

Time: 3 Hours

Total Marks: 80

- N.B.:** 1) Question No.1 is compulsory.
 2) Attempt any THREE of the remaining questions.
 3) Figures to the right indicate full marks.

- Q.1** A Differentiate OLAP and Data mining. **05**
 B Why data preprocessing is important in data mining? **05**
 C Define Classification algorithm with example **05**
 D Write a note on Web usage Mining **05**
- Q.2** A Explain the concept of data reduction. Discuss the need for data reduction in data mining and describe the different data reduction techniques in detail. **10**
 B Define OLAP. Discuss ROLAP models with a neat diagram. **10**
- Q.3** A Discuss Naïve Bayesian classification with suitable example. **10**
 B Explain the architecture of a Data Warehouse with a neat diagram. Describe the role of each component. **10**
- Q.4** A Explain the partitioning clustering methods with example. **10**
 B Discuss Distributed DBMS architecture in detail. **10**
- Q.5** A Explain the CART (Classification and Regression Tree) algorithm. **10**
 B Explain Market Basket Analysis? Find out frequent itemsets and strong association rule from the given transaction using Apriori Algorithm with Min_Support of 40% and Confidence of 70%. **10**

| TID | Items |
|-----|---------------------------|
| T1 | Bread, Butter, Milk |
| T2 | Tea, Cake |
| T3 | Bread, Butter, Milk, Cake |
| T4 | Bread, Butter |
| T5 | Butter, Milk |
| T6 | Bread, Butter, Milk |
| T7 | Tea, Cake |
| T8 | Bread, Butter, Milk |
| T9 | Juice, Cake |
| T10 | Bread, Milk |

- Q.6** A Explain text mining and discuss in brief the Information retrieval method. **10**
 B Define Abstract data type. Discuss the Operations on Structured Data. **10**
