



KISII UNIVERSITY
UNIVERSITY EXAMINATIONS

SECOND YEAR EXAMINATION FOR THE AWARD OF THE DEGREE OF
BACHELOR OF ARTS IN ECONOMICS AND SOCIOLOGY
SECOND SEMESTER, 2023/2024
(JANUARY-APRIL, 2024)

ECON 234: ECONOMIC STATISTICS II

STREAM: Y2 S2

TIME: 2 HOURS

DAY: TUESDAY, 3:00 – 5:00 P.M.

DATE: 16/04/2024

INSTRUCTIONS

1. *Do not write anything on this question paper.*
2. *Answer Question ONE (compulsory) and any other TWO Questions.*

QUESTION ONE (30MARKS)

a) The incidence of a certain occupational disease is such that on the average 20% of workers suffer from it. If 10 workers are selected at random, find the probability that:

- i) Exactly 2 workers suffer from the disease. (5marks)
 - ii) Not more than 2 workers suffer from the disease. (5marks)
- b) Discuss the Purposes of Survey Development. (10marks)
- c) Highlight the steps on how you can easily develop survey research. (10marks)

QUESTION TWO (20MARKS)

a) The following marks have been obtained by a class of students in statistics (out of 100) Compute the coefficient of correlation for the above data.

(10marks)

<i>x</i> statistics I	45	55	56	58	60	65	68	70	75	80	85
<i>y</i> statistics II	56	50	48	60	62	64	65	70	74	82	90

b) If the probability of defective bolts is 0.1, find (a) the mean and standard deviation for the distribution of defective bolts in a total of 500, and (b) the moment coefficient of skewness and kurtosis of the distribution. (10marks)

QUESTION THREE (20MARKS)

- a) Explain the Properties of the normal distribution. (10marks)
- b) Define term ANOVA, differentiate between one way and two-way ANOVA and the State the assumptions of ANOVA. (10marks)

QUESTION FOUR (20MARKS)

- a) A football team has kept records of hours per month spent on training and the goals scored month and wish to know if there is any correlation between training hours and goals scored.

Hours per month x	12	21	27	16	19	22	33	10
Goals per month y	8	11	13	11	9	15	17	12

- b) Explain the factors Affecting the Effectiveness of Surveys. (12marks)
- (8marks)

QUESTION FIVE (20MARKS)

- a) Briefly explain the importance of normal distribution. (10marks).
- b) Highlight the procedure for testing hypothesis about population mean. (10 marks)