UNIVERSITY OF JAFFNA, SRI LANKA

FACULTY OF ALLIED HEALTH SCIENCES
FIRST YEAR SECOND SEMESTER EXAMINATION – APRIL 2020

AHSBS 1211 BASIC STATISTICS

Date: 28.09.2020

Time: 02 Hours

<u>ANSWER ALL TWO QUESTIONS</u>
Calculator may be used

1)

i). The following table shows the age distribution of live births in Albany County, New York State for 2000.

Mother's age	Number of Live Births
10-14	7
15-19	258
20-24	585
25-29	841
30-34	981
35-39	526
40-44	99
45-49*	4

May include live births to mothers over age 49.

For the above data, construct
a) cumulative frequency distribution.
b) relative frequency distribution.
c) cumulative relative frequency distribution.
d) less than ogive curve
e) histogram and draw the frequency polygon. Hence comment on the shape of the distribution

ii). A random sample of patients in a hospital was asked to state the number of months of stayed in the hospital. Classified results are given below.

Number of months of stayed	Number of patients
15-25	4
25-35	11
35-45	19
45-55	14
55-65	6
65-75	2

Find
  a) Mean
  b) Variance
  c) Mode
  d) Quartile deviation
  e) Median
  f) Coefficient of skewness and interpret.
  g) Mean Deviation
  h) Kurtosis and interpret the results.

2)

  i). A researcher examined glomerular filtration rate (GFR) in pediatric renal transplant recipients. GFR is an important parameter of renal function assessed in renal transplant recipients. The following are measurements from 19 subjects of GFR measured with diethylenetriamene penta-acid. (Note: - some subjects were measured more than once.)

| 18 | 21 | 21 | 23 | 27 | 27 | 30 | 32 | 32 | 32 | 36 | 37 | 41 | 42 |
| 42 | 43 | 43 | 48 | 48 | 51 | 55 | 58 | 60 | 62 | 67 | 68 | 88 | 63 |

OR
68

  a) Construct a stem- and leaf display.
  b) Compute mean, median, variance, standard deviation, and coefficient of variation.
  c) What percentage of the measurements is within the 1- standard deviation of the mean? Within 2 - standard deviations? 3-standard deviations?

  ii).
  a) Distinguish **Descriptive statistics** and **Inferential statistics**.
  b) Define the terms **population, sample, parameter** and **statistic** and write ONE example for each.
  c) For each of the following data types, write THREE examples and identify the respective measures of location.
      I.   Nominal
      II. Ordinal
      III. Numerical