



UNIVERSITY EXAMINATIONS
FIRST YEAR EXAMINATION FOR THE AWARD OF THE
DIPLOMA IN COMMUNITY HEALTH AND DEVELOPMENT
SECOND SEMESTER 2022/2023
[JANUARY-APRIL, 2023]

COMH 0128: BIostatistics

STREAM: Y1S2

TIME: 2 HOURS

DAY: FRIDAY, 2:00 – 5:00 PM

DATE: 31/03/2023

INSTRUCTIONS

- 1. Do not write anything on this question paper.**
- 2. Answer question ONE and any other TWO questions in Section B.**

SECTION A: (40 MKS)

Answer all questions in this section

1. State 5 significances of studying biostatistics. (5marks)
2. Distinguish between the following.
 - i) Qualitative and quantitative variables (2marks)
 - ii) Primary and secondary data (2marks)
 - iii) Sample and population (2marks)
3. Outline four requirements of a good sampling frame? (4marks)
4. Explain the importance of sampling as opposed to census. (5marks)
5. Define an error and give two examples for each. (5marks)
6. Define the following terms as used in the study of statistics? (5marks)
 - i. Mode
 - ii. Median
 - iii. Parameter
 - iv. Variable
 - v. Data
7. Outline any three characteristics of a binomial distribution? (3marks)

8. Highlight four essentials a researcher needs to consider when sampling for worthwhile results? (4marks)

SECTION B (30MKS)

Answer only TWO questions from the 4 provided in this section.

9. a). Describe three properties of a normally distributed data? 3mks

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

- i) None suffer from the diseases (5marks)
ii) exactly 2 patients suffer from the disease? (3marks)
iii) not more than 2 patients suffer from the disease? (4marks)

10. a). Discuss in details any 5 factors one has to put into consideration when developing a Standard sampling design? (10marks)

b). justify by citing any two reasons why sampling is of essence in research? (2marks)

c). Explain any 3 factors required during sample determination? (3marks)

11. During the world AIDS day, data for co-infections from the PSC services was recorded as follows, use this information to answer the following questions.

Age (yrs)	No .of patients
10-20	20
20-30	10
30-40	25
40-50	15
50-60	15
60-70	5

- a). Draw an histogram using the data above? (4marks)

b). Find,

- i). mean (2marks)
ii). Median (3marks)
iii). Variance (3marks)

iv). Standard deviation (3marks)