GUJARAT TECHNOLOGICAL UNIVERSITY
M. E. - SEMESTER – I • EXAMINATION – WINTER • 2014

Subject code: 2712309   **Date: 12-01-2015**
Subject Name: Data Mining
Time: 02:30 pm - 05:00 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)**	Explain basic components of data warehousing.	07
	(b)	What are the functionalities of data mining? Explain in brief.	07
Q.2	**(a)**	What is the difference between discrimination and classification? Between classification and prediction?	07
	(b)	1. Discuss the issues to consider during data integration.	03
		2. Discuss the techniques for attribute subset selection.	04

OR

	(b)	Using the given data for age answer the following.	07

Data:13, 15, 16, 16, 19, 20, 20, 21, 22, 25, 25, 25, 25,30 ,33, 33, 35, 35, 35, 35, 36, 40, 45, 46, 52, 70
   a. Using bin depth 3, smooth the data by bin mean
   b. How can you determine outliers in the data?

Q.3	**(a)**	What is market basket analysis? What are the different applications of it?	07
	(b)	Apply apriory algorithm on the given data. Min support = 60% Min confidence = 80%	07

TID	Items
100	{M,O,N,K,E,Y}
200	{D, O,N,K,E,Y}
300	{M,A,K,E}
400	{M,U,C,K,Y}
500	{C,O,O,K,I,E}

OR

Q.3	**(a)**	Explain different criteria for frequent pattern mining classification.	07
	(b)	Discuss the techniques to improve efficiency apriory algorithm.	07
Q.4	**(a)**	Explain rule based classification.	07
	(b)	Outline the major steps of classification with decision tree induction.	07

OR

Q.4	**(a)**	Explain Linear Regression with the help of suitable example.	07
	(b)	Explain how accuracy of classifier can be measured?	07
Q.5	**(a)**	What is web usage mining? Explain activities of web usage mining.	07
	(b)	Write a short note on incremental learning.	07

OR

Q.5	**(a)**	Explain how data mining is applicable for Fraud Detection.	07
	(b)	Write a short note on mining on text.	07

****