

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

CHUKA AND THARAKA CAMPUSES

EXAMINATION FOR THE AWARD OF DEGREE OF MASTER OF GEOGRAPHY

GEOG 834: QUANTITATIVE METHODS

STREAMS: MA GEOGRAPHY (SB)

TIME: 2 HOURS

DAY/DATE: TUESDAY 04/12/2018

11.30 A.M. – 1.30 P.M.

INSTRUCTIONS:

- Answer question **ONE** and any other **TWO** questions.
- Use diagrams and illustrations when necessary

1. (a) Distinguish between descriptive and inferential statistics. (4 marks)
- (b) Explain the procedure of testing Null hypothesis. (10 marks)
- (c) (i) Calculate the Mean, Median and Range for a set of grade point average of 1.1, 2.34, 2.9, 3.14, 3.29, 3.57 and 4.0 (8 marks)
- (ii) Calculate variance and standard deviation for the following:

X	Y
10	3
11	1
12	4
13	1
14	5
15	4
16	2
17	3

Comment on the distribution of (X) values based on the standard deviation calculated (5 marks)

- (iii) Represent the following set of values using stem and leaf display method:
20, 24, 29, 32, 35, 35, 38, 41, 43, 49, 50, 50, 50, 61, 64, 65 (3 marks)
2. (a) Price of petroleum per litre at petrol stations in Chuka is normally distributed with a mean of Kshs 118 and a standard deviation of 1 Sh. Calculate the probability that a randomly selected petrol station will be selling petrol between Kshs 116 and 118. (9 marks)
- (b) Workers in tea packaging factory work an average of 251 days in a year with a standard deviation of 20 days. How many days correspond to a Z-score of 2.3 (6 marks)
3. Examine any FIVE sources of data used in geographical research. (15 marks)
4. Use the following set of Date values to:
- (i) Calculate Pearson’s product moment correlation co-efficient. (6 marks)
- (ii) Draw a scatter plot (3 marks)
- (iii) Draw a line of best fit and estimate the value of X when Y is 6. (6 marks)
- | X | Y |
|----|---|
| 10 | 3 |
| 15 | 4 |
| 30 | 2 |
| 25 | 3 |
| 40 | 1 |
5. Write explanatory notes on the following:
- (a) Statistics (3 marks)
- (b) Probability (3 marks)
- (c) Normal distribution (3 marks)
- (d) Dispersion (3 marks)
- (e) Central tendency (3 marks)
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