

IV B.E. / B.TECH. EXAMINATION, DECEMBER - 2022
Data Warehouse & Data Mining (BITL 802)

Time: 3 Hrs.

Maximum Marks: 70

Minimum Passing Marks: 22

Note:		1. Answer all five questions. All questions carry equal marks. 2. In each question part a, b, c are compulsory and part d has internal choice. Out of which part a & b carries 2 marks each, part c carries 3 marks and part d carries 7 marks. 3. All parts of each question are to be attempted at one place. 4. Assume suitable value for missing data, if any			
Q. No.			Marks	Course Outcomes	Bloom's Level
1.	(a)	What is data mining? Discuss its importance in the real world scenario.	2	1	Remember
	(b)	Differentiate between Temporal Database and Relational Database	2	1,2	Understand
	(c)	What do you mean by Transactional databases? Discuss with examples.	3	1,2	Understand
	(d)	Draw and discuss the architecture of data mining system.	7	1,2	Understand
	OR				
	(e)	Discuss about the various steps involved in KDD process model.	7	1,2	Remember, Understand
2.	(a)	Define the term "Data warehouse".	2	1,2	Analyze
	(b)	Differentiate between Operational Database System and Data Warehouse.	2	2,4	Understand
	(c)	What do you understand by Multidimensional Data Model? Discuss its relevance with data warehousing.	3	3,4	Understand, Apply
	(d)	Discuss 3-tier data warehouse architecture.	7	2,3	Understand, Apply
	OR				
	(e)	Discuss the following schemas in the context of Data Warehousing (i) Star Schema (ii) Snowflake Schema	7	2,3	Understand, Apply
3.	(a)	What do you mean by noisy data?	2	3	Remember
	(b)	Discuss the need and importance of data preprocessing in the Knowledge Discovery Process.	2	4	Understand
	(c)	Differentiate between Horizontal Data Layout and Vertical Data Layout. Give suitable Example	3	3	Analyze
	(d)	What is the purpose of data reduction techniques? Discuss attribute subset selection method with the help of suitable example.	7	3,4,5	Understand

	OR													
	(e) Discuss the following (i) Data Cleaning (ii) Data Integration and Transformation	7	3	Understand										
4.	(a) What do you mean by Association Rule? (b) State "Downward Closure Property" and explain it with the help of suitable example. (c) What do you understand by market basket analysis? Explain with the help of suitable example. (d) Define Support and Confidence measures with the help of suitable example	2 2 3 7	1.2 4 4 5	Understand Apply Understand, Apply Understand										
	OR													
	(e) A database has four transactions. Let the Minimum support is 50% <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Tid</th> <th>Items</th> </tr> </thead> <tbody> <tr> <td>100</td> <td>1, 2, 3, 6</td> </tr> <tr> <td>200</td> <td>1, 2, 3, 4, 5</td> </tr> <tr> <td>300</td> <td>1, 2, 4, 5</td> </tr> <tr> <td>400</td> <td>1, 2, 3</td> </tr> </tbody> </table> Find all frequent items using Apriori algorithm.	Tid	Items	100	1, 2, 3, 6	200	1, 2, 3, 4, 5	300	1, 2, 4, 5	400	1, 2, 3	7	4, 5	Evaluate
Tid	Items													
100	1, 2, 3, 6													
200	1, 2, 3, 4, 5													
300	1, 2, 4, 5													
400	1, 2, 3													
5.	(a) What do you understand by the term "Classification"? (b) Discuss the purpose of Cluster Analysis with suitable example (c) Give the name of Five Data Analysis tools available in the real world scenario and list the major features of any one of these (d) Discuss various design issues for the efficient and intelligent data mining system.	2 2 3 7	2 3 3.5 5.6	Understand Understand Remember, Understand Create										
	OR													
	(e) Consider any commercial data mining system and outline the major features of such a system.	7	5,6	Create										
