

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 naive 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**
