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K25U 0287

Reg. No.:....

Name :

VI Semester B.C.A. Degree (C.B.C.S.S. – O.B.E. – Regular/Supplementary/ Improvement) Examination, April 2025 (2019 to 2022 Admissions) Discipline Specific Elective

6B20BCA - E01 : DATA MINING AND DATA WAREHOUSING

Time: 3 Hours

Max. Marks: 40

PART – A (Short Answer)

Answer all questions. 1 mark each.

 $(6 \times 1 = 6)$

- 1. Define a data warehouse.
- 2. What does KDD stands for ?
- 3. Define web mining.
- 4. What is metadata in the context of a data warehouse?
- 5. Name any two data mining techniques.
- 6. Define a decision tree.

PART – B (Short Essay)

Answer any 6 questions. 2 marks each.

 $(6 \times 2 = 12)$

- 7. Differentiate between hierarchical clustering and partitioning clustering.
- 8. List two OLAP operations with examples.
- 9. What are the differences between DBMS and data mining?
- 10. Describe spatial data mining.
- 11. What is the purpose of the apriori algorithm in association rule mining?
- 12. List the main paradigms of clustering techniques.
- 13. Explain the concept of splitting criteria in decision tree construction.
- 14. Briefly describe the partition algorithm for association rule mining.

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PART – C (Essay)

Answer any 4 questions. 3 marks each.

 $(4 \times 3 = 12)$

- 15. Describe the CART algorithm.
- 16. Explain the architecture of a data warehouse.
- 17. Identify the challenges associated with data mining.
- 18. Describe the incremental algorithm for association rule mining.
- 19. How does the DBSCAN clustering technique work?
- 20. What are the key principles of decision tree construction?

PART – D (Long Essay)

Answer any 2 questions. 5 marks each.

 $(2 \times 5 = 10)$

- 21. Explain the backend processes involved in a data warehouse.
- 22. Discuss the applications of data mining.
- 23. Explain the FP-tree growth algorithm for association rule mining.
- 24. Compare the CLARA and CLARANS clustering techniques.