Code No: 138GT

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech IV Year II Semester Examinations, July - 2021
R PROGRAMMING
(Common to ME, ECE)

Time: 3 Hours

Max. Marks: 75

Answer any Five Questions
All Questions Carry Equal Marks
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1.a) What is an attribute? Do all R objects contain attributes? Justify your answer.
  b) Illustrate logical operators of R. [8+7]

2.a) What care has to be taken to avoid infinite loops? Illustrate with the an example code in R.
  b) Demonstrate lapply and sapply functions. [8+7]

3.a) Write a function to determine the words in a text file and compile a list of the locations of each word's occurrences in the text.
  b) Two functions are handy for applying functions to lists. Demonstrate these functions. [8+7]

4. How is a table different from an array/ a matrix? What array like operations can be used on tables? Write R code to extract a subtable. [15]

5.a) Explain a procedure for polynomial regression using relevant R code.
  b) How to define an implementation of a generic function on an S4 class? [8+7]

6.a) How does R handle integers and factors data? Explain with suitable examples.
  b) How to read and write data using R? [8+7]

7.a) How to convert a vector in to matrix? Provide illustrative example.
  b) What is the difference between integer indexing and vector indexing? [8+7]

8. With the help of employee database illustrate the following operations on data frames:
  a) Creating dataframe   b) cbind( ) application   c) merging two data frames
[6+4+5]

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