

Enrolment No. /Seat No.: \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**MCA INTEGRATED – SEMESTER VII- EXAMINATION –SUMMER-2025**

**Subject Code: 2678601**  
**Subject Name: Machine Learning**  
**Time:02:30 PM TO 05:00 PM**  
**Instructions:**

**Date: 30/05/2025**

**Total Marks: 70**

1. Attempt all questions.
2. Make Suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Use of simple calculators and non-programmable scientific calculators are permitted.

- Q.1** (a) Write your thoughts on human learning vs. Machine learning. **07**  
(b) Differentiate supervised learning, unsupervised learning and reinforcement learning. **07**
- Q.2** (a) Explain K-fold cross validation method in detail. **07**  
(b) How to find Nearest Neighbors in KNN algorithm. **07**
- OR**
- (b) Explain naive Bayes algorithm. **07**
- Q.3** (a) Explain Random forest algorithm. **07**  
(b) Explain features engineering. **07**
- OR**
- Q.3** (a) Explain Data preprocessing in machine learning. **07**  
(b) Explain Logistic Regression in brief. **07**
- Q.4** (a) How is Session Management Performed in Laravel? **07**  
(b) Write short note on K-Means clustering algorithm. **07**
- OR**
- Q.4** (a) Discuss Clustering concept and its Features. **07**  
(b) Write Classification learning steps with appropriate example. **07**
- Q.5** (a) Write the SVM model in detail. **07**  
(b) What is Deep learning? Compare Deep Learning with machine learning **07**
- OR**
- Q.5** (a) List the types of Activation functions. Explain any three. **07**  
(b) Write a detail note on learning process in ANN. **07**

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