

M. Tech. Computer Science & Engineering (CBCS Pattern) Semester-I
PCSS141 / 14(A) Elective-I - Data Warehousing and Data Mining

P. Pages : 1

Time : Three Hours



GUG/W/24/10944

Max. Marks : 70

- Notes :
1. All questions carry equal marks.
 2. Solve **any five** question.
 3. Assume suitable data wherever necessary.
 4. Diagrams and Chemical equation should be given wherever necessary.
 5. Illustrate your answers wherever necessary with the help of neat sketches.

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|-----------|----|--|----------|
| 1. | a) | List and explain OLAP operations with suitable diagram. | 6 |
| | b) | Explain 3 tier architecture of a Data warehouse. | 8 |
| 2. | a) | For the given sample of numbers.
85, 90, 87, 93, 100, 53, 78, 85, 99 and 82 Calculate Median, Mode, Range, and variance. | 8 |
| | b) | What is Data Mart and explain types of Data marts. | 6 |
| 3. | a) | Explain in detail BIRCH : Multiphase Hierarchical clustering using clustering feature trees. | 8 |
| | b) | Explain Agglomerative versus divisive hierarchical clustering. | 6 |
| 4. | a) | Explain major testes in data preprocessing. | 8 |
| | b) | Write short note on class/concept Description, characterization and discrimination. | 6 |
| 5. | a) | Write short notes on density reachability and density connectivity. | 6 |
| | b) | Discuss major issues involved in Data Mining. | 8 |
| 6. | a) | List and explain the requirements of clustering in data mining. | 6 |
| | b) | Explain the following hierarchical method for clustering.
i) Agglomerative ii) Divisive | 8 |
| 7. | a) | Explain Enterprise Warehouse, Data Mart and Virtual Warehouse. | 6 |
| | b) | What are Neural Networks and where to use them. | 8 |
| 8. | a) | Write short notes Interval scaled attributes and ratio scaled attributes. | 8 |
| | b) | Suppose we have the following values for salary (In thousands of dollars), shown in increasing order : 30, 36, 47, 50, 52, 56, 60, 63, 70, 70, 110. Calculate mean, median, mode and midrange. | 6 |
