

24030801080



KOGI STATE UNIVERSITY, KABBA

FACULTY OF SCIENCE AND COMPUTING (Department of Mathematical Sciences)

STA 111: Descriptive Statistics UNIT: 3

Session: 2023/2024 Semester: FIRST Date: 19/9/2024 Time allowed: 2 Hours.

Instructions: Answer four (4) questions only.

- Q1 a. Explain the concept of Statistics.
b. List and explain with examples the methods of data collection.
c. Enumerate five (5) uses of statistical data.

- Q2 a. The table below shows the monthly wage of twenty employees of KSUK Ventures Ltd.

Monthly wage (N'000) (x)	No of employees (f)
5	4
10	7
15	3
20	5
25	1

- Estimate the average monthly wage of twenty employees of KSUK Ventures Ltd.
b. Differentiate with examples between discrete random variable and continuous random variable.

- Q3 a. Mention three (3) advantages and three (3) disadvantages of arithmetic mean.
b. The number of cars crossing a certain bridge in a big city in intervals of five minutes each were recorded as follows: 20, 15, 16, 30, 20, 20, 12, 9, 18, 15. Calculate the mean, median and mode.

- Q4 a. Define the following: i. Skewness ii. Kurtosis
b. Calculate Sample Skewness and Sample Kurtosis from the following grouped data

Class	Frequency
2-4	3
4-6	4
6-8	2
8-10	1

- Q5 From the following data compute an index number by using weighted average of price relative method:

Items	Base Year		Current
	Price (P_0)	Quantity (q_0)	Year Price (P_1)
A	1	6	5
B	2	7	4
C	3	8	3
D	4	9	2

- Q6 a. Define Index Numbers.
b. Enumerate five (5) uses of Index Numbers.