D 141106 **(Pages : 2)** **Name.....**

Reg. No.....

FOURTH SEMESTER B.VOC. DEGREE EXAMINATION, APRIL 2026

Data Science and Analytics

SDC 4DS 17—R PROGRAMMING

(2021 Syllabus)

Time : Two Hours and a Half Maximum : 80 Marks

Section A (Short Answer Type Questions)

All questions can be answered, each correct answer carries a maximum of 2 *marks. Ceiling* 25 *marks.*

1. Explain R as a statistical software.
2. What is readline() in R ?
3. Define data frame.
4. Write syntax of while loop.
5. What is break statement ?
6. Define pie chart.
7. What is Skewness ?
8. Define Kurtosis.
9. What is Range ?
10. What is F-test ?
11. Define Chi-square goodness of fit.
12. What is two-sample t-test ?
13. Define MANOVA.
14. What is discriminant analysis ?
15. Define canonical correlation.

Turn over

Section B (Paragraph Type Questions)

All questions can be answered, each correct answer carries a maximum of 5 *marks.*
Ceiling 35 *marks.*

16. Explain saving and retrieving work in R.
17. Discuss graphics in R with examples.
18. Explain measures of central tendency.
19. Describe correlation and its types.
20. Explain random number generation in R.
21. Discuss non-parametric tests (Wilcoxon and KS test).
22. Explain two-way ANOVA.
23. Describe Kruskal-Wallis and Friedman test.

Section C (Essay Type Questions)

Answer any **two** *questions, correct answer carries* 10 *marks.*

24. Explain data accessing and indexing in R with examples.
25. Discuss probability distributions and sampling techniques.
26. Explain cluster analysis and its types.
27. Describe Canonical Correlation and Discriminant Analysis.

(2 × 10 = 20 marks)