

**B.Tech. (CSE) 4th Semester F-Scheme**

**Examination, May-2019**

**DATABASE MANAGEMENT SYSTEMS**

**Paper-CSE-202-F**

*Time allowed : 3 hours*

*[Maximum marks : 100]*

**Note :** Attempt five questions in total, selecting one question from each unit. Question No. 1 is compulsory. All questions carry equal marks.

1. (i) Meta data and data dictionary
- (ii) Sequential files
- (iii) Types of database users
- (iv) Entity integrity constraint
- (v) Data mining
- (vi) Hashing
- (vii) Life cycle of transaction
- (viii) Recovery techniques

**Unit-I**

2. Differentiate between data, database, DBMS and database system with examples. Also explain three level architecture of database.

3. Explain the E-R diagram of online counseling. Also discuss the following :
  - (a) Reduction of ER diagram into tables
  - (b) Mapping

**Unit-II**

4. Discuss the following :
  - (a) B-tree index files
  - (b) Direct file
5. What is RDBMS ? Is there any order of tuples. Explain various operation of relational algebra.

**Unit-III**

6. (a) What are various DDL commands in SQL ? Give brief description of their purposes.
- (b) Can we work with unnormalized database? Explain the normalization in detail.
7. Discuss Boyce-Codd Normal form in detail with merits and demerits.

**Unit-IV**

8. (a) What do you mean by functional dependency ? Also explain referential integrity constraint.
- (b) Explain two phase locking and binary locking.

9. Write the short notes on the following :

- (a) Need of concurrency control
- (b) Network model
- (c) Properties of transaction
- (d) Hierarchical model

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