

Seat No. **OCT-NOV 2025 WINTER EXAMINATION****1154 B.Tech. CBCS****Sub. Name: Machine Learning****Sub. Code: 81549/81826****Day and Date: Tuesday ,16-12-2025****Total Marks: 70****Time: 10:30 AM To 01:00 PM**

- Instructions:**
1. All questions are compulsory
 2. Assume suitable data wherever necessary and mention it boldly
 3. Draw neat labelled diagrams wherever necessary
 4. Figures to the right indicate full marks
 5. Use of calculator and statistical table is allowed

- Q1) Solve any 2 of the following (7 Marks Each) [14]**
- a. What is machine learning? Explain types of machine learning.
 - b. Explain polynomial regression.
 - c. Explain Hidden Markov Model with example.
- Q2) Solve any 2 of the following (7 Marks Each) [14]**
- a. Differentiate between linear regression and logistic regression.
 - b. Draw and explain machine learning architecture.
 - c. Explain multivariate linear regression.
- Q3) Solve any 2 of the following (7 Marks Each) [14]**
- a. Define Support Vector Machine with neat diagram. Define the kernel trick in SVM.
 - b. Explain Apriori algorithm.
 - c. With neat diagram explain neural network in detail.
- Q4) Solve any 2 of the following (7 Marks Each) [14]**
- a. Explain clustering with its different types.
 - b. Describe the concept of information gain and entropy in decision tree.
 - c. Explain in detail Agglomerative Hierarchical clustering.
- Q5) Solve any 2 of the following (7 Marks Each) [14]**
- a. Explain Association Rule mining
 - b. Explain Content based recommendation engines.
 - c. Write and explain decision tree algorithm.

End Of Question Paper**Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -**

This Question Paper may be distributed for following Subjects as common code.

सदरची प्रश्नपत्रिका खालील विषयांकरिता वितरित करता येईल.

1] (101) Bachelor of Engineering (81826) Machine Learning Part 3 SEM 6

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