**PAN ATLANTIC UNIVERSITY, IBEJU LEKKI**

**SCHOOL OF SCIENCE AND TECHNOLOGY**

**DEPARTMENT OF BASIC SCIENCES**

**STA 111: Descriptive Statistics**

**CLASS WORK 14/11/2023 (10.00 am to 12.00 pm)**

The data below represents the average monthly service charges (in thousands of naira) after tax made by an Engineering Consulting Firm for 40 consecutive months.

28 42 46 42 32 38 14 50 32 22

28 28 10 38 32 38 32 10 28 40

36 24 46 52 14 38 36 32 30 28

42 46 10 44 44 24 50 38 48 40

1. Find the mean, median, mode, and coefficient of variation of the ungrouped data.
2. From your results in i.) above, comment on the symmetry of the data.
3. Draw a stem and leaf display and a Box plot for the data.
4. Comment on the symmetry of the distribution of the data.
5. Construct a frequency distribution table, showing the relative frequencies, cumulative frequencies, percentages, percent relative frequencies and percent cumulative frequencies. Using 5 – 10 as your first class, how many cases intervals do have?
6. Present the grouped data in a histogram. Estimate the mode.
7. Using the percent cumulative frequencies, draw an Ogive for the data and use it to estimate the 25th, 50th, 60th and 75th percentiles.
8. Using the Ogive, estimate the number of months with at least N30,000 charges.