

Introduction to Database System

Compulsory Question

1.
 - (i) What is the relation between Data and Information?
 - (ii) What is the difference between Privacy and Security?
 - (iii) Define the term File and Record.
 - (iv) What is Conceptual data model?
 - (v) Define the term 'Derived attribute'.
 - (vi) Define Weak entity in E-R model.
 - (vii) What is Alternate key?
 - (viii) Define Domain of a relation.
 - (ix) Give two examples of RDBMS software. 18

UNIT-I

2. Explain the concept of Database, Database Management System and Database System. How are they interrelated with each another? How a user access the data from database using database management system? Explain with the help of a block diagram and give an example also. 18
3.
 - (a) Give at least *eight* differences between Traditional File Processing System and Database System. 9
 - (b) How the terms Database Administrator and Database Designer differ? Explain the various roles of Database Administrator.

UNIT-II

4. Write in detail about the various components of architecture of database system such as Levels, Schemas at various levels, Data Models at various levels, Mapping among the levels, DBMS language at various levels and Data Independence among levels. Draw the block diagram for the same. 18
5.
 - (a) Differentiate between the following :
 - (i) Records-based and Object-based data model 4.5
 - (ii) Schema and Subschema. 4.5

Unit-III

6. Explain the terminology used in E-R Model. Draw an E-R model for the company which has several departments, several projects

and several employees. Assumptions should be mentioned while making E-R model. 18

7. Explain the concept of Hierarchical and Network data model along with examples. What are their advantages and disadvantages over each other? 18

UNIT-IV

8. Explain the concept of Relational data model in detail along with various kinds of terminology used in it. Justify the concepts with examples.
9. (a) Explain various types of integrity constraints over relations in Relational data model. 9
- (b) What are the advantages of Relational data model over Hierarchical and Network data model? 9