

Roll No. ....

Total Printed Pages - 8

**F - 547**

**M.Sc. (Second Semester) (ATKT)  
EXAMINATION, MAY-JUNE, 2022  
(COMPUTER SCIENCE)  
(Paper-First)  
RDBMS (SQL Programming with Oracle)**

*Time : Three Hours]*

*[Maximum Marks:100*

*[Minimum Pass Marks: 40]*

**Note:- Attempt all sections as directed.**

**Section-A**

**(Objective Type Questions)**

**(1 mark each)**

**Note : Attampt all questions:-**

1. Database system have functional components named as:
  - (A) Query processor and storage manager.
  - (B) Relationship manager and query processor
  - (C) Entity processor and query manager.
  - (D) Information processor and storage manager.

[2]

2. Which is the false statement?
  - (A) A transaction must completely succeed or completely fail
  - (B) Data helps in making decisions
  - (C) A set of application programmes used to access, update and manage that data which form the data management system.
  - (D) A database is systematic compilation of records in a computer.
3. DBMS manages the interaction between \_\_\_\_\_ and data-base.
  - (A) End users
  - (B) Clients
  - (C) Users
  - (D) Stake Holders
4. The actual content in the database at a particular point is called \_\_\_\_\_
  - (A) Domain
  - (B) Attribute
  - (C) Parameter
  - (D) Schema
5. Entity Relationship Model is not representation of data-base-
  - (A) Pictorial
  - (B) Graphical
  - (C) Sheet
  - (D) Diagram

**P.T.O.**

**F - 547**

[3]

6. Which of the following can be a multivalued attribute?
- (A) Date-of-birth
  - (B) Name
  - (C) Phone-number
  - (D) All of the mentioned
7. Relational Algebra is a \_\_\_\_\_ query language that takes two relations as input and produces another relation as an output of the query.
- (A) Fundamental
  - (B) Relational
  - (C) Procedural
  - (D) Structural
8. Which of the following is used to denote the selection operation in relational algebra?
- (A)  $\Pi$ (Greek)
  - (B)  $\Lambda$  (Greek)
  - (C)  $\Sigma$  (Greek)
  - (D)  $\Omega$  (Greek)
9. The statement in SQL which allows changing the definition of a table is.
- (A) Create
  - (B) Select
  - (C) Update
  - (D) Alter

F - 547

P.T.O.

[4]

10. Which of the following statements contains an error?
- (A) Select \*from emp where empid=10003.
  - (B) Select empid from emp where empid=10006.
  - (C) Select empid from emp
  - (D) Select empid where empid=1009 and lastname='GELLER'
11. To remove a relation from an SQL database, we use the \_\_\_\_\_ command.?
- (A) Purge
  - (B) Delete
  - (C) Remove
  - (D) Drop table
12. The database language that allows us to access data in a database is called:
- (A) DCL
  - (B) TCL
  - (C) DDL
  - (D) DML
13. PL/SQL block has up to four different sections. How many section is mandatory?
- (A) TWO
  - (B) ONE
  - (C) THREE
  - (D) FOUR
14. All steps are using in an Explicit Cursor expect:
- (A) OPEN
  - (B) EXCEPTION
  - (C) DECLARE
  - (D) FETCH

F - 547

[5]

15. How many rows will be inserted in the messages table?

In this program:

```
DECLARE
```

```
v_start_sales NUMBER :=2;
```

```
v_end_sales NUMBER :=100;
```

```
BEGIN
```

```
FOR i IN v_start_sales.v_end_sale LOOP
```

```
INSERT INTO messages (msgid)
```

```
VALUES v_start_sales;
```

```
END LOOP;
```

```
END
```

(A) 0

(B) 99

(C) 100

(D) 1

16. Which of the following is not true about PL/SQL decision making structures?

(A) The IF-THEN-ELSIF statement allows you to choose between several alternatives

(B) The IF statement associates a condition with a sequence of statement enclosed by the keywords THEN and END

(C) The IF statement also adds the keyword ELSE followed by an alternative sequence of statement.

(D) PL/SQL have a CASE statement

F - 547

P.T.O.

[6]

17. Which-one of the following statements about normal forms is FALSE?

(E) A. BCNF is stricter than 3 NF

(F) B. Loss less, dependency-preserving decomposition into BCNF is always possible

(G) C. Lossless, dependency-preserving decomposition into 3 NF is always possible.

(H) D. Any relation with two attributes in BCNF

18. Which is not anomalies that occur when the database is not normalized-

(A) Deletion

(B) Update

(C) Select

(D) Insertion

19. Tables in second normal form (2NF):

(A) Have a composite key

(B) Eliminate the possibility of a insertion anomalies

(C) Eliminate all hidden dependencies

(D) Have all non key fields depend on the whole primary key.

20. Which functional dependency tuypes is/are not present in the following dependencies?

Empno->ENAME, Salary, Deptno, DName

DeptNo->DName

EmpNo->DName

(A) Partial functional dependency

(B) Both Partial and Transitive

(C) Transitive functional dependency

(D) Full functional dependency

F - 547

[7]

**Section- B**  
**(Very Short Answer Type Questions)**

**(2 marks each)**

**Note:- Attempt all questions. Answer using 2-3 sentences.**

1. What is Schema and Instances?
2. What is Data Dictionary?
3. What is attributes?
4. What is embedded query languages?
5. What do you understand by view in SQL?
6. What is Nested queries?
7. What is purity function?
8. What is Sub Program?
9. What is Functional Dependencies?
10. What is Indexing?

**Section-C**  
**(Short Answer type Questions)**

**(3 marks each)**

**Note:- Attempt all questions. Answer precisely using < 75 words.**

1. What is the Database language? Explain it.
2. What is data independency?
3. What is difference between weak and strong entity?
4. What is Domain relational calculus?
5. What is Application Programming Interface?
6. What do you mean by aggregate functions? Explain its.
7. Write the data types of PL/SQL.
8. What are advantage of packages?
9. What do you understand by multi valued dependency?
10. What is Hashing Techniques?

[8]

**Section-D**  
**(Long Answer type Questions)**

**(6 marks each)**

**Note:- Attempt all questions. Answer precisely using 150 words.**

1. What data problems tend to arise in application development? What are the advantages of the DBMS approach to application development? Why is the Relational Database Approach better than earlier methods?

**OR**

What do you mean by Data Model? Explain the different type of models.

2. Construct an E-R diagram for a hospital with a set of patient and a set of medical doctors. Associate with each patient a log of the various tests and examination conducted.

**OR**

What is relational algebra? Explain the basic operations of relational algebra with suitable example.

3. What is the use of the following in table? Explain with example.

(i) ORDER BY (ii) GROUP BY (iii) DROP (iv) UPDATE

**OR**

Write the PL/SQL program for print following series

1 2 4 8 .....N

4. Write the any one PL/SQL Program by using cursors in packages.

**OR**

Write the PL/SQL Program to find the greatest number among three numbers using function.

5. What do you mean by pitfalls in database design? Explain the various types of anomalies.

**OR**

What is the importance of the Normalization? How many types of Normalization? Explain 1NF, 2NF and 3NF with example.