

**ANURAG Engineering College**

(An Autonomous Institution)

III B.Tech II Semester Supplementary Examinations, Dec–2023/Jan-2024

**DATA WAREHOUSING AND DATA MINING  
(COMPUTER SCIENCE AND ENGINEERING)****Time: 3 Hours****Max.Marks:75****Section – A (Short Answer type questions)****(25 Marks)****Answer All Questions**

	<b>Course Outcome</b>	<b>B.T Level</b>	<b>Marks</b>
1. Define data warehouse.	CO1	L1	2M
2. List various multidimensional data models.	CO1	L1	3M
3. Define data mining.	CO2	L1	2M
4. Compare data mining and data warehouse.	CO2	L2	3M
5. Define association rule?	CO3	L1	2M
6. What is the principle of APRIORI algorithm?	CO3	L2	3M
7. Illustrate the meaning of cluster analysis?	CO4	L2	2M
8. Define Outlier Detection?	CO4	L1	3M
9. Define graph mining.	CO5	L1	2M
10. What is the technique used in text mining?	CO5	L2	3M

**Section B (Essay Questions)****Answer all questions, each question carries equal marks.****(5 x 10M = 50M)**

11. A) Compare and contrast operational database systems with data warehouse.	CO1	L3	10M
<b>OR</b>			
B) With illustrative examples explain various OLAP operations.	CO1	L3	10M
12. A) Outline data mining functionalities with real life example.	CO2	L3	10M
<b>OR</b>			
B) Express the different techniques for handling Missing values in data cleaning process?	CO2	L3	10M
13. A) Discuss the FP-growth algorithm? Explain with an example?	CO3	L3	10M
<b>OR</b>			
B) Discuss about frequent item set? Write the Apriori algorithm for frequent item set generation? Explain with an example.	CO3	L3	10M
14. A) Identify the algorithms for k-means and k medoids? Explain?	CO4	L3	10M
<b>OR</b>			
B) Explain why is it that BIRCH encounters difficulties in finding clusters of arbitrary shape but OPTICS does not? Can you propose some Modifications to BIRCH to help it find clusters of arbitrary shape?	CO4	L3	10M
15. A) Explain the process of mining the World Wide Web.	CO5	L3	10M
<b>OR</b>			
B) What are the goals of time series analysis?	CO5	L3	10M