

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION MO/2023)

CLASS: B. TECH
BRANCH: CSE/IT

SEMESTER: V
SESSION: MO/2023

SUBJECT: IT335 DATA MINING CONCEPTS & TECHNIQUES

TIME: 02 HOURS

FULL MARKS: 25

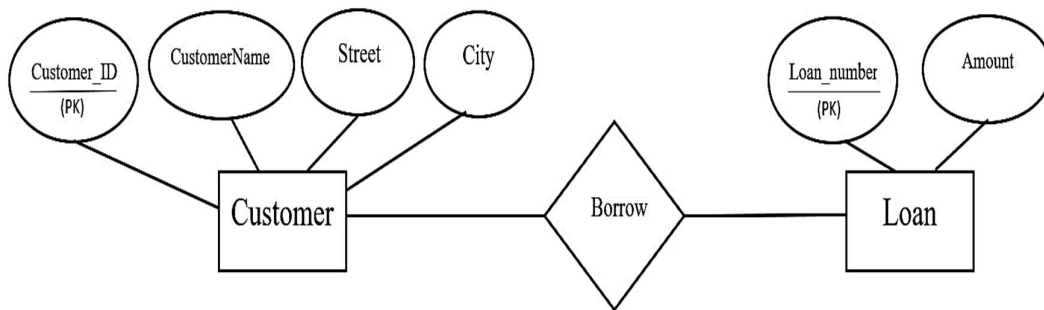
INSTRUCTIONS:

1. The question paper contains 5 questions each of 5 marks and total 25 marks.
2. Attempt all questions.
3. The missing data, if any, may be assumed suitably.
4. Tables/Data handbook/Graph paper etc., if applicable, will be supplied to the candidates

- Q.1(a) How is data warehouse different from a database? How are they similar? [2]
Q.1(b) Describe the steps involved in data mining when viewed as a process of Knowledge discovery? [3]

- Q.2(a) Describe challenges and functionality of mining a huge amount of data. [2]
Q.2(b) Give three additional commonly used statistical measures for characterization of data dispersion. [3]
Discuss how they can be computed efficiently in large databases.

- Q.3(a) Convert the given ER Diagram to a Relational Table (or Schema) [2]



ER Diagram

- **PK= Primary Key**
- Q.3(b) What are the preprocessing techniques are used in data mining? Explain with Example. [3]
- Q.4(a) Describe the data cube technology in data mining. [2]
Q.4(b) Describe and draw a Snowflake schema diagram for data warehouse for Big university database consists of four dimensions student, course, semester and instructor and two measures count and avg_grade. [3]
- Q.5(a) Distinguish between OLTP and OLAP. [2]
Q.5(b) Explain data warehouse architecture- 2_tire and 3_tire with examples. [3]

:::21/09/2023 M:::