B.E. Eighth Semester (Computer Technology) (C.B.S.)
Data Warehousing & Mining

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Notes : 1. All questions carry marks as indicated.
2. Solve Question 1 OR Questions No. 2.
3. Solve Question 3 OR Questions No. 4.
4. Solve Question 5 OR Questions No. 6.
5. Solve Question 7 OR Questions No. 8.
6. Solve Question 9 OR Questions No. 10.
7. Solve Question 11 OR Questions No. 12.
8. Due credit will be given to neatness and adequate dimensions.
9. Assume suitable data whenever necessary.
10. Illustrate your answers whenever necessary with the help of neat sketches.

1. a) What is data warehouse? Explain architecture of Data warehouse. **7**

   b) Explain architecture of ROLAP and MOLAP. **6**

OR

2. a) Write short note on different OLAP tools. **4**

   b) What is the need of separate data warehouse? **4**

   c) Explain in detail the components of Data warehouse system. **5**

3. a) Explain Data preprocessing in detail. **7**

   b) Explain the concept of Hierarchies in detail using example. **7**

OR

4. a) Write note on following application application areas of DM : **8**
   i) DM for Intrusion Detection.
   ii) DM for Retail Industry.

   b) Explain knowledge Discovery in Database (KDD) process. **6**

5. a) Discuss typical requirements of clustering in data mining. **6**

   b) Differentiate between hierarchical and non – hierarchical clustering. **8**

OR

6. a) Enlist various types of data in cluster analysis. **4**

   b) Write a detailed note on split algorithm based on gini index. **6**

	c)	Explain tree induction algorithm for building decision tree.	4
7.	a)	What is Frequent pattern mining and Association Rules? What is the use of both? Explain.	6
	b)	Explain the technique for improving efficiency of FP growth algorithm.	7

OR

8.	Explain Market Basket Analysis for mining frequent pattern set and association rules with suitable example.	13

9.	a)	Discuss the challenges that occurred during knowledge discovery on the web.	9
	b)	Explain a query reporting tool.	4

OR

10.	Write short note on **any three.**	13

    i)   Web Content Mining.

    ii)   Web Usage Mining.

    iii) Web Structure Mining.

    iv) Visual Web Data Mining.

11.	a)	Explain Big data problem with suitable example.	6
	b)	What are the different trends and applications of Big data Analytics.	7

OR

12.	Write short notes on :	

    i)   Technologies for Big Data Management.   **4**

    ii)   Big Data technology and tools.   **4**

    iii) Map-Reduce paradigm and the Hadoop.   **5**

    iv) Challenges of Big Data.   **4**

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