

Code No.: CS701PC

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CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS

IV-B.TECH-I-Semester End Examinations (Regular) - November- 2023

DATA MINING

(CSE)

[Time: 3 Hours]

[Max. Marks: 70]

Note: This question paper contains two parts A and B.

Part A is compulsory which carries 20 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART-A

(20 Marks)

1. a) What is Data Mining? Explain its mining task. [2M]
- b) Define Discretization and Binaryzation. [2M]
- c) Define Support and Confidence with examples in association rule mining? [2M]
- d) Name the pruning strategies of closed frequent item sets. [2M]
- e) What is Classification? Give some applications of classification? [2M]
- f) Quote an example for Bayesian Belief Networks. [2M]
- g) Discuss the two approaches to improve quality of hierarchical clustering. [2M]
- h) List out the requirements of cluster analysis. [2M]
- i) Explain the Purpose of Web Mining? [2M]
- j) Mention three main areas of Web Mining. [2M]

PART-B

(50 Marks)

2. Explain principal component analysis as a method of dimensionality reduction. [10M]
- OR**
3. Discuss data mining as a step-in knowledge discovery process and various challenges associated. [10M]
4. How can the efficiency of Apriori Algorithm be improved? [10M]
Explain mining quantitative association rules with appropriate examples with support count = 2.
T1 = {fever, cold, sore throat, running nose, difficulty breathing}
T2 = {cold, sore throat}
T3 = {cold, fever}
T4 = {difficulty breathing, fever}
T5 = {fever, cold, difficulty breathing}
T6 = {cold, fever, running nose}
- OR**
5. How can we mine closed frequent item sets? Explain. [10M]
6. Explain Naïve-Bayes classification technique with an illustrative example. [10M]
- OR**
7. State the classification problem and briefly explain general approaches to solve it. [10M]
8. Explain K-means algorithm with an example. [10M]
- OR**
9. Appraise the importance of outlier detection and its application. Explain any one approach for outlier detection. [10M]
10. What is Web structure mining? How does it differ from Web content mining? [10M]
- OR**
11. Discuss the applications of web usage mining. [10M]
