Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA– SEMESTER –IV EXAMINATION –SUMMER-2019

Subject Code:4649307 **Date: 21-05-2019**

Subject Name: Data Mining and Data Visualization

Time:10.30 am to 1.00 pm **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	i)	What is data mining? What kind of patterns can be mind?	**04**
		ii)	Describe Data reduction and Data transformation.	**03**
	(b)	Answer the following		
		i)	What is Apriori algorithm?	**03**
		ii)	Explain frequent item sets and closed item sets.	**02**
		iii)	Explain market basket analysis.	**02**
Q.2	**(a)**	i) Explain pattern evolution methods with example.		**04**
		ii) Explain Tree pruning? Explain scalability and decision tree induction.		**03**
	(b)	Describe Bayes' theorem and also explain about native Bayesian theorem classification.		**07**
		OR		
	(b)	Discuss model selection using statistical tests of significance. Differentiate cost-benefit and ROC curves.		**07**
Q.3	**(a)**	i) List out techniques to improve classification accuracy. Explain boosting and adaboost.		**04**
		ii).Explain distance measures in algorithmic methods and partitioning methods.		**03**
	(b)	Explain BIRCH multiphase hierarchical clustering tree.		**07**
		OR		
Q.3	**(a)**	i) Write down an overview for rule based classification.		**04**
		ii)List out requirements for cluster analysis		**03**
	(b)	What are Outliers? Describe types of outliers also explain challenges of outliers detection.		**07**
Q.4	**(a)**	i) What is probabilistic hierarchical clustering?		**04**
		ii) Discuss rise of HTML5.		**03**
	(b)	Describe charting primitives.		**07**
		OR		
Q.4	**(a)**	i) Explain density based methods.		**04**
		ii) Explain Applications of Data visualization.		**03**
	(b)	Explain advanced visualization.		**07**
Q.5	**(a)**	i) Discuss SVG in detail.		**04**
		ii) Explain basic pie chart.		**03**
	(b)	What is canvas chart? How to adding animations in canvas chart?		**07**
		OR		
Q.5	**(a)**	i). What is Acquiring data and visualize data?		**04**
		ii). Explain linear interpolation.		**03**
	(b)	What is Google chart? Discuss working with chart animations.		**07**

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