

**College of Engineering Pune**  
**Probability and Statistics for Engineers**  
**F.Y.B. Tech. Even Semester (Computer Branch) 2023-24**  
**Assignment on R software and R Studio**

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1. Install packages namely 'plyr', 'MASS', 'ggplot2', 'dplyr' etc.
2. Find answers to  $\log_2(2^5)$  and  $\log(\exp(1)*\exp(1))$
3. Using built-in dataset iris, implement the functions like: Summary, class, type of, head, tail, str, Merge.
4. Write a R program to create a two-dimensional  $5 \times 3$  array of sequence of even integers greater than 50.
5. Write a R program to create a vector which contains 10 integer values between -50 and +50
6. Suppose the age is a vector containing ages of 10 persons as  
22,27,31,41,30,25,19,20,23,35
  - a). Access the age of fourth person
  - b). Create a vector of 'age 30' with a person  $>30$
  - c). Access the age of last 3 person
  - d). Find the number of elements in vector age
  - e). Access the age of person except 5th and 7th
  - f). Create a vector 'age 2' with a persons between 20 and 25.
7. Create a factor from the following vector data: (1,2,3,2,3,1,4,2,3,NA,5,3,2) and also find levels
8. Write a R program to create a list containing strings, numbers, vectors and a logical values.
9. Using built-in dataset iris, find out the categorical variables.
10. Create a numeric vector  $c(1:5)$  and a 5 by 3 matrix with elements from 1 to 15.

11. Create a dataframe of the following dataset

height:140,137,150,147,139,140,150,132,138,140

Weight:55,57,59,62,61,60,60,58,59,57

- a).Create a vector h1 with height>145cms
- b).Create a vector h2 with weight>55kgs
- c).Create a vector h3 with height>140 and weight >60

————THE END————