analysis are key to clear interpretations.

Task: Discuss

QUESTION FIVE [20 MARKS]

“The research process in computing research consists of number of activities that overlap continuously rather than following a strict prescribed sequence”.

Task. Discuss