

(4)

9. Describe the following with examples :
- | | |
|-------------|---|
| (a) Insert | 2 |
| (b) Grant | 2 |
| (c) MAX | 2 |
| (d) UPPER | 2 |
| (e) BETWEEN | 2 |
| (f) LIKE | 1 |

A

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Roll. No. _____

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B.Sc.(Part-III) Examination, 2015

Introduction to DBMS-SQL

(Old Course)

Paper-III

(BCS-303)

Time Allowed : Three Hours] [Maximum Marks : 75

Note : Answer five questions in all. Question No. 1 is compulsory. Attempt one question from each of the four Units.

1. Explain the following in brief :

- | | |
|--------------------------------------|---|
| (a) Candidate Key and Composite Key. | 3 |
| (b) Database Users | 3 |
| (c) Relational Calculus | 3 |
| (d) Database Managers | 3 |
| (e) DDL | 3 |
| (f) Conceptual View | 3 |

(2)

- (g) Entity and Attributes 3
- (h) Transaction 3
- (i) Concurrency Control 3
- (j) Data Repository 4

Unit-I

- 2. What are ACID properties of a database? Explain. 11
- 3. (a) What is Functional Dependency? Give suitable example. 5
- (b) What is Project Operator in Relational Algebra? Give one example. 6

Unit-II

- 4. (a) What is the difference between 3NF and BCNF of a database? Explain 5
- (b) What is the difference between Logical and Physical Data Independence? 6
- 5. Define the following terms
 - (a) Entity Integrity 4
 - (b) Referential Integrity 4
 - (c) Join 3

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Unit-III

- 6. What is File Organization? Define Random Access File Organization with example. 11
- 7. Draw the E-R diagram of musician who performs for album. Assume any four entities. Indicate all key and constraints with assumptions that are made? 11

Unit-IV

- 8. Consider following Relational Algebra Schema
STUDENT (RNO, Name, DOB, Percentage, DNO)
DEPARTMENT (DNO, DNAME, HEAD)
Write Relational Algebra expressions.
 - (i) Find Student's name and course from Computer Department. 4
 - (ii) Get the Student's name who has percentage greater than 70. 4
 - (iii) Find the Student's name start with 'A' and end with 'C'. 3

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P.T.O.