

THIRD SEMESTER B.VOC. DEGREE EXAMINATION, NOVEMBER 2016**Software Development****SDC 3IT 10—INTRODUCTION TO RDBMS AND SQL**

Time : Three Hours

Maximum : 80 Marks

Section A

*Answer all questions.
Each question carries 1 mark.*

1. An entity set that does not have sufficient attributes to form a primary key is a :
 - (a) Strong entity set.
 - (b) Weak entity set.
 - (c) Simple entity set.
 - (d) Primary entity set.
2. A ER modelling for a given application leads to :
 - (a) Conceptual data model.
 - (b) Logical data model.
 - (c) External data model.
 - (d) Internal data model.
3. Which of the following operations need the participating relations to be union compatible ?
 - (a) UNION.
 - (b) INTERSECTION.
 - (c) DIFFERENCE.
 - (d) All of the above.
4. To eliminate duplicate rows ——— is used.
 - (a) NODUPLICATE.
 - (b) ELIMINATE.
 - (c) DISTINCT.
 - (d) None of the above.
5. Which statement is used for allocating system privileges to the users ?
 - (a) CREATE.
 - (b) GRANT.
 - (c) REVOKE.
 - (d) ROLE.
6. The DBMS language component which can be embedded in a program is :
 - (a) The data definition language (DDL).
 - (b) The data manipulation language (DML).
 - (c) The database administrator (DBA).
 - (d) A query language.

Turn over

7. Which one of the following is one of the basic types of joins in Oracle DB ?
- (a) Outer join. (b) Self join.
(c) Equijoin. (d) All of the above.
8. How many type of DML triggers are present in SQL server ?
9. ——— command is used to delete a particular column in a relation.
10. A ——— in a table represents a relationship among a set of values.

(10 × 1 = 10 marks)

Section B

*Answer any **eight** questions.
Each question carries 2 marks.*

11. Explain logical data independence.
12. How the primary key of a weak entity is formed ?
13. What is a data model ? List the types of data model used.
14. What is relational calculus ?
15. What is the need of normalization ?
16. What is full functional dependency ?
17. What is the difference between TRUNCATE and DELETE command ?
18. What are domain constraints ?
19. What is meant by SQL join ?
20. What is the use of Union and intersection operation ?
21. What is the need for triggers ?
22. What are the different modes of lock ?

(8 × 2 = 16 marks)

Section C

*Answer any **six** questions.
Each question carries 4 marks.*

23. Construct an E-R diagram for a car insurance company whose customers own one or more cars each. Each car has associated with it zero to any number of recorded accidents. State any assumptions you make.
24. What are the advantages of RDBMS ?

25. Compare relational algebra and relational calculus.
26. With example, explain DDL commands in SQL.
27. What is closure of a set of attributes ?
28. Give SQL statement which creates a STUDENT table consisting of following fields. Name CHAR (40), Class CHAR (6), Marks NUMBER (4), Rank CHAR (8).
29. Explain the creation, deletion and modification of relational schema in SQL.
30. Explain how procedures and functions are called in PL/SQL block ?
31. Create a procedure to find the factorial of a number.

(6 × 4 = 24 marks)

Section D

*Answer any **two** questions.
Each question carries 15 marks.*

32. What are triggers ? How can you declare, open, store and close trigger ? Demonstrate with an example.
33. Explain how to add a NOT NULL column to a table ?
34. Explain the following relational algebra operations with examples :—
 - (a) SELECT.
 - (b) PROJECT.
 - (c) DIFFERENCE.
 - (d) UNION.
35. Explain the fundamental concept of Relational Data Base Management System.

(2 × 15 = 30 marks)