(*University of Choice*)

MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY (MMUST)

MAIN EXAM

UNIVERSITY EXAMINATIONS 2023/2024 ACADEMIC YEAR

FIRST YEAR SECOND SEMESTER EXAMINATIONS

FOR THE DEGREE SAM AND SAR

COURSE CODE: ECO 202/AEC112

COURSE TITLE: ECONOMIC STATISTICS 1

DATE: TUESDAY 9th April 2024 TIME: 8:00-10:00

INSTRUCTIONS TO CANDIDATES

ATTEMPT: QUESTION ONE AND ANY OTHER TWO
TIME: 2 Hours

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 3 Printed Pages. Please Turn Over.

QUESTION ONE

a). Define the term Statistics and discuss the two branches of statistics. (6 Marks)

b). Discuss the following concepts as used in statistics.

i. Population (2 Marks)

ii. Variable (2 Marks)

iii. Data (2 Marks)

c). As a social scientist, what are some of the importance of statistics in economics? (6 Marks)

d). List and explain the various measures of central tendency and dispersion (6 Marks)

e). Discuss the advantages of using questionnaire (6 Marks)

QUESTION TWO

a).Given the following observations, 12, 13, 54, 56, and 25.

i. Determine the skewness of the data. (4 Marks)

ii. Determine the type of kurtosis present (4 Marks)

b). Describe the preliminary consideration for data collection. (6 Marks)

c).What is the relevance of statistics to political science? (6 Marks)

QUESTION THREE

a). Given the statement p, q, and r, use the Truth table to prove:

i. The associative law that $pv(qvr) = (pvq)vr$. (8 Marks)

ii. $p\Lambda[(\sim p\Lambda p) V (\sim p\Lambda \sim q)$ is a contradiction. (8Marks)

b). Explain the Problems of construction of Index numbers. (4Marks)

QUESTION FOUR

In an objective test marked out of 40, the marks scored by 35 students out of 40 students are given in the table below:

Marks %	1 - 5	6 - 10	11 - 20	21 - 30	31 - 35	36 - 40
No. of Students	2	7	12	8	5	1

Calculate,

i. the mean of the distribution (4 Marks)
ii. The median of the distribution and give the median class (8 Marks)
iii. The mode of the distribution and give the modal class (8Marks)

QUESTION FIVE

a. Consider the frequency table showing the population of a country and use it to answer the questions below.

Age Group	No. of persons in Millions
0- 9	49
10-19	39
20-29	31
40-49	27
50-59	18
60-66	14
70-79	10
80 and above	2

i. Determine the population of the country above. (2 Marks)
ii. Which age group has the lowest population in millions? (2 Marks)
iii. Which age group has the highest population (2 Marks)

b). Explain the difference between primary and secondary data and give their various sources and methods of collection (10 Marks)

c). Why is it necessary to determine the level of measurement before calculating statistics?

(4 Marks)