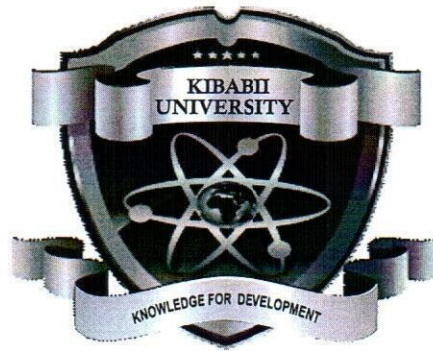*(Knowledge for Development)*

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS 2022/2023 ACADEMIC YEAR

FIRST YEAR 2ND SEMESTER MAIN EXAMINATION

FOR THE DEGREE OF BACHELOR OF SCIENCE AGRICULTURE ECONOMICS AND RESOURCE MANAGEMENT

COURSE CODE: AEC 125
COURSE TITLE: STATISTICS FOR ECONOMISTS

DATE: 21ST APRIL 2023 **TIME:** 9 – 11 AM

INSTRUCTIONS TO CANDIDATES

Answer Question ONE and any other TWO Questions.

TIME: 2 Hours

This paper consists of 2 printed pages. Please Turn Over ▶

KIBU observes ZERO tolerance to examination cheating

QUESTION ONE

30 MARKS

(a) Define the term statistical methods and elaborate its components **(10 Marks)**

(b) Explain the different class categories into which the data can be sorted and tabulated **(10 Marks)**

(c) A bin contains 13 marbles, 8 are red and 5 are white. Successive drawings are made and in the first case Marbles are replaced before the second draw; while in the second case the marbles are not replaced before the second draw. In each case, find the probability that the first drawing will give 3 white and the second 3 red marbles? **(10 Marks)**

QUESTION TWO

20 MARKS

(a) Using suitable examples explain the different methods in probability sampling

QUESTION THREE

20 MARKS

Differentiate between the following terms
- (i) Null and alternate hypothesis.
- (ii) sampling and non-sampling errors
- (iii) Dispersion and skewness
- (iv) Primary or Secondary data
- (v) Discrete series and continuous series

QUESTION FOUR

20 MARKS

(a) Define statistical series and explain the various types of statistical series **(8 marks)**

(b) The table below shows production and distribution of milk by Mweni, a farmer in Nairobi for the first six months of 2022.

Month	Jan	Feb	Mar	Apr	May	June
Locally consumed (litres)	18	27	36	9	31.5	22.5
Sold to society (litres)	72	81	90	63	103.5	94.5

From the information above
- (i) Draw a component bar chart to illustrate the above information **(8 marks)**
- (ii) What percentage of milk produced was consumed locally for the six months **(4 marks)**

QUESTION FIVE

20 MARKS

(a) The data in the table below was derived from exam marks of students in Kibabii primary.

Marks	0 – 10	10 -20	20 - 30	30 – 40	40 - 50
No. of Students	7	6	15	12	10

From this information
- (i) Compute the Karl Pearson's co-efficient of variation **(8 Marks)**
- (ii) Comment on the results **(2 Marks)**

(b) Write short notes on your understanding of an average and outline the qualities of a good average **(10 Marks)**