

B. TECH. (MINOR) CBCS-2023  
B. TECH. (MINOR) Semester-III (Sem-V Level) Artificial Intelligence & Data Science : WINTER:  
2025

SUBJECT: ADVANCED MACHINE LEARNING

Day : Tuesday  
Date : 23/12/2025

W-29446-2025

Time : 02:30 PM-05:30 PM  
Max. Marks : 60

NB :

1. Assume data, if necessary.
2. Draw neat and labelled diagram WHEREVER necessary.
3. Figures to the right indicate FULL marks.
4. All questions are COMPULSORY.

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|------|---|------|
| Q. 1 | Discuss the specific areas where Machine Learning (ML) is used.                                     | (10) |
|      | OR  |      |
| Q. 1 | State and explain the steps in Exploratory Data Analysis (EDA).                                     | (10) |
| Q. 2 | Illustrate the Classification and Regression problems.  | (10) |
|      | OR  |      |
| Q. 2 | Evaluate the performance of Decision Trees.   | (10) |
| Q. 3 | Demonstrate the Clustering technique with proper diagram.   | (10) |
|      | OR  |      |
| Q. 3 | Interpret the Working Process of Unsupervised Learning.   | (10) |
| Q. 4 | Examine the different Key Elements of Reinforcement Learning.                                       | (10) |
|      | OR  |      |
| Q. 4 | Compare and contrast between Supervised Learning, Unsupervised Learning and Reinforcement Learning. | (10) |
| Q. 5 | Analyze the concept of Centrality along with its Classification.                                    | (10) |
|      | OR  |      |
| Q. 5 | Inspect the Role of Community Detection in Network Analysis.  | (10) |
| Q. 6 | Elaborate the Steps to conduct Text Analysis.   | (10) |
|      | OR  |      |
| Q. 6 | Describe the process of Categorizing Documents by Topics.   | (10) |

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