8. Write short notes on the following :

(a) Control Structures in PL/SQL

(b) Triggers. **15**

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D-212

B.C.A. EXAMINATION, May 2018

(Fourth Semester)

(B. Scheme) (Main & Re-appear)

BCA204B

RELATIONAL DATABASE MANAGEMENT SYSTEMS

Time : 3 *Hours*] [*Maximum Marks :* 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit.

Unit I

1. What is Relational data model ? Also write Codd's Rule for Relational data model. **15**

2. Write short notes on the following :

(a) Relational Calculus

(b) Domain Calculus. **15**

Unit II

3. What is the concept of Normalization ? Also explain 2NF, 3NF and BCNF with suitable examples. **15**

4. (a) What is data redundancy ? What are the disadvantages of having redundacy within a database ? **7**

(b) What do you understand by functional dependencies ? Also write characteristics of functional dependencies. **8**

Unit III

5. (a) List and explain the basic data types available for attributes in SQL. **9**

(b) List and explain different scheme change statements available in SQL. **6**

6. (a) Write SQL update statements to perform the following in the 'Student' table mentioned below : **9**

Table : Student

Name	Student_Number	Class	Major
Smith	17	1	CS
Brown	8	2	CS

(i) Insert a new student, <'Johnson', 25, 1, 'Math'>, in the student table.

(ii) Change the class of student 'Smith' to 2.

(iii) Delete the record for the student whose name is 'Smith' and whose student number is 17.

(b) Briefly describe the concept of referential integrity constraints. **6**

Unit IV

7. Write a detailed note on PL/SQL and its execution environment. Also write the advantages of PL/SQL. **15**