



- Notes :
1. All questions carry marks as indicated
 2. Due credit will be given to neatness and adequate dimensions.
 3. Assume suitable data wherever necessary.
 4. Illustrate your answers wherever necessary with the help of neat sketches.

1. a) Describe ETL process of data warehouse. **8**
b) What is data warehouse ? Explain its four key features. **8**

OR
2. a) Describe OLAP and OLTP system of data warehouse. **8**
b) Explain data mart. Enterprise warehouse and virtual warehouse. **8**
3. a) What is data mining ? Explain applications of data mining. **8**
b) Describe KDD process. **8**

OR
4. a) Discuss major issues in data mining. **8**
b) Describe data mining functionalities. **8**
5. a) Explain types of attributes used for data measurement. **8**
b) Explain the concept hierarchy generation. **8**

OR
6. a) Explain similarity & dissimilarity of data. **8**
b) Explain mean, mode and median measure of data. **8**
7. a) Describe how rules can be generated from a decision tree. **8**
b) Explain tree pruning with example. **8**

OR
8. a) Explain attribute selection using decision tree induction algorithm. **8**
b) What is association rule mining? Explain support and confidence with example. **8**
9. a) Give application of cluster. **8**
b) What are different requirement of cluster analysis. **8**

OR
10. a) Explain outlier analysis with example. **8**
b) Describe any one method of clustering. **8**
