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.   2

   (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

YBC—15294   1   (Contd.)

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