Roll No. [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]

S. No. of Question Paper : **5314**

Unique Paper Code : **234251**   **D**

Name of the Paper : **Database Management and Systems (DBMS)**

Name of the Course : **B.A. (Prog.)**

Semester : **II**

Duration : **3 Hours**   Maximum Marks : **45**

(Write your Roll No. on the top immediately on receipt of this question paper.)

Section A is compulsory.

Attempt any *three* questions from Section B.

Section A

1. (*a*) Define the following :   2

       (*i*) Primary key

       (*ii*) Foreign key.

    (*b*) What is the difference between data and information ?   2

    (*c*) Give full forms of :   2

       (*i*) SQL

       (*ii*) DDL.

(d) Differentiate between : Entity and Attribute.   2

(e) Write the syntax of the following SQL commands :   2

   (i)   UPDATE

   (ii) DELETE.

(f) Describe the need for data normalization.   2

(g) Name the various types of relationships that exist in a database.   3

Section B

2. (a) With the help of a diagram, explain the three layered architecture of DBMS.   6

   (b) A database consists of the following tables :   4

      DEPT(DNO, DNAME, HOD, DYEAR)

      COURSE(CNO, CNAME, NO_STUD, DEPT)

      Write queries in SQL for the following :

      (i)   Display the names and number of students in each course.

      (ii) List the name of "HOD" for those departments which were set up before 2000.

3. (a) What do you understand by data redundancy ? What are the disadvantages of data redundancy ?   4

   (b) Differentiate between : Entity integrity and Referential integrity.   4

   (c) What do you understand by functional dependency ?   2

4. (a) What are the main characteristics of a relational table ? 4

(b) What is a business rule ? What is the purpose of data modeling ? 6

5. (a) Write the steps to convert the data to first normal form. Explain with an example.

2+2

(b) Briefly describe any *three* data models with suitable example. 6

6. (a) Briefly describe any *three* data types supported by ANSI SQL. 3

(b) What do you understand by SQL CONSTRAINTS ? Briefly describe any *three* SQL CONSTRAINTS. 1+6