

**BCA [Honours]
[CBCS]**

B.Sc. Fifth Semester End Examination-2023

(Regular & Supplementary Paper)

(Practical)

PAPER- C12P

[Data Science Lab]

Full Marks: 20

Time: 02 Hrs

The figures in the right hand margin indicate marks

*Candidates are required to give their answers in their own words as
far as practicable*

Illustrate the answers wherever necessary

Answer any one question:

1x15= 15

1. Write a R program to read a vector and compute it's mean and median
2. Write a R program to read two multiplication-compatible matrices and compute its multiplication.
3. Write a R program to read a matrix and compute it's transpose and also the determinant.
4. Write a R program to plot $\sin(x)$. and $\cos(x)$ functions for $2\pi \leq x \leq 2\pi$ with appropriate legend.
5. Write a R program to display the following triangle.

(2)

```
*
*   *
*   *   *
*   *   *   *
*   *   *   *   *
```

6. Write a R program to read the current time in your system and display the Time. and Date separately.
7. Create a CSV file with the following contents:

Team	Points
India	12
South Africa	10
New Zealand	10
Australia	8
Pakistan	6
Afganistan	6

Write a R program to read the above CSV file and display the top four rows.

8. Write a .csv file with the following contents.

Player	2023	2022
Lionel Messi	32,	42
Kylian Mbappe	30,	36
Christianu Ronaldo	26,	30

(3)

9. Create two datasets as shown below and write a R program to join the two datasets.

Name	C11T	C12T
P. V. Sindhu	30,	35
Saina Nehwal	28,	32
Sania Mirza	26,	33
Jhulan Goswami	30	35
Sakshi Malik	31,	34
Mithali Raj	38	34

Name	DSE1T	DSE2T
P. V. Sindhu	36,	38
Saina Nehwal	38,	33
Sania Mirza	36,	31
Jhulan Goswami	30	32
Sakshi Malik	39,	30
Mithali Raj	29	36

10. Create a dataset as show and write a R program to create a new field Total that adds marks of DSE1T in the following dataset.

Name	C8T	C9T
P. V. Sindhu	36,	38
Saina Nehwal	36,	31
Jhulan Goswami	30	32
Sakshi Malik	39,	30

(4)

11. Ten students were enrolled in a course. Their ages were: 20 21
20 22 21 22 20 22 21 22.

Find the mean median and mode age of the students.

12. Read a table in CSV format. Then using the dplyr package to
select some rows and columns of a dataset?

13. Use dplyr package to join two tables using R programming.

14. Write a R program to find the prime factors of a composite
integer.

15. Write a R program to display system date, time and time zone in
specific format given by the examiner.

Viva – 03

PNB - 02
