



**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA**  
**KAKINADA – 533 003, Andhra Pradesh, India**

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

II Year – II Semester		L	T	P	C
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R PROGRAMMING LAB					

**COURSE OBJECTIVES:**

- To learn statistical programming, computation, graphics, and modeling,
- To learn Writing functions and use R in an efficient way,
- To learn about basic types of statistical models

**COURSE OUTCOMES:**

At the end of this course, students will be able to:

- Access online resources for R and import new function packages into the R workspace
  - Import, review, manipulate and summarize data-sets in R
  - Explore data-sets to create testable hypotheses and identify appropriate statistical tests
  - Perform appropriate statistical tests using R
  - Create and edit visualizations with R
- 1) Write a R program to take input from the user (name and age) and display the values. Also print the version of R installation.
  - 2) Write a R program to get the details of the objects in memory.
  - 3) Write a R program to create a sequence of numbers from 20 to 50 and find the mean of numbers from 20 to 60 and sum of numbers from 51 to 91.
  - 4) Write a R program to create a simple bar plot of five subjects marks.
  - 5) Write a R program to get the unique elements of a given string and unique numbers of vector.
  - 6) Write a R program to create three vectors a,b,c with 3 integers. Combine the three vectors to become a 3×3 matrix where each column represents a vector. Print the content of the matrix.
  - 7) Write a R program to create a 5 x 4 matrix , 3 x 3 matrix with labels and fill the matrix by rows and 2 × 2 matrix with labels and fill the matrix by columns.
  - 8) Write a R program to combine three arrays so that the first row of the first array is followed by the first row of the second array and then first row of the third array.
  - 9) Write a R program to create a two-dimensional 5x3 array of sequence of even integers greater than 50.
  - 10) Write a R program to create an array using four given columns, three given rows, and two given tables and display the content of the array.
  - 11) Write a R program to create an empty data frame.
  - 12) Write a R program to create a data frame from four given vectors.
  - 13) Write a R program to create a data frame using two given vectors and display the duplicated elements and unique rows of the said data frame.
  - 14) Write a R program to save the information of a data frame in a file and display the information of the file.



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- 15) Write a R program to create a matrix from a list of given vectors.
- 16) Write a R program to concatenate two given matrices of same column but different rows.
- 17) Write a R program to find row and column index of maximum and minimum value in a given matrix.
- 18) Write a R program to append value to a given empty vector.
- 19) Write a R program to multiply two vectors of integers type and length 3.
- 20) Write a R program to find Sum, Mean and Product of a Vector, ignore element like NA or NaN.
- 21) Write a R program to list containing a vector, a matrix and a list and give names to the elements in the list.
- 22) Write a R program to create a list containing a vector, a matrix and a list and give names to the elements in the list. Access the first and second element of the list.
- 23) Write a R program to create a list containing a vector, a matrix and a list and remove the second element.
- 24) Write a R program to select second element of a given nested list.
- 25) Write a R program to merge two given lists into one list.
- 26) Write a R program to create a list named s containing sequence of 15 capital letters, starting from 'E'.
- 27) Write a R program to assign new names "a", "b" and "c" to the elements of a given list.
- 28) Write a R program to find the levels of factor of a given vector.
- 29) Write a R program to create an ordered factor from data consisting of the names of months.
- 30) Write a R program to concatenate two given factor in a single factor.