(i) Printed Pages : 2 Roll No. .....

(ii) Questions : 9 Sub. Code : 0941

Exam. Code : 0030

Bachelor of Computer Applications 4th Semester

1059

DATABASE MANAGEMENT SYSTEM

Paper–BCA–16–405

Time Allowed : Three Hours] **[Maximum Marks : 65**

Note :— Attempt **five** questions in all, selecting at least **one** question from each Unit. Q. No. **9** is compulsory.

UNIT–I

1. (a) What is meant by Database Management System ? Discuss the features that give it an edge over traditional file system.

   (b) Explain the three tier architecture of Database Management System. 6,7

2. Distinguish between :

   (a) Physical and Logical Data Independence

   (b) Schema and Instances

   (c) Attributes and Entity. 13

UNIT–II

3. (a) Illustrate using example the Normalization of database upto 3NF.

   (b) Compare and contrast three different data models of DBMS. 7,6

4. (a) State 12 Codd's Rules for RDBMS.

(b) What are functional dependencies ? How is decomposition related to it ? Discuss desirable properties of decomposition for an effective database design. 5,8

UNIT—III

5. Explain the following clauses with example queries :

(i) Group by

(ii) Order by

(iii) Aggregation functions. 13

6. (a) What are Views ? Why are they significant in DBMS ?

(b) How are Commit and Rollback different ? Explain through examples. 6,7

UNIT–IV

7. What is a Join ? Discuss the following types of joins :

(a) Cartesian Join

(b) Equi Join

(c) Outer Join

(d) Self Join. 13

8. (a) Throw light on the block structure of PL/SQL.

(b) What are Cursors ? How is Explicit Cursor different from Implicit Cursor ? How are Cursors Managed in PL/SQL ? 4,9

UNIT—V

(Compulsory Question)

9. (a) State Integrity Rules.

(b) What are Triggers ?

(c) Discuss the functions of a DBA.

(d) How are generalization and aggregation represented in E-R Diagrams ? 3,3,3,4