KISII UNIVERSITY

UNIVERSITY EXAMINATIONS

SECOND YEAR EXAMINATION FOR THE AWARD OF THE DEGREE OF BACHELOR OF IN SOCIOLOGY AND ECONOMICS SECOND SEMESTER 2021/2022 [JUNE-SEPTEMBER, 2022]

ECON 234: ECONOMIC STATISTICS II

STREAM: Y2S2   **TIME: 2 HOURS**

DAY: FRIDAY, 9:00 – 11:00 AM   **DATE: 09/09/2022**

INSTRUCTIONS
1. *Do not write anything on this question paper.*
2. *Answer question ONE (Compulsory) and any other TWO questions.*

QUESTION ONE (30 MARKS)

a) Assume that the product manager of ABC Ltd is concerned about the apparent fluctuations in efficiency and therefore work done by employees which are related to the volume. The result of this in most 12 weeks research carried out is as shown below;

Week	Machine hours (cost driver)	Indirect labour costs (Kshs)
1	68	1,190
2	88	1,211
3	62	1,004
4	72	917
5	60	770
6	96	1,456
7	78	1,180
8	46	710

9	82	1,316
10	94	1,032
11	68	752
12	48	963

Required

(a) Find the indirect labour costs associated with 90 machine hours using

regression   (5marks)

 (b) The machine hours that $1,000 of indirect labour cost would produce

(5marks)

c) Define term ANOVA, differentiate between one way and two way ANOVA and

the State the assumptions of ANOVA   (10marks)

d)Discus the Purposes of Survey Development   (10marks)

QUESTION TWO (20 MARKS)

a) Define Binomial and Normal Distributions and then differentiate between the

two.   (10marks)

b) A hospital records show that the cost of carrying health checks in the last

five

Accounting periods has been as follows;

Period No of patients seen Total cost

1. 650 17,125

2. 940 17,800

3. 1,260 18,650

4. 990 17,980

5. 1,150 18,360

Required: Estimate the cost of carrying out health checks on 850 patients

using Regression model   (10 marks)

QUESTION THREE (20 MARKS)

a) Explain the things to Remember When Creating and Implementing a Survey (12marks)

b) Highlight the procedure for t*esting hypothesis about population mean* (8 marks)

QUESTION FOUR (20 MARKS)

a) Explain the factors Affecting the Effectiveness of Surveys (8marks)

b)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

(12marks)

QUESTION FIVE (20 MARKS)

a) Highlight the steps on how you can easily develop survey research. (10marks)

b) *Write short notes on the following: -* (10marks)
(i) Null and alternative hypothesis
(ii) One tailed and two tailed tests
(iii) Type I and type II errors
(iv) Acceptance and rejection regions.