

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (CSE/ AI & ML) (Sem.-6)

DATA MINING AND DATA WAREHOUSE

Subject Code : BTCS702-18

M.Code : 93396

Date of Examination : 06-05-2025

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students have to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.

SECTION - A

1. Write briefly :

- a) What are the primary objectives of design guidelines for data warehouse implementation?
- b) Define multidimensional models in the context of data warehousing.
- c) What does OLAP stand for?
- d) What is data mining?
- e) Name two common data mining tasks.
- f) Define association rule mining.
- g) Name one example each of partition, hierarchical and density-based methods used in the cluster analysis
- h) How do cluster analysis methods deal with the large databases?
- i) What are the characteristics of cluster software search engines?
- j) What is the role of content mining?

SECTION - B

2. Discuss the key design guidelines for implementing a data warehouse, emphasizing the importance of scalability and usability.
3. Describe the characteristics of OLAP, its architecture and how it facilitates efficient processing of queries in multidimensional data.
4. What is the process of association rule mining? Explain by highlighting the steps involved and its significance in discovering patterns in the large datasets.
5. Explain the challenges of dealing with large databases in cluster analysis and discuss strategies or techniques employed to address these challenges effectively.
6. What are the different concepts of locality and hierarchy in the context of the web? Highlight their significance in organizing and navigating web content effectively.

SECTION - C

7. Discuss web mining software, including its functionalities, features and popular tools used for web content mining, web usage mining and web structure mining. Explore how these software tools facilitate knowledge discovery and decision making based on the web data analysis.
8. Explore the characteristics and functionalities of modern search engines, detailing their indexing processes, relevance ranking algorithms and user interfaces. Discuss how these factors contribute to efficient information retrieval.
9. Explain in detail about the architecture of an OLAP server, detailing its components, functionalities and how it supports data cube operations for efficient query processing and analysis.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.