

- (v) LOWER ()
- (vi) LENGTH () 6
9. (a) Explain while loop in PL/SQL with example. 6
- (b) Explain :
- (i) Commit
- (ii) Rollback
- (iii) Auto commit
- (iv) Save point 6

OR

10. (a) What is cursor ? How to declare cursor ? Explain. 6
- (b) Explain Block in PL/SQL with all sections. 6

B.C.A. Part—II (Semester—III) Examination

DATABASE MANAGEMENT SYSTEM

Paper—3ST3

Time—Three Hours]

[Maximum Marks—60

N.B. :— (1) All questions are compulsory.

(2) Draw neat sketches wherever necessary.

1. (a) What is data independence ? Explain physical data independence and logical data independence. 6
- (b) What is DBA ? Explain responsibilities of the DBA. 6

OR

2. (a) Explain :
- (i) Hierarchical Data Model
- (ii) Network Data Model
- (iii) Relational Model. 6
- (b) Explain difference between a file oriented system and a database oriented system. 6

3. (a) Explain : 6
- (i) Relational algebra
 - (ii) Tuple calculus
 - (iii) Domain calculus
- (b) Explain BNF and BCNF. 6

OR

4. (a) What is Normalization ? Explain 1NF and 2NF. 6
- (b) Explain set operations :
- (i) Union
 - (ii) Intersection
 - (iii) Difference
 - (iv) Cross product. 6
5. (a) What is Join ? Explain types of Joins. 6
- (b) Write SQL statement :
- (i) To display different jobs in emp table.
 - (ii) To find name of the employee with second maximum salary in emp table.
 - (iii) To display department wise average salary. 6

OR

6. (a) Explain any three DDL commands with example. 6
- (b) Explain View with example and state the advantages of Views. 6
7. (a) Explain Union operation in two tables with example. 6
- (b) Explain :
- (i) MIN()
 - (ii) MAX()
 - (iii) AVG()
 - (iv) COUNT()
- with example. 6

OR

8. (a) What is join operation ? Can we join more than two tables ? Explain with example. 6
- (b) Explain following character functions :
- (i) RTRIM ()
 - (ii) LTRIM ()
 - (iii) LPAD ()
 - (iv) UPPER ()