

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034



M.Sc. DEGREE EXAMINATION – DATA SCIENCE

FIRST SEMESTER – NOVEMBER 2019

PDS 1503 – R FOR DATA ANALYTICS

Date: 05-11-2019

Dept. No.

Max. : 100 Marks

Time: 01:00-04:00

PART-A

Answer all Questions: -

(10 x 2 = 20)

1. How shall we make use of the “help” facility in R to know about a R command?
2. Write a function to find the sum of four numbers with fractional parts.
3. How do Matrices differ from Data Frames?
4. What is the syntax for defining a Matrix in R?
5. How is a Table generated in R?
6. Why should each column of a Data Frame be a Vector?
7. How is the scan() function used to read values through Keyboard?
8. When do we use str_sub() string function?
9. Name any two functions available in ggplot2() library.
10. What is the use of coord_flip() function?

PART-B

Answer all Questions:-

(5 x 8 = 40)

11. (a) What are vectorised operations in R? Give an example.
(OR)
(b) Briefly explain: (i) “for” loop in R (ii) “while” loop in R.
12. (a) Define a 4 X 3 array and explain how we can access its rows and columns.
(OR)
(b) Define a List that contains different types of values. Briefly explain how the \$ operator can be used to access the values of this List.
13. (a) How can we obtain the structure of a Data Frame? Explain the method of viewing the last few records of a Data Frame?
(OR)
(b) Briefly explain any two functions used with the Factor Variables.
14. (a) Briefly explain how the classes and objects are defined in R.
(OR)
(b) Write a S3 class that contains an employee’s name, salary and his union participation. Also write the derived class that contains hoursWorked as an additional variable.
15. (a) Explain the methods of making position adjustments in R Graphics?
(OR)
(b) Briefly explain the geometric objects used in R Graphics.

PART-C

Answer any TWO Questions:-

(2 x 20 = 40)

16. (a) Briefly explain how we can add, modify or remove an element in the case of a List.
(b) Explain the commands that are used to retrieve, add and remove the elements of a Vector.

17. (a) Explain how we can add/remove a row/column in a Data Frame.
(b) How can we export an EXCEL file from R? How can we save R objects in .Rdata files?

18. (a) Briefly explain: (i) Data Hiding (ii) Polymorphism.
(b) Explain how Facets are used to draw subplots in R Graphics.

