COURSE CODE: STAT 101/111, **CREDIT UNITS:** 3

LECTURER: ADIO, A.K., BAMISILE, O.O.

TIME ALLOWED: 2HRS, **TOTAL MARKS:** 60

INSTRUCTION: Attempt any **FOUR** questions

QUESTION ONE

a) Give a concise definition of statistics (2 marks)

b) Distinguish between Descriptive and Inferential Statistics. (3 marks)

c) What is measurement? Outline the types of measurement scale. (5 marks)

d) Outline the stages involved in Statistical Analysis. (5 marks)

QUESTION TWO

The following data represent the Continuous Assessment (C.A.) Score of some students in a Statistical Course.

16 19 24 13 17 29 20 18 22 26

28 15 27 20 25 14 21 23 19 22

23 21 19 18 21 24 17 25 26 16

27 15 28 29 14 13 22 21 23 19

21 22 23 18 21 20 24 26 21 20

Using the class intervals 10 – 13, 14 – 17 etc.

a) Prepare a frequency table. (3 marks)

b) Compute:

  i.   Quartile deviation. (4 marks)

  ii. D_3 and D_7 (4 marks)

  iii. P_{35} and P_{70} for the distribution. (4 marks)

QUESTION THREE

The table below shows the distribution of the groups of consultation fee (in naira) of some professionals.

Group	1- 3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27
Fee	1	9	20	45	60	45	20	9	1

a) Calculate:
    i.   The <u>Mean</u> consultation fee, using assumed mean method.   (5 marks)
    ii.   The mean deviation of the data.   (4 marks)
b) Determine the Coefficient of variation of the data.   (6 marks)

QUESTION FOUR

The number of overtime hours per week worked by employees at a factory are as follows: Using the given data

45 31 46 25 57 39 42 55 20 37

40 59 11 38 34 22 62 33 48 43

57 37 43 51 29 41 35 66 45 32

44 47 42 46 54 65 17 35 53 27

38 22 33 39 45 32 43 41 57 45

Calculate the followings using the formula method:
a) **The mean**   **(5 marks)**
b) **The median**   **(5 marks)**
c) **The mode**   **(5 marks)**

QUESTION FIVE

Using the data in Question 4 above, calculate:
a) The Variance and Standard Deviation of the distribution.   (4 marks)
b) The "**less than**" and "**more than**" cumulative frequencies.   (3 marks)
c) The relative and percentage frequency.   (4 marks)
d) Sketch the Frequency polygon and Ogive of the distribution.   (4 marks)

QUESTION SIX

a) Name and explain three methods of data presentation.   (9 marks)
b) Given the data: 2, 2, 3, 3, 4, 5. Calculate the :
    i.   Harmonic mean   (2 marks)
    ii.   Geometric mean   (2 marks)
    iii. Quadratic Mean   (2 marks)