

Code No: 157BC

JAWAHARLAL NE.

UNIVERSITY HYDERABAD

B. Tech IV Year Examinations, February/March - 2022

DATA MINING
(Common to CSE, IT)

R18

Max. Marks: 75

Time: 3 Hours

Answer any Five Questions
All Questions Carry Equal Marks

1. Explain the need of data preprocessing and various forms of preprocessing. [15]
2. What is a data warehouse? Demonstrate integrating data mining system with a data warehouse with a neat diagram. [15]
3. Apply FP-Growth algorithm to the following data for finding frequent item sets, consider support threshold as 30%. [15]

TID	List of ItemIDs
1	I1, i2, i4, i5
2	I2, i4, i7
3	I2, i3, i4, i5
4	I1, i3, i4, i7
5	I1, i2, i3, i4, i5
6	I3, i4, i5, i6

4. a) How to identify sub-graphs in a graph?
b) Give an overview of correlation analysis. [8+7]
5. a) Explain classification as a two step process.
b) State Bayes theorem. How this concept is used in classification. [8+7]
6. What is a decision tree? Explain decision tree induction algorithm. [15]
7. a) Contrast k-means clustering with k-medoids clustering approach.
b) Discuss the merits and demerits of hierarchical approaches for clustering. [8+7]
8. How to apply mining techniques to unstructured text database? Explain with example. [15]

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