F. Y. B. Tech CSBS

Statistical method R Programming Test (Batch A1)

1. Suppose that x=2 and y=5 . Use R to compute the following

   i. $\frac{yx^3}{x-y}$

   ii. $\frac{3}{2}\,xy$

   iii. $\left(1-\frac{1}{x^5}\right)^{-1}$

OR

2. Suppose $x = \ -7-5i$, $y = 4+3i$, Use R to evaluate $xy,\ x+y, x-y,\ x/y$, argument of x and y , modulus of x and y.
3. (i) Create the vector x having regular spacing of 0.2 which starts at 2 and ends at 14

   (ii) Write a code to find the volume of the sphere and cuboid.

OR

4. Create a matrix A= $[3\ 2\ -1\ 6\ 8\ -5\ 7\ 9\ 10\ ]$

   (i) Find Transpose, determinant, trace , inverse of matrix, A(2,3)

   (ii) Display only third row of A

5. Create following data

Employee id	Employee name	Salary	Department	Date of joining
1	Rick	623.30	IT	1/1/2012
2	Dan	515.20	Operations	23/9/2013
3	Michelle	789.23	HR	5/1/2020
4	Ryan	542.90	Finance	23/6/2009
5	Gary	411.21	IT	21/3/2016
6	Rashmi	457.21	Operations	5/1/2020
7	Tushar	800.90	Finance	3/6//2019
8	Ajay	900.12	IT	1/1/2012

(i) Which employee join after 2012

(ii) Plot the Histogram emp. Name and salary.

(iii) Which employees join on the same date?

(iv) What is the average salary?

OR

6.

Create the following data frame, afterwards invert Sex for all individuals.

	Age	Height	Weight	Sex
Alex	25	177	57	F
Lilly	31	163	69	F
Mark	23	190	83	M
Oliver	52	179	75	M
Martha	76	163	70	F
Lucas	49	183	83	M
Caroline	26	164	53	F

(i) Plot a graph of age vs height

(ii) Find mean of age, height, weight

(iii) Find maximum height , weight.

(iv) Who is younger in all?