

CHUKA



UNIVERSITY

SUPPLEMENTARY / SPECIAL EXAMINATIONS

FIRST YEAR EXAMINATION FOR THE AWARD OF BACHELOR

GEOG 146: INTRODUCTION TO QUANTITATIVE METHODS IN GEOGRAPHY

STREAMS: B.A & B.E.D

TIME: 2 HOURS

DAY/DATE : TUESDAY 17/11/2020

2.30 P.M - 4.30 P.M.

INSTRUCTIONS:

- Answer Question ONE and any other Two Questions

GEOG 146

1. The data below shows total seasonal rainfall in millimetres at a certain station for a 70 years period (1905-1975)

24.7	8.6	16.4
28.7	11.0	11.0
16.6	22.1	18.7
13.9	14.1	27.6
25.8	19.2	9.5
15.4	9.6	8.9
13.5	31.5	14.8
15.0	13.9	17.8
17.0	12.0	15.5
23.9	27.6	20.7
20.0	18.6	12.6
17.9	11.8	11.5
8.7	9.7	8.7
7.0	18.4	17.2
12.6	11.0	10.8
27.1	21.2	17.9
16.4	12.5	15.4
14.1	28.7	16.7
13.2	21.6	12.7
20.9	11.4	
9.0	23.2	
15.2	19.4	
20.4	19.0	
14.1	18.7	
25.4	17.8	

a) From the above data construct a grouped frequency distribution table (use approximately 10 classes) (10 marks)

b) draw:

i. a histogram (6 marks)

ii. a frequency and percentage polygon (6 marks)

iii. a cumulative percentage curve/Ogive (8 marks)

2. The table shows the number of cattle reared by pastoralists in Wajir District, Kenya

No. of Cattle (Classes)	No of Pastoralist (Frequency)
7-10	6
11-14	10
15-18	12
19-22	14
23-26	13
27-30	16
31-34	13
35-38	10
39-42	15
43-46	11

use the above table to:

a. Calculate the mean and the median (5 marks)

b. Identify the modal class, hence or otherwise calculate the actual mode (5 marks)

c. Calculate the interquartile range (5 marks)

d. Calculate the standard deviation (5 marks)

3. Given the values: 269, 270, 295, 272, 302, 343, 364, 292, 244, 256 and 266

a. Calculate the range and mean (4 marks)

- b. Calculate the standard deviation and hence the coefficient of variation (5 marks)
 - c. Calculate the momental skewness (4 marks)
 - d. Calculate the coefficient of kurtosis (4 marks)
 - e. Calculate the mean deviation (3 marks)
4. A group of 1000 students who sat for KACE geography P251/4 in 1984 had a mean mark of 50 and a standard deviation of 4. Assuming a normal distribution for these geography scores for this examination, find:
- a. The number of students who scored a mark between 46% and 54% (10 marks)
 - b. The number of students who scored a mark below 54% (5 marks)
 - c. If the pass mark was 40%, how many students failed? (5 marks)
5. A study by transport a geographer in the city estate revealed that 42.9% of the households possess one car. From a random sample of 6 households, determine the probability of 4 households possessing a car. (20 marks)
-