

SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN
(AUTONOMOUS)

(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)
Chromepet, Chennai - 600 044.

B.Sc.CGS - END SEMESTER EXAMINATIONS - APRIL 2025

SEMESTER - VI

24UCGET6A02 - Machine Learning

Total Duration : 1 Hrs.30 Mins.

Total Marks : 40

Section B

Answer any **TEN** questions ($10 \times 2 = 20$ Marks)

1. What are the key elements of Machine Learning?
2. What is Unsupervised Learning?
3. Define Transpose of a Matrix.
4. Name some tools for data plotting.
5. Define Gradient Descent.
6. What is Logistic Regression?
7. Define Overfitting.
8. What is Bias-Variance Tradeoff?
9. What is L2 Regularization?
10. Define Stochastic Gradient Descent (SGD).
11. What is Back propagation?
12. What is Optimization in ML?

Section C

Answer any **FOUR** questions ($4 \times 5 = 20$ Marks)

13. Explain Supervised, Unsupervised, and Reinforcement Learning with real-life examples.
14. Explain the Bias-Variance Tradeoff in Machine Learning.
15. How do you handle matrix operations like addition, multiplication, transpose, and inverse using R programming?
16. What is Logistic Regression? Explain its role in classification problems.
17. What is Over fitting? How does Regularization help in overcoming Over fitting?
18. Explain Multiclass Representation in Neural Networks.
