K24U 0187

Reg. No. : .....

Name : .....

Sixth Semester B.C.A. Degree (C.B.C.S.S. – OBE – Regular/ Supplementary/Improvement) Examination, April 2024
(2019 to 2021 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**. (6×1=6)

1. What makes a data warehouse "subject-oriented" ?
2. Define the term 'Data Mining'.
3. What does 'rough set' refer to ?
4. Name the two closure properties exhibited by frequent sets.
5. What is the role of the pruning step in the apriori algorithm ?
6. Differentiate between a training set and a test set.

PART – B
(Short Essay)

Answer **any 6** questions. 2 marks **each**. (6×2=12)

7. Differentiate between KDD and data mining.
8. Identify the fundamental goals of data mining.
9. Define the association rule.

P.T.O.

10. Differentiate between hierarchical clustering and partitioning clustering.

11. What is the relationship between CLARA and PAM ?

12. State the classification problem.

13. What is the significance of decision trees in supervised classification ?

14. Define the following :
    i) Splitting attribute
    ii) Splitting criterion.

PART – C
(Essay)

Answer **any 4** questions. **3 marks each**. (4×3=12)

15. How does a data cube enhance the representation of data in a multidimensional data model ?

16. Explain the categories of summary measures based on the kind of aggregate function used.

17. Describe the following data mining models.
    i) Verification model
    ii) Discovery model.

18. Detail the various types of data managed within the scientific applications in data mining.

19. Explain the concept of confidence and support in association rule mining.

20. Define the following in the context of DBSCAN :
    i) ε – Neighborhood of an object
    ii) Core object
    iii) Directly-Density-Reachable object. [1+1+1]

PART – D
(Long Essay)

Answer **any 2** questions. 5 marks **each**. (2×5=10)

21. Illustrate the following warehouse schema.
    i) Star schema
    ii) Snow flake schema
    iii) Fact constellation. [2+2+1]

22. Explain partition algorithm.

23. Elaborate on PAM, a k-Medoid algorithm.

24. Briefly describe the following decision tree construction algorithms :
    i) CART
    ii) ID3
    iii) CHAID. [2+1+2]