



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF HEALTH SCIENCES

**UNIVERSITY EXAMINATION FOR THE DIPLOMA IN COMMUNITY HEALTH
AND DEVELOPMENT**

2ND YEAR 2ND SEMESTER 2015/2016

MAIN CAMPUS

COURSE CODE: *HDC 2223*

COURSE TITLE; *INTRODUCTION TO BIOSTATISTICS*

EXAM VENUE: **STREAM**
DATE: **EXAM SESSION:**
TIME: **1.30 HOURS**

Instructions:

- 1. Answer all questions in section A and any other 2 questions in Section B.**
- 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**

SECTION A: ANSWER ALL THE QUESTIONS (30 MARKS)

1. What is a variable and provide an example of a qualitative variable (3 marks)
2. List basic concepts of biostatistics (2 marks)
3. With the blood group of 40 people distributed as follows: 16 with blood group O, 18 with A, 4 with B and 2 with AB. Present graphical summary of this data. (6 marks)
4. Describe two methods for measuring the center of a quantitative data (3 marks)
5. List three measures of variation for quantitative data (3 marks)
6. What is a box plot and its significance (4 marks)
7. What is the difference between the following:
 - i) Numerical parameter and Numerical statistics (3 marks)
 - ii) Bar and histogram graphs (3 marks)
 - iii) Quantitative and qualitative variables (3 marks)

SECTION B. ANSWER ANY TWO (2) QUESTIONS IN THIS SECTION (30 MARKS)

1. Explain five significance of biostatistics in research (15 marks)
2. With the following weights in kilograms: 60, 40, 35, 65, 73, 78, 46, 27, 54, 25.
 - i) Determine the standard deviation (5 marks)
 - ii) List weights within first and second standard deviation (10 marks)
3. Discuss the probability of a continuous random variable using a density curve (15 marks)
4. With the following data: 20, 30, 44, 16, 33, 61, 70, 56, 48, 66, 48.
 - i) List numbers above 60th percentiles (3 marks)
 - ii) List number above 2nd deciles (3 marks)
 - iii) List numbers below 1st quartiles (3 marks)