Roll No. ....   Total Pages : 03

BCA/D-20   1200
FUNDAMENTALS OF DATABASE SYSTEM
BCA-235

Time : Three Hours]   [Maximum Marks : 80

Note :   Q. No. **1** is compulsory. In addition to that attempt *four* more questions, selecting exactly *one* question from each Unit. All questions carry equal marks.

Compulsory Question

1. (a)   What is difference between data and information ?
    (b)   What is the need of DBMS ?
    (c)   Name various components of DBMS.
    (d)   Difference between primary and secondary key.
    (e)   What is the role of database designer ?
    (f)   What is E-R data model ?
    (g)   Define Tuple and attribute.
    (h)   What is instance of a schema ? Define with example.

                                             2×8=16

Unit I

2. How database system is different from traditional file system ? Explain along with advantages and disadvantages of database system.   **16**

3. Explain various types of database users. Explain the role of each in detail. **16**

Unit II

4. (a) What is Data Independence ? Explain various types of data independence. **8**

   (b) Define the following terms : **8**
   Schema, Subschema, Instance of Schema, Data Dictionary.

5. What is Centralized and client server architecture of DBMS ? Explain. **16**

Unit III

6. What do you mean by Data Model ? Discuss the various types of Data Model along with their advantages and disadvantages. **16**

7. (a) Draw an E-R diagram for Company database system. **8**

   (b) What is an Entity ? Explain the term weak and strong entity. **8**

Unit IV

8. (a) What are relational constraints ? Explain with example. Define : **8**
   (i) Data value   (ii) Super Key
   (iii) Domain   (iv) Candidate Key.

   (b) What is relationship between tables and views in relational database management systems ? Explain with example. **8**

9. (a) What is a relation model ? Explain various properties of a relation. **8**

   (b) Explain the following terms :
   (i) Degree of a relation
   (ii) Cardinality of the relation
   (iii) Extension
   (iv) Intension. **8**