

(i) Printed Pages: 2 Roll No.

(ii) Questions : 9 Sub. Code :

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**Bachelor of Computer Applications 4th Semester
(2055)**

DATABASE MANAGEMENT SYSTEM

Paper : BCA-16-405

Time Allowed : Three Hours] [Maximum Marks : 65

Note :—The students are required to attempt **ONE** question from each Section (A to D) and the compulsory question.

SECTION—A

1. Discuss characteristics of Database approach. What are its advantages over File Systems ? 13
2. (a) Explain DBMS Architecture in detail along with concept of data independence. 7
(b) What are ER-models ? Design an ER-diagram for a university database. 6

SECTION—B

3. What are data models ? Discuss various types of data models in detail. 13
4. (a) Explain Relational Algebra along with its operations. 7
(b) Discuss Codd's rules for RDBMS. 6

SECTION—C

5. (a) Discuss DDL commands in SQL along with its syntax and examples. 7
- (b) What are aggregate functions ? Also discuss Date functions with examples. 6
6. How to query a database ? Discuss its complete syntax along with examples. 13

SECTION—D

7. (a) What are Set Operations in SQL ? Explain with examples. 6
- (b) Discuss conditional control statements in PL/SQL. Write a program to find greatest of three numbers. 7
8. (a) What are triggers ? Explain its types with examples. 7
- (b) How exceptions are handled in PL/SQL ? Explain by an example. 6

(Compulsory Question)

9. (a) Compare Truncate command with Delete command. 2
- (b) Functional Dependencies. 2
- (c) Views. 2
- (d) System and Object Privileges. 2
- (e) Implicit/Explicit cursors. 2
- (f) Normalisation. 3