

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)**

**CLASS: MTECH(EXECUTIVE)
BRANCH: CSE**

**SEMESTER : II
SESSION : SP/2022**

SUBJECT: CS539 DATA MINING AND DATA WAREHOUSING

TIME: 3 HOURS

FULL MARKS: 50

INSTRUCTIONS:

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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- Q.1(a) What is Data Mining? Differentiate between Data Characterization and Data Discrimination. [5]
Q.1(b) How does Data Mining work as a step in the process of Knowledge Discovery? Explain using diagram. [5]
- Q.2(a) What is Entity Identification problem? Explain. [5]
Q.2(b) How redundancies of nominal data are handled using correlation analysis? Discuss it using suitable numerical example. [5]
- Q.3(a) Explain following types of Normalization using suitable Examples [5]
i) Min-Max normalization ii) z-score Normalization
Q.3(b) Discuss any two heuristics for attribute subset selection in data reduction process. [5]
- Q.4(a) Explain Various OLAP operations used in Cubes. [5]
Q.4(b) Discuss any two data models used for designing Datawarehouse using suitable examples. [5]
- Q.5(a) How to generate FP tree for frequent itemset mining? Explain with suitable example. [5]
Q.5(b) What is Apriori Property? How it helps in improving the computational aspect of Apriori Algorithm for Frequent Pattern mining? Explain. [5]

:::19/07/2022:::