GUJARAT TECHNOLOGICAL UNIVERSITY
ME – SEMESTER-II(NEW)-EXAMINATION – WINTER-2020

Subject Code:3720223   **Date: 02/Feb/2021**
Subject Name: Advanced Machine Learning
Time: 02:00 PM To 04:00 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)**	Explain in detail issues in Machine Learning	**07**
	(b)	What do you mean by machine Learning? Explain how supervised learning is different from unsupervised.	**07**
Q.2	**(a)**	Explain in details independent component Analysis.	**07**
	(b)	Explain with issues decision tree induction.	**07**
Q.3	**(a)**	Explain in detail Bayes theorem.	**07**
	(b)	Explain K-Means Algorithm for cluster Analysis.	**07**
Q.4	**(a)**	Discuss Feature Selection Vs. Feature Extraction.	**07**
	(b)	Discuss Expectation –Maximization (EM) algorithm	**07**
Q.5	**(a)**	List out different filter method. Discuss any two in detail.	**07**
	(b)	Discuss Random forest with respect to machine learning.	**07**
Q.6	**(a)**	Differentiate Bagging Vs. Boosting.	**07**
	(b)	Write a short note on Hidden Markov Model.	**07**
Q.7	**(a)**	Define CCA, LDA, ICA, NMF.	**07**
	(b)	Explain in details Recommender system.	**07**
Q.8	**(a)**	Explain in detail any two methods of reducing dimensionality.	**07**
	(b)	Explain classification using Bayesian Belief Network with example.	**07**

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