

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.AI - END SEMESTER EXAMINATIONS - APRIL 2025

SEMESTER - VI

**22UAICT6010 - Machine Learning**

Total Duration : 2 Hrs.30 Mins.

Total Marks : 60

### Section B

Answer any **SIX** questions ( $6 \times 5 = 30$  Marks)

1. State the design of a learning system and its features.
2. Show the technique of reducing Overfitting and Multicollinearity by Ridge Regression.
3. Apply the Decision tree Regression with simple code using python.
4. Explain K-Means Clustering with a suitable example.
5. Describe the concepts related to Associative Rule Learning.
6. Prepare the detailed note on application of machine learning techniques.
7. Illustrate simple linear expression with a neat sketch.
8. Explain "Evaluation in Classification models".

### Section C

Answer any **THREE** questions ( $3 \times 10 = 30$  Marks)

9. Classify the different types of machine learning with suitable example.
10. Apply Bagging technique to anyone dataset and predict the result.
11. Examine the working of SVM classifier and its mathematical computation.
12. Prepare how PCA works for dimensionality reduction.
13. Assess Apriori algorithm to the following and find the strong association rule.

Transaction ID	Items Bought
1	{Bread, Butter, Milk}
2	{Bread, Butter}
3	{Beer, Cookies, Diapers}
4	{Milk, Diapers, Bread, Butter}
5	{Beer, Diapers}

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