

Exam. Code : 110004

Subject Code : 3777

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) Define Database of an organization. Explain the difference between a file oriented system and a database oriented system.
- (b) Discuss the main characteristics of database approach. 5,5
2. (a) Explain 3 level architecture of DBMS with suitable diagram.
- (b) Write the role of DBA in an organization. 7,3
3. (a) What is the role of E-R diagrams in database management system ?
- (b) What is relational model ? What are the limitations of Relational model ? Discuss any two operations of this model with suitable example. 3,7

4. What is Normalization ? Explain and define 1NF, 2NF, 3NF and BCNF with suitable example. 10
5. (a) What is the significance of SQL in DBMS ?
(b) What are DDL, DML and DCL ? Explain any two each DCL, DML and DDL commands. 3,7
6. (a) What are the properties of transactions ? Write in brief.
(b) What is the purpose of concurrency control ? Discuss any one technique used for concurrency control. 4,6
7. What is the need of database recovery ? Discuss any two database recovery techniques in brief. 10
8. (a) Explain the defence mechanism for maintaining Database security.
(b) Differentiate between physical and logical data independence. 6,4