200

(University of Choice)

MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY (MMUST)

MMUST EXAMINATION

UNIVERSITY EXAMINATIONS
2022/2023 ACADEMIC YEAR

SECOND YEAR FIRST SEMESTER EXAMINATIONS
FOR BACHELORS OF SCIENCE ECONOMICS AND
BACHELOR OF ECONOMICS AND STATISTICS

COURSE CODE: ECO 202

COURSE TITLE: ECONOMIC STATISTICS

DATE: TUESDAY 06/12/2022 **TIME:** 12:00-14:00

INSTRUCTIONS TO CANDIDATES

ATTEMPT **QUESTION ONE and ANY OTHER TWO QUESTIONS**

TIME: 2 Hours

MMUST observes ZERO tolerance to examination cheating

QUESTION ONE

a) Define the scope of statistics. (3 marks)

b) State THREE ways in which statistics may be useful in our daily lives (3marks)

c) Explain briefly the two types of statistics (6 marks)

d) Describe briefly the levels of measurements (4marks)

e) Differentiate between each of the following pair of terms

i) Regression and Correlation

ii) Stratified random sampling and Systematic random sampling

iii) Geomap and a Score card

iv) Quartile deviation and coefficient of variation (8 marks)

f) The following table gives the monthly wages and cost of living index no. based on 2018:

Years	2016	2017	2018	2019	2020	2021	2022
Wages	65	70	75	80	90	100	120
Index no.	100	110	120	130	150	200	250

Calculate the real wages. (6 marks)

QUESTION TWO

a) "Based on the responses to a mailed questionnaire, a company was disturbed to find that about 30 percent of its customers were dissatisfied by the service they receive from the field agents. This was in sharp contrast to the field agents' response which indicated that only about 2 percent customers were having problems." Discuss (10 marks)

b) "Sampling is necessary under certain conditions." Explain with illustrative examples. (10 marks)

QUESTION THREE

a) Find the mean, median and mode from the following frequency distribution

Output in units	**No. of workers**
300-309	9
310-319	20
320-329	24
330-339	38
340-349	48
350-359	27
360-369	17
370-379	6

(12 marks)

b) Show the relative position of different averages in a moderately symmetrical series (4 marks)

c) What are the qualities which an average must possess (4 marks)

QUESTION FOUR

a) Calculate the mean deviation from the following data:

X	f
0-10	18
10-20	16
20-30	15
30-40	12
40-50	10
50-60	5
60-70	2
70-80	2

(8marks)

b) Find the standard deviation of the data in the following distribution.

X	f
12	4
13	11
14	32
15	21
16	15
17	8
18	5
20	4

(8marks)

c) Discuss two advantages of observation as a method of data collection. (4marks)

QUESTION FIVE

a) State the assumptions of the linear regression equation (8marks)

b) Find the coefficient of correlation between X and Y, (7marks)

X	1	2	3	4	5	6	7	8	9
Y	12	11	13	15	14	17	16	19	18

c) A correlation coefficient of 0.5 does not mean that 50% of the variance is explained. Comment. (5marks)