GUJARAT TECHNOLOGICAL UNIVERSITY
MCA INTEGRATED - SEMESTER–VII • EXAMINATION – WINTER 2020

Subject Code:4470601   **Date:06-01-2021**
Subject Name: Machine Learning
Time: 10:30 AM to 12:30 PM   **Total Marks: 56**

Instructions:
1. **Attempt any FOUR questions out of EIGHT questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	What is Machine Learning? List advantages and limitations of the Machine Learning.	**07**
	(b)	Explain the following terms :	**07**

i)FOCL   v) Inductive Bias
ii)ANN   vi) Concept learning
iii) Hypothesis   vii) Testing data set
iv) Training data set

Q.2	**(a)**	What is Perceptron? Explain Gradient descent in details.	**07**
	(b)	How information gain and entropy used? Explain with short example	**07**
Q.3	**(a)**	Explain Bayes theorem in detail.	**07**
	(b)	What is Neural Network Representation? Explain with example.	**07**
Q.4	**(a)**	What is decision tree? Explain various issues in the Decision Tree Learning	**07**
	(b)	Discuss Backpropagation algorithm in detail	**07**
Q.5	**(a)**	Discuss K-nearest Neighbor algorithm in detail.	**07**
	(b)	What is Brute-Force Bayes concept learning? Explain with example.	**07**
Q.6	**(a)**	How sequential covering algorithm works? Explain with suitable example.	**07**
	(b)	What is Case –Based Reasoning (CBR)? How it helps in learning? Explain with suitable example	**07**
Q.7	**(a)**	What is Eager Learning method? Explain any one Eager Learning method.	**07**
	(b)	Compare supervised, unsupervised and reinforcement algorithm with suitable example.	**07**
Q.8	**(a)**	What is First-Order Horn Clauses? How it helps in learning? Explain with example.	**07**
	(b)	What is VC dimension? How it is used?	**07**

****