

Roll No.

E-354

M. Sc. (IT) (First Semester)

EXAMINATION, Dec.-Jan., 2020-21

Paper Second

RDBMS AND SQL

Time : Three Hours]

[Maximum Marks : 100

[Minimum Pass Marks : 40

Note : Attempt all Sections as directed.

Section—A

1 each

(Objective/Multiple Choice Questions)

Note : Attempt all questions.

Choose the correct/most appropriate answer and write it in your answer book :

1. The employees are not exposed to the salary details of manager. This is :

(a) Conceptual level data hiding

P. T. O.

- (b) Physical level data hiding
 - (c) External level data hiding
 - (d) None of the above
2. Regardless 1 match in attributes values which operation results all pair of tuples from the two relations :
- (a) Join
 - (b) Cartesian product
 - (c) Intersection
 - (d) Set difference
3. Composite key :
- (a) is made up of more than one number of attributes
 - (b) uniquely identifies an item in a list
 - (c) it is a combination of unique key
 - (d) Both (a) and (b)
4. Which of the following is not a super key of the given relation R with attributes (A, B, C, D, E), primary key of R is AC ?
- (a) ABCDE
 - (b) ACDE
 - (c) ABCE
 - (d) ABDE

5. Relationship among a set of values in a table is represented with :
- (a) Column
 - (b) key
 - (c) Entry
 - (d) Row
6. Which of the following column properties specifies whether or not cells in a column must contain a data value ?
- (a) Null status
 - (b) Data types
 - (c) Default value
 - (d) Data constraints
7. The primary key is selected from the :
- (a) Composite key
 - (b) Candidate key
 - (c) Foreign keys
 - (d) Determinants
8. An instance is
- (a) A set of relationships
 - (b) A set of attributes
 - (c) A set of entities
 - (d) A schema

9. Which of the following is valid for weak entity set ?
- (a) Many to many relationship
 - (b) Many to one relationship
 - (c) One to many relationship
 - (d) One to one relationship
10. Which one of the following is a top to bottom relationship ?
- (a) Hierarchical schema
 - (b) Network schema
 - (c) Relational schema
 - (d) All of the above
11. Which of the following are steps in query processing ?
- (a) Parsing and translation
 - (b) Optimization
 - (c) Evaluation
 - (d) All of the mentioned
12. For the query :
- ```
SELECT employee_name
from department
WHERE employee_name LIKE
' _____ Physical Education';
```

in the above query which of the following can be placed in the blank space ?

- (a) Q
- (b) –
- (c) %
- (d) \$

13. Fill in the blanks to display the salary of an instructor from highest to lowest amount and sorting the instructor name alphabetically :

SELECT \*

FROM instructor

ORDER By salary \_\_\_\_\_, name \_\_\_\_\_.

- (a) Ascending, Descending
- (b) Asc, Desc
- (c) Desc, Asc
- (d) All of the above

14. Which of the following reference to the “data about data” ?

- (a) Directory
- (b) Subdata
- (c) Warehouse
- (d) Metadata

15. Which of the following commands is used to save any transaction permanently into the database ?
- (a) Commit
  - (b) Rollback
  - (c) Save point
  - (d) None of the above
16. Updata that violate \_\_\_\_\_ are disallowed.
- (a) Integrity constraints
  - (b) Transaction control
  - (c) Authorization
  - (d) DDL constraints
17. In order to undo the work of transaction after last commit which one should be used ?
- (a) View
  - (b) Commit
  - (c) Rollback
  - (d) Flashback
18. Which of the following is used for database security ?
- (a) Data encryption
  - (b) A view
  - (c) Fingerprint
  - (d) All of the above

19. Who is responsible to maintain the database ?

- (a) User
- (b) DBMS
- (c) DBA
- (d) All of the above

20. Keyword supported by SQL are :

- (a) SELECT
- (b) INSERT
- (c) DELETE
- (d) All of the above

**Section—B**

2 each

**(Very Short Answer Type Questions)**

**Note :** Attempt all questions.

1. What is DBMS ?
2. Define primary key.
3. What is data dictionary ?
4. What is E-R model ?
5. What is aggregation ?
6. What are triggers ?
7. What is cursors ?
8. Write the advantages of indexing.
9. What is domain constraints ?
10. Write the advantages of packages.

## Section—C

5 each

## (Short Answer Type Questions)

**Note :** Attempt any *six* questions.

1. Describe different types of DBMS user.
2. Describe generalization with suitable example.
3. Describe 5FN with example.
4. Write a program in PL/SQL for finding sum of 1st 10 natural number.
5. Describe various kinds of authorization in SQL.
6. Write a brief note on query processing.
7. What is embedded SQL ?
8. Describe foreign key with suitable example.

## Section—D

 $7\frac{1}{2}$  each

## (Long Answer Type Questions)

**Note :** Attempt any *four* questions.

1. Explain different types of data models.
2. Explain 1NF, 2NF and 3NF in detail.
3. Describe various types of indexing techniques.
4. Explain different types of join operation.
5. Explain different types of keys.
6. Describe E-R model in detail with suitable example.