

**PRIYADARSHINI COLLEGE OF ENGINEERING, NAGPUR**  
**DEPARTMENT OF COMPUTER TECHNOLOGY**  
**ACADEMIC SESSION: 2022-23(EVEN SEMESTER)**  
**Question Bank for CAT-1**

**Subject** : Data Warehousing and Mining(BTCT602T) **Semester** : VI A&B  
**Subject teacher** : Mrs.R.A.Khan/Ms.Shreyanshi Patel  
**Unit** : I, II , III,IV,V

**Course Outcomes:**

Upon the successful completion of the course, students will be to:

CO1	Explain the data warehousing components, OLAP operations and design a data warehouse for any organization.
CO2	Learn data mining concepts and discuss various techniques for data pre-processing.
CO3	Explore and illustrate different classification and data clustering techniques.
CO4	Apply different mining techniques for frequent itemset mining
CO5	Describe and compare various techniques of Web, Temporal and Spatial data mining.

Q.No.	Questions	Mapping with COs	Marks
<b>UNIT 1</b>			
1	a) Differentiate between: i) Data mart and metadata ii) OLTP and OLAP	CO1	6
	b) What is OLAP? Define following with example : i) ROLAP ii) MOLAP iii) HOLAP	CO1	8
2	a) Explain in detail the components of Data warehouse system.	CO1	6
	b) Differentiate between Data Warehouse versus Operational DBMS	CO1	8
3	a) What is data model? Explain multidimensional data model in detail.	CO1	8
	b) What are the characteristics of data warehouse?	CO1	6
4	a) Define data warehouse. Draw the architecture of data warehouse and explain the three tiers in detail.	CO1	9
	b) Why Do We Need Data Warehouses?	CO1	5
5	a) As a Bank manager how would you decide whether to give loan to an applicant or not by using DM strategies.	CO1	7
	b) Discuss different OLAP tools.	CO1	7
6	Design of schema		
<b>UNIT 2</b>			
6	a) What are major components of a typical data mining? Draw architecture of data mining system and explain it.	CO2	7
	b) Explain data mining functionalities in detail.	CO2	6
7	a) Explain various major issues and challenges in data mining in detail.	CO2	7
	b) Discuss: i) Data cleaning ii) Data integration	CO2	6
8	a) Explain Data preprocessing in detail.	CO2	7
	b) Describe the steps involved in data mining when viewed as a process of knowledge discovery.	CO2	7
9	a) Write any two applications of data mining.	CO2	7
	b) Explain the concept Hierarchies in detail using example.	CO2	7
<b>UNIT 3</b>			
10	a) Enlist various types of data in cluster analysis.	CO3	7
	b) Explain tree induction algorithm for building decision tree.	CO3	7
11	a) Discuss typical requirements of clustering in data mining	CO3	5
	b) Explain k-means algorithm.	CO3	9

12	What do you mean by hierarchical clustering approach? Explain agglomerative and divisive hierarchical clustering.	CO3	8
13	Write a detailed note on split algorithm based on gini index.	CO3	8
Unit 4			
14	What do you mean by mining frequent patterns, Associations & correlations? Elaborate by giving examples.	CO4	7
15	Explain Apriori Algorithm in detail.	CO4	7
16	How FP growth algorithm works? Explain.	CO4	7
17	Explain how efficiency of Apriori algorithm can be improved?	CO4	7
18	Explain how to improve efficiency of FP growth algorithm in detail.	CO4	7
19	Explain Market Basket Analysis for mining frequent pattern set and association rules with suitable example.	CO4	7
	Numericals based on apriori and FP growth		
Unit 5			
20	Explain Web Mining in detail.	CO5	7
21	Describe various Graph properties of Web.	CO5	7
22	How to access accuracy of text retrieval in text mining system?	CO5	7
23	Explain Spatial Data Mining in detail.	CO5	7
24	What do you mean by web Data mining? Explain various steps involved in WDM.	CO5	7
25	How data mining is useful in customer relationship management in e-business world?	CO5	7
26	Explain the concept of visual web data mining in detail.	CO5	7
27	Differentiate temporal and spatial data mining in detail.	CO5	8
28	Discuss the challenges that occurred during knowledge discovery on the web.	CO5	7
29	Discuss i) Web Content Mining  ii) Web Usage Mining	CO5	14

	iii) Web Structure Mining		
	iv) Visual Web Data Mining		
30	Discuss page rank algorithm	CO5	7

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Subject Teacher

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