



NATIONAL OPEN UNIVERSITY OF NIGERIA
UNIVERSITY VILLAGE, PLOT 91 CADASTRAL ZONE, JABI ABUJA
FACULTY OF HEALTH SCIENCES
DEPARTMENT OF PUBLIC HEALTH SCIENCE
2023_1 POP EXAMINATION

PROGRAMME: M.Sc. PUBLIC HEALTH
COURSE CODE: PHS813
COURSE TITLE: BIostatISTICS AND APPLICATION
CREDIT UNITS: 3
TIME ALLOWED: 2 HOURS

INSTRUCTION: ANSWER ALL THE QUESTIONS.

- 1a. Using a diagram, illustrate the types of data used in Biostatistics. (9 marks)
- b. What are the methods used for primary data collection. (4 marks)
- c. List the sources of secondary data (5 marks)

2. The table below shows 5 classes of grouped frequency distribution of marks scored in a test by female NOUN students in Ibadan Study Center.

Class	Class Limit	Class boundaries	Class center (X)	Frequency (F)
1	40-49			5
2	50-59			17
3	60-69			13
4	70-79			13
5	80-89			2

Using the information provided in the table,

- a) Determine the corresponding class boundary for each class (5 marks)
- b) Calculate X for each class (10 marks)

3. In a study to monitor changes in weight of NOUN students in Kaduna Study center attending the University gymnasium, the following 5 classes of grouped frequency distribution of weights (kg) were initially measured.

Class	Class limit	Class center (X)	Frequency (F)	FX
1	40-49		5	
2	50-59		17	
3	60-69		13	
4	70-79		13	
5	80-89		2	

Using the information provided in the table,

- Calculate the X for each class (5 marks)
- Determine FX for each class (5marks)
- Calculate the mean weight (5 marks)

4. Extending the same table as above in NO 3. and using the Calculated mean,

Class limit	Class center (X)	Frequency (F)	FX	$X-\bar{X}$	$(X-\bar{X})^2$	$F(X-\bar{X})^2$
40-49		5				
50-59		17				
60-69		13				
70-79		13				
80-89		2				

Using the information provided in the table,

- Determine the values of the mean deviation $(X-\bar{X})$ for each class (5 marks)
- Determine the values of the mean deviation squared $[(X-\bar{X})^2]$ for each class (5 marks)
- Determine the values of $[F(X-\bar{X})^2]$ for each class (5 marks)
- Calculate the standard deviation (5 marks)
- Calculate the Variance (2 marks)