

BCA 4th Semester Exam., 2015

RELATIONAL DATABASE MANAGEMENT SYSTEM

Time : 3 hours

Full Marks : 60

Instructions :

- (i) The marks are indicated in the right-hand margin.
- (ii) There are **SEVEN** questions in this paper.
- (iii) Attempt **FIVE** questions in all.
- (iv) Question Nos. **1 & 2** are compulsory

1. Write notes on any six of the following :

2×6=12

- (a) Database
- (b) Metadata
- (c) OODBMS
- (d) Primary Key
- (e) JDBC
- (f) Entity Sets
- (g) Relational Algebra
- (h) Normal Form
- (i) Nested Queries

2. Attempt any *three* questions from the following : 4×3=12

- (a) Describe the three levels of data abstraction.
- (b) What are relation schema and relation?
- (c) What is functional dependency?
- (d) What do you mean by correlated subquery?
- (e) List the various cases where use of a NULL value would be appropriate.

3. Explain the various components of database management system. 12

4. How is an ER-Diagram reduced to table? Explain in detail. 12

5. In what sense does relational calculus differ from relational algebra, and in what sense are they similar? Explain with suitable example. 12

6. What is BCNF? How is it different from third NF? Explain. 12

7. Define the terms—entity, attribute, attribute value, relationship instance, composite attribute, multivalued attribute, derived attribute, complex attribute, key attribute and value set (domain). 12
