K24U 0187

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]

P.T.O.

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

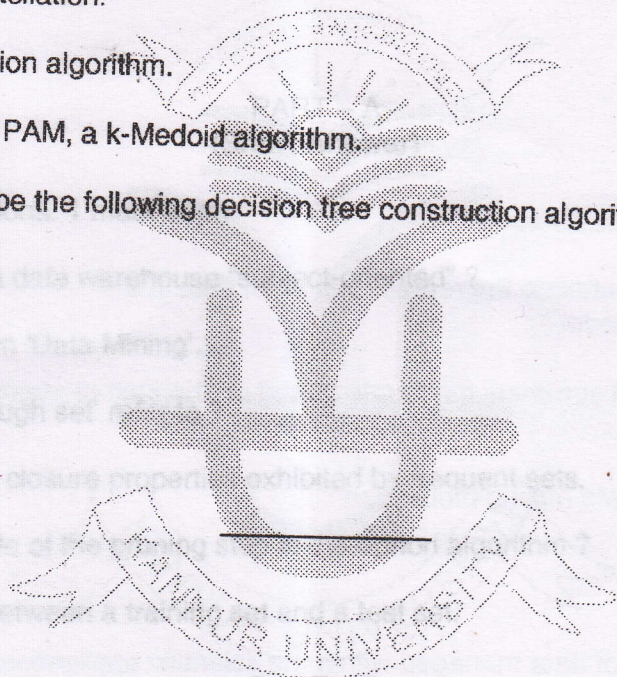   iii) Fact constellation.   **[2+2+1]**

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]**

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Name : ....

VI Semester B.C.A. Degree (C.B.C.S.S. – OBE – Regular/Supplementary/ Improvement) Examination, April 2023
(2019 and 2020 Admissions)
Discipline Specific Elective
6B20BCA-E01 : DATA MINING AND DATA WAREHOUSING

Time : 3 Hours

Max. Marks : 40

PART – A

Answer **all** questions. **Each** question carries **1** mark.

1. What is a database maintained separately from an organizations operational database called as ?

2. What is decision tree used for ?

3. Expand CART.

4. Write an example for categorical clustering.

5. What is entropy ?

6. Which association rule mining algorithm is suited for transaction databases with frequent updates ?

PART – B

Answer **any six** questions. **Each** question carries **2** marks.

7. Define association rule.

8. What are frequent episodes ?

9. What is prediction ?

10. What is meant by support of an itemset ?

11. What is the main difference in Pincer-search algorithm compared to Apriori algorithm ?

P.T.O.

12. What is a verification model ?

13. What is temporal data mining ?

14. What is a core object in DBSCAN ?

PART – C

Answer **any four** questions. **Each** question carries **3** marks.

15. Describe the subject-oriented feature of **data-warehouse.**

16. Write notes on problem decomposition.

17. Describe data refresh.

18. Differentiate upward closure property and downward closure property.

19. List all the stage in KDD.

20. Differentiate hierarchical and partitioning clustering methods.

PART – D

Answer **any two** questions. **Each** question carries **5** marks.

21. Write notes on DBSCAN and the concepts introduced by it.

22. Compare C4.5 and CHAID.

23. Describe the difficulties in data mining.

24. Describe star schema.
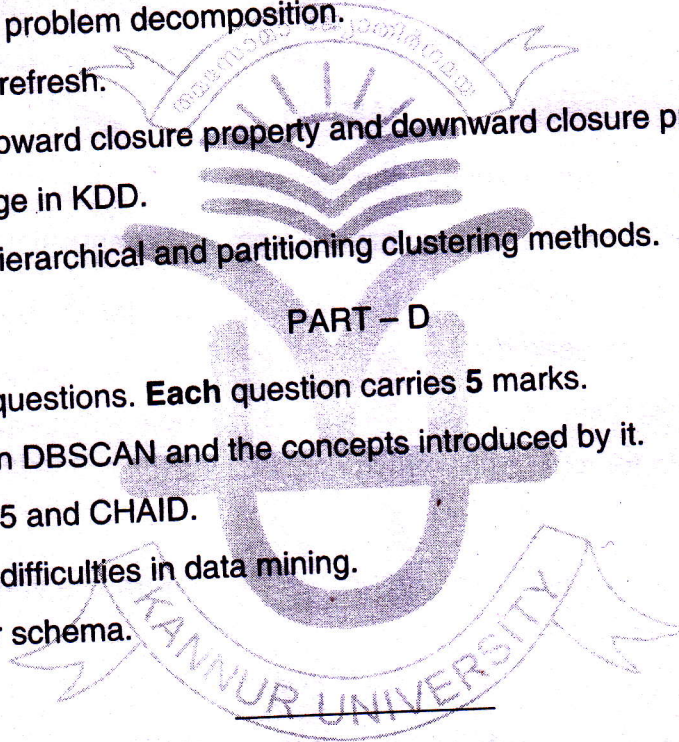
Reg. No. : ....

Name : ....

VI Semester B.C.A. Degree (CBCSS – OBE – Regular) Examination, April 2022
(2019 Admission)
Core Course
Discipline Specific Elective
6B20BCA-E01 : DATA MINING AND DATA WAREHOUSING

Time : 3 Hours   Max. Marks : 40

PART – A
(Short Answer)

Answer **all** questions :   (6×1=6)

1. What is Data mining ?

2. Expand OLAP.

3. What is a Decision Tree ?

4. Expand ID3.

5. What is KDD ?

6. List any two advantages of Data Warehouses.

PART – B
(Short Essay)

Answer **any 6** questions :   (6×2=12)

7. What is Web Mining ?

8. What is CLARA ?

9. What are frequent itemsets ?

10. Define support in Association rules.

11. Give four application areas of Data Mining.

12. What is Data Preprocessing ?

13. What is a Data Warehouse ?

14. How does Pincer Search overcome the disadvantage of Apriori algorithm ?

PART – C
(Essay)

Answer **any 4** questions :   (4×3=12)

15. What is Data Visualization ?

16. Explain about Spatial Mining.

17. What are partitioning algorithms ?

18. Explain hierarchical clustering.

19. Explain the limitations of the Apriori algorithm.

20. Describe briefly the stages of KDD.

PART – D
(Long Essay)

Answer **any 2** questions :   (2×5=10)

21. Explain the *k*-Medoid algorithm.

22. Describe briefly the C4.5 algorithm. How does it differ from ID3 ?

23. Discuss the challenges faced in Data Mining.

24. Explain the various OLAP operations.

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