KENYATTA UNIVERSITY

DIGITAL SCHOOL OF VIRTUAL AND OPEN LEARNING (DSVOL)

EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN RECORDS MANAGEMENT AND INFORMATION TECHNOLOGY

ISC 419: STATISTICS

1ST TRIMESTER 2022/2023 **TIME: 2 Hrs**

INSTRUCTIONS:

Answer question 1 and 2 in SECTION 1 and any other two questions in SECTION 2

SECTION 1 (COMPULSORY)

1. (a) Briefly explain each of the following concepts: (10 MARKS)
   - i. Regression
   - ii. Inferential statistics
   - iii. Unit of measurement
   - iv. Population
   - v. Sampling error
   - vi. Distribution
   - vii. Outlier
   - viii. Percentile
   - ix. Variable
   - x. Correlation coefficient

   (b) Draw a relative frequency table for the following set of values (10 marks)

   (A,A,A,Z,B,A,Z,R,R,X,X,W,X,W,W,V,V,V,V,R,V,V,V,V,Z,X,)

   (c) Plot a pie chart for the data set in 1 (b) above (5 marks)

2. The following distribution are on usage of an online information service by a sample of 12 staff in an institution.

   Number of hours spent online (1,2,,2.5,2,3,4,5,20,40,4,23,12,0.5)

No of documents accessed (50, 18, 40, 13, 14, 80, 180, 100, 92,50, 25, 96)

(a) For each distribution, compute the following (20 marks)

i. Mode

ii. Range

iii. Inter quartile range

iv. Mean

v. Standard deviation

(b) Justifying your case, explain whether the mean values of the two distribution are reliable (5 marks)

SECTION 2

Each question is 10 marks

Do ANY TWO questions only

3. Using appropriate examples, explain the circumstances under which each of the following scales can be used. (10 marks)

a. Nominal

b. Ordinal

c. Interval

d. Ratio

4. The cost of a book at different shops in Nairobi County is normally distributed with a mean of $2.00 and a standard deviation of $ 0.50. What is the probability that at a randomly shop in Nairobi, the cost of the book will be between $ 1.85 and $3 (10 marks)

5. Convert the following distribution into classes and compile a relative frequency table (10 marks)

X {1,1,1,3,3,3,8,6,20,14,14,4,6,8,9,9,15,14,20,21,22,24,26,22,24,18}