JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF HEALTH SCIENCES

DIPLOMA IN COMMUNITY HEALTH PROGRAMME

NAMBALE CAMPUS

COURSE CODE: HDC 2223

COURSE TITLE: (BIOSTATISTICS)

EXAM VENUE

STREAM:

DATE: **EXAM SESSION:**

TIME: **2.00 HOURS**

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Instructions:
1. Answer any three questions (question one is compulsory)
2. Candidates are advised not to write on the question paper
3. Candidates must hand in their answer booklets to the invigilator while in the examination room

QUESTIONS

1. a) i) Explain statistics

   ii. What role does statistics play in the health sector?

   b) Explain the following terminologies as used in biostatistics using relevant examples

   Sample space, discrete data, continuous data, skewness, and measures of dispersion

   c) Use the given data to determine;

Age	20-24	25-29	30-34	35-39	40-44
No. of patients	4	6	10	8	2

   Mean mode, median, P_{30} and standard deviation

2.

Class	Frequency
10-20	8
21-31	7
32-42	7
43-53	10
54-64	3

   Required;

   a) Frequency polygon

   b) Mode

   c) Mean

3. The reliability of a test kit is normally distributed with mean $\mu=50$ hours and variance of 36. Find the following probabilities

   a) $P(51<x<60)$

   b) $P(x>60)$

   c) $P(50<x<60)$

4. .

Random available x	10	20	30	40	50
Frequency of occurrence of x	1	2	4	2	1

Required;

a) Expected value of distribution

b) Standard deviation of the distribution

c) Explain random variable, discrete and continuous probability distribution.

5. .

Age	10-20	21-31	32-42	43-53	54-64
No. of patients	4	6	10	8	2

Required;

a) Cumulative frequency curve (Ogive)

b) Use the curve to determine the median, P_{25} and P_{30} class