

3660

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7. (a) Explain file indexing and different indexing techniques used in DBMS. 7
- (b) Discuss concurrency control and recovery mechanisms in transaction processing. 8

[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 3660

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Unique Paper Code : 6332492403

Name of the Paper : DBMS USING MYSQL

Name of the Course : **B.Voc. (Web Designing)**
(NEP UGCF)

Semester : IV

Duration : 3 Hours

Maximum Marks : 90

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. **Section A** is compulsory.
3. Attempt any **four** questions from **Section B**.
4. Parts of a question must be answered together.

Section A

1. (a) Explain the characteristics of the database approach. 5

- (b) Differentiate between file system approach and DBMS approach. 5
- (c) Define entity, attribute, and relationship with suitable examples. 5
- (d) What are integrity constraints in the relational data model? 5
- (e) Explain the purpose of DDL and DML commands in SQL. 5
- (f) What are ACID properties in transaction processing? 5

Section B

- 2. (a) Explain the three-schema architecture of DBMS with suitable diagrams. 7
- (b) Discuss data independence and its types in DBMS. 8

- 3. (a) Explain the components and notation used in Entity Relationship (ER) diagrams. 7
- (b) Discuss different types of relationships and constraints in ER modeling. 8
- 4. (a) Explain the relational data model and schema-instance distinction. 7
- (b) Discuss relational algebra operators with suitable examples. 8
- 5. (a) Explain the SQL commands used to create databases and tables with examples. 7
- (b) Discuss aggregation functions, GROUP BY clause, and HAVING clause in SQL with examples. 8
- 6. (a) Explain functional dependencies and their role in database normalization. 7
- (b) Discuss 1NF, 2NF, 3NF, and BCNF with suitable examples. 8