

**B.Sc. (Part—II) Semester—IV Examination**  
**COMPUTER SCIENCE/COMPUTER APPLICATION/INFORMATION TECHNOLOGY**  
**(New)**  
**(RDBMS and PL/SQL)**

Time : Three Hours]

[Maximum Marks : 80

**N.B. :—** (1) **ALL** questions are compulsory.

(2) Question No. 1 carries 8 marks and all other questions carry 12 marks each.

(3) Assume suitable data and draw well labelled diagram wherever necessary.

1. (A) Fill in the blanks :

(i) BCNF stands for \_\_\_\_\_.

(ii) \_\_\_\_\_ clause is used to sort the contents of table.

(iii) \_\_\_\_\_ function measures all the rows in entire table.

(iv) \_\_\_\_\_ section is the execution section of PL/SQL.

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(B) Choose correct alternative :

(i) Non key attribute of one table becomes primary key of another table is called \_\_\_\_\_.

(a) Primary key

(b) Foreign key

(c) Super key

(d) Candidate key

(ii) \_\_\_\_\_ is not SQL component.

(a) DCL

(b) DML

(c) DDL

(d) DSL

(iii) In outer join \_\_\_\_\_ operator combines matching and non matching rows of two tables.

(a) +

(b) %

(c) \*

(d) -

(iv) Hierarchical model has \_\_\_\_\_ connectivity.

(a) One to one

(b) One to many

(c) Many to many

(d) Many to one

2

(C) Answer in one sentence :

(i) What is primary key ?

(ii) What is DBMS ?

(iii) What is block in PL/SQL ?

(iv) What is privilege ?

4

2. (A) Describe hierarchical database model with example.

6

(B) Why database systems are more popular over conventional file system ?

6

**OR**

3. (A) Describe architecture of database system and explain with diagram.

6

(B) What is relation ? Describe relational database model.

6

4. (A) What is E-R diagram ? Describe procedure to reduce E-R diagram into table. 6  
(B) Describe the following terms :  
(i) Functional dependency  
(ii) Entity and entity set. 6
- OR**
5. (A) Describe the following terms :  
(i) Attribute  
(ii) Domain  
(iii) Relation. 6  
(B) What is normalization ? Explain 3NF with example. 6
6. (A) What is SQL ? Explain components of SQL. 6  
(B) Describe various data types used in SQL with suitable example. 6
- OR**
7. (A) Describe the following commands with syntax and example :  
(i) CREATE  
(ii) RENAME  
(iii) UPDATE. 6  
(B) What is data integrity ? Give types of integrity constraints. 6
8. (A) Describe the following functions with example :  
(i) POWER  
(ii) SIGN  
(iii) SIN. 6  
(B) What is join ? Explain equi join with example. 6
- OR**
9. (A) Describe with syntax and example :  
(i) INITCAP  
(ii) INSTR  
(iii) RTRIM. 6  
(B) Describe various date functions with syntax and example. 6
10. (A) What is cursor ? How to use explicit cursor ? Describe with example. 6  
(B) Describe loop control structure in PL/SQL with example. 6
- OR**
11. (A) Describe datatype support by PL/SQL with example. 6  
(B) What are various cursor attributes ? 6
12. (A) Explain the following statements with syntax and example :  
(i) GRANT  
(ii) REVOKE. 6  
(B) How to secure databases ? Explain. 6
- OR**
13. (A) What is transaction ? Describe various transaction control statements. 6  
(B) Describe various levels of data locking in SQL. 6