

Paper :- SEC-II Computer Algebra Systems and Related Software

B.Sc. (H) Mathematics (SEM-IV) :- SOFTWARE → R

Q-1 Write the commands in R for the following:

- (i) Put the following values into a variable 'd':  
3, 5, 7, 3, 2, 6, 8, 5, 6, 9, 4, 5, 7, 3, 4
- (ii) Find mean of d
- (iii) Find the largest value in d.
- (iv) Find variance of d.

Q-2 Put the list of values 7, 5, 9, 2, 1, 0, 4, 2, 4, 8 into a variable 'a'.

- (a) Find the mean, median, and standard deviation of 'a'.
- (b) Sort the array 'a'.

Q-3 Put the following values into a file (using Excel), and read the file into a variable 'b'.

- (a) Generate a five number summary of 'b'.
- (b) Create a box plot of b.
- (c) Create a stem and leaf plot of b.

Q-4 For a  $3 \times 3$  matrix  $A = \begin{bmatrix} 1 & -3 & 2 \\ 7 & 1 & 4 \\ 8 & 3 & 5 \end{bmatrix}$

write the command to give column and row headings.