

Code No: 156EZ

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**B. Tech III Year II Semester Examinations, March - 2024****DATA MINING****(Computer Science and Engineering – Artificial Intelligence and Machine Learning)****Time: 3 Hours****Max. Marks: 75**

- Note:** i) Question paper consists of Part A, Part B.
ii) Part A is compulsory, which carries 25 marks. In Part A, Answer all questions.
iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

PART – A**(25 Marks)**

- 1.a) What is meant by data warehouse? [2]
- b) What are the application areas of data mining? [3]
- c) Define the measure confidence in association rule mining. [2]
- d) Differentiate frequent subsequence and frequent substructure. [3]
- e) Define Regression with example. [2]
- f) Discuss If-Then rule in classification. [3]
- g) What are applications of clustering? [2]
- h) List out all partitioning methods for clustering data. [3]
- i) What are the features of unstructured text mining? [2]
- j) Define Web mining and text mining. [3]

PART – B**(50 Marks)**

- 2.a) Why do we preprocess the data? Discuss.
 - b) Discuss about Data Mining Task primitives with examples. [5+5]
- OR**
- 3.a) Describe about major issues in Data mining.
 - b) What are the challenges in data mining that motivate the mining tasks? [5+5]
- 4.a) Categorize various kinds of Association Rules with examples.
 - b) Explain in detail about Graph Pattern mining. [5+5]
- OR**
- 5.a) What are the various Constraints in Constraint based Association rule mining? Explain.
 - b) Discuss about basic concepts of frequent item set mining. [5+5]
- 6.a) Describe in detail about Rule based Classification.
 - b) Mention different characteristics to construct a decision tree? [5+5]
- OR**
- 7.a) Write about Lazy Learners for classification.
 - b) What is Bayesian belief network? Explain in detail. [5+5]

- 8.a) Discuss various types of data in cluster analysis.
b) Explain about Hierarchical clustering in brief. [5+5]

OR

- 9.a) How to detect outliers? Explain with an example.
b) Differentiate between AGNES and DIANA algorithms. [5+5]

- 10.a) Explain about the Multimedia data mining briefly.
b) Discuss the concept of mining Data Streams. [5+5]

OR

- 11.a) What activities are involved in web usage mining?
b) Explain the Text Mining briefly. [5+5]

---ooOoo---

paper March-2024