UGANDA MARTYRS UNIVERSITY

FACULTY OF SCIENCE

DEPARTMENT OF NATURAL SCIENCES

COC 2201: Research Methodology and Data analysis

Group: (Economics/Mathematics/Statistics)- BSC (GEN)

YEAR 1 SEMESTER I EXAMINATIONS 2022/2023

Time: 3 hours

Read the following instructions carefully:

(i) *This examination consists of SIX questions.*

(ii) *Answer only FOUR questions. Only the **first four** questions answered will be marked.*

(iii) *Indicate the questions answered on the examination answer booklets provided.*

(iv) *All answers MUST be presented in the Answer Booklets provided.*

(v) *Please, read and follow ALL the instructions on the examination answer book.*

Question 5

(a) Explain **FIVE** reasons why research is important. (05 *marks*)

(b) Outline the research process. (05 *marks*)

(c) Highlight **FIVE** factors to consider when selecting a research topic.
(05 *marks*)

(d) State **FIVE** components of an introduction section of a research report.
(05 *marks*)

Question 6

(a) Distinguish the following terms as used in statistics

(i) Sample and Population.

(ii) Descriptive statistics and inferential statistics.

(iii) Statistics and Parameter.

(iv) Dependent variable and the Independent variable. (08 *marks*)

(b) By citing examples in each explain the **TWO** levels of measurement
scales for statistical data. (04 *marks*)

(c) The number of days the college nurse was called for emergencies per
month for the last 10 months were; 2, 3, 4, 0, 5, 6, 7, 4, 3, 2.
Determine the

(i) Mean.

(ii) Mean Absolute Deviation.

(iii) Variance.

(iv) Standard deviation. (08 *marks*)

−END−

Question 1

(a) Design and state a good researchable topic of your choice. (05 *marks*)

(b) Using the topic you have chosen, develop a statement of the problem.

(07 *marks*)

(c) State four specific objectives in your topic. (08 *marks*)

Question 2

(a) Discuss the importance of literature review in a research.

(b) Discuss four data collection instruments and how they are used in design.

(20 *marks*)

Question 3

(a) Explain **FIVE** reasons why hypothesis is important in research.

(10 *marks*)

(b) Discuss **TWO** types of alternative hypothesis. (05 *marks*)

(c) Highlight **FIVE** characteristics of a good hypothesis. (05 *marks*)

Question 4

(a) Explain the need for editing, coding, classifying and tabulating in the processing of data.

(08 *marks*)

(b) Discuss various kinds of charts and diagrams used in data analysis.

(12 *marks*)