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

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