Bachelor of Vocation (Web Technology & Multimedia)
4th Semester

DATABASE SYSTEM

Paper—401

Time Allowed—3 Hours]   [Maximum Marks—50

Note :— Attempt any *five* questions. All questions carry equal marks.

1. (a) Explain the advantages and disadvantages of database approach over conventional file system approach.

   (b) Differentiate between physical and logical data independence.   6,4

2. (a) What is DBMS ? Discuss three level architecture and mapping of DBMS with suitable diagram.

   (b) Write the role of DBA in an organization. 7,3

3. (a) Describe Relational Model in detail with suitable example.

   (b) How E-R diagrams are useful in database design ?   7,3

4. Define Normalization. Explain and define 1NF, 2NF, 3NF and BCNF. Take suitable table to show the process of normalization.   10

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5. (a) What is the significance of SQL in DBMS ? What is the role of DDL, DCL and DML in DMBS ?

(b) Explain any six types of DML operations in SQL with example. 5,5

6. What is the need of concurrency control ? Explain different concurrency control techniques. 10

7. What is database recovery ? Discuss any two database recovery techniques. 10

8. (a) Explain the counter measures to be taken to maintain database security.

(b) Write a short note on : properties of transactions.

5,5