Zeal Education Society's

ZEAL POLYTECHNIC, PUNE

NARHE | PUNE -41 | INDIA

DEPARTMENT OF COMPUTER ENGINEERING

SECOND YEAR (SY)

DIPLOMA IN COMPUTER ENGINEERING

SCHEME: I **SEMESTER: III**

NAME OF SUBJECT: DATABASE MANAGEMENT SYSTEM

Subject Code: 22319

UNIT WISE MULTIPLE CHOICE QUESTIONS BANK

Question Bank for Multiple Choice Questions

Program: Diploma in Computer Engineering	**Program Code:- CO**
Scheme:- I	**Semester:- Third**
Course:- Database Management System	**Course Code:- 22319**

Unit 01 – Database System Concepts	**Marks:-12**

1.1 Concept of Data, database, DBMS, advantages of DBMS over file processing system, Application of database
1.2 Three level Architecture for database system
1.3 Data abstraction: Different levels of data abstraction, Instance and schema, Data independence-Logical and Physical independence
1.4 Overall Structure of DBMS
1.5 Data Modeling: Record based logical model-Relational ,Network, Hierarchical
1.6 Data Modeling Using the E-R Model: Entity Relationship Model, Strong Entity set, Weak Entity set, Types of Attributes, E-R Diagrams

Question 1: A collection of interrelated records is called a
(A) Database
(B) Spreadsheet
(C) Management information system
(D) Text file
Answer: A

Question 2: The method of file organization in which data records in a file are arranged in a specified order according to key field is known as the
(A) Sequential access method
(B) Queuing method
(C) Predetermined method
(D) Direct access method
Answer: A

Question 3: Unlike filters queries can be saved as in a database.
(A) Database
(B) Filters
(C) Objects
(D) Any of the above
Answer: C

Question 4: External database is
(A) Database created using DBMS package
(B) Database created in MS-Word
(C) Database created in EXCEL
(D) All of the above
Answer: A

Question 5: ROLLBACK in a database is_____statement.
(A) DDL
(B) DML
(C) DCL
(D) TCL
Answer: D

Question 6: Report generators are used to
(A) Store data input by a user
(B) Retrieve information from files
(C) Answer queries
(D) Both (b) and (c)
Answer: D

Question 7: The logical data structure with a one-to-many relationship is a
(A) Hierarchical/ Tree
(B) Chain
(C) Network
(D) All of these
Answer: A

Question 8: In a database, related fields are grouped to
(A) File
(B) Bank
(C) Menu
(D) Data record
Answer: D

Question 9: The database environment has all the following components except
(A) Database administrator
(B) Database
(C) Users
(D) Separate files
Answer: D

Question 10: Which database handles full text data, image, audio and video?
(A) Multimedia database
(B) Video on demand database
(C) Graphics database
(D) Transaction database
Answer: A

Question 11: In a large DBMS
(A) each user can access every sub schema
(B) each sub schema contains every field in the logical schema
(C) each user can "see" only a small part of the entire database
(D) all of these
Answer: C

Question 12: A network schema
(A) stores data in tables
(B) restricts the structure to a one-to-many relationship
(C) permits many-to-many relationships
(D) none of these
Answer: C

Question 13: Administrative supervision of database activities is the responsibility of the
(A) DB manager
(B) DP manager
(C) VP-DP administration
(D) Database administrator
Answer: D

Question 14: A file consists of
(A) Fields and records
(B) Records and sorts
(C) Fields and sorts
(D) Databases and fields
Answer: A

Question 15: An entry in the telephone book can be compared to a
(A) Field
(B) Record
(C) File
(D) Database
Answer: B

Question 16: In a database, a network structure
(A) Allows many-to-many relationship
(B) Is a physical representation of the data
(C) Allows only one-to-one relationship
(D) None of these
Ans: A
Allows many-to-many relationship

Question 17: Which of the following is at the highest level in the hierarchy of data organization?
(A) Database
(B) Data bank
(C) Data file
(D) Data record
Ans: A
Database

Question 18: Which language is used by most of DBMSs for helping their users to access data?
(A) HLL
(B) Query language
(C) SQL
(D) 4 GL
Ans: B
Query language

Question 19: The relational database management (RDBM) system manages data in more than one file at once. How does it organize these files?
(A) Relations
(B) Tables
(C) Tuples
(D) Both (a) and (b)
Ans: D
Both (a) and (b)

Question 20: A table consists of
(A) Rows and cells
(B) Rows and columns
(C) Fields and columns
(D) None of these
Ans: B
Rows and columns

Question 21: A command that lets you change one or more fields in a record is
(A) Look-up
(B) Insert
(C) Modify
(D) None of these
Ans: C
Modify

Question 22: A database management system
(A) is a collection of programs for managing data in a single file
(B) can do more than a record management system
(C) allows simultaneous access to multiple file
(D) both (b) and (c)
Ans: D
both (b) and (c)

Question 23: The physical location of a record is determined by a mathematical formula that transforms a file key into a record location in a/an
(A) Sequential file
(B) Hashed file
(C) Indexed file
(D) B-tree file
Ans: B
Hashed file

Question 24: Information can be transferred between DBMS and a
(A) Graphics program
(B) Word processor program
(C) Spreadsheet program
(D) All of these
Ans: D
All of these

Question 25:
The management information system (MIS) structure with one main computer system us called a
(A) Centralized MIS structure
(B) Decentralized MIS structure
(C) Distributed MIS structure
(D) Hierarchical MIS structure
Ans: A
Centralized MIS structure

Question 26: What is a database?
(A) It is a collection of data arranged in rows
(B) It is a collection of data arranged in rows and columns
(C) It is a collection of data arranged in columns
(D) All of the above
Ans: C
It is a collection of data arranged in columns

Question 27: A record is related to a file as a statement is related to a _____
(A) procedure
(B) data
(C) file
(D) program
Ans: B
data

Question 28: Data independency in DBMS is known as _____
(A) Data modeling
(B) Data hiding
(C) Data consistency
(D) Data capturing
Ans: A
Data modeling

Question 29: We can quickly move a cursor by
(A) Mouse
(B) Printer
(C) Keyboard
(D) Monitor
Ans: A
Mouse

Question 30: A data warehouse
(A) contains numerous naming conventions and formats
(B) is organized around important subject areas
(C) contains only current data
(D) can be updated by end users
Ans: B
is organized around important subject areas

Question 31: An adhoc query is a _____
(A) Pre-planned question
(B) Pre-scheduled question
(C) Spur-of the moment question
(D) None of these
Ans: C
Spur-of the moment question

Question 32: Which is one function of a database management system (DBMS)?
(A) Preventing errors arising, while enabling multiple, simultaneous users
(B) Deciding what to do with legacy systems
(C) Identifying what a user needs
(D) Ensuring usability
Ans: A
Preventing errors arising, while enabling multiple, simultaneous users

Question 33: When data changes in multiple lists and all lists are not updated, this causes
(A) Data redundancy
(B) Data inconsistency
(C) Duplicate data
(D) Information overload
Ans: B
Data inconsistency

Question 34: An application where only one user accesses the database at a given time is an example of a(n)_____
(A) Single-user database application
(B) Multiuser database application
(C) E-commerce database application
(D) Data mining database application
Ans: A
Single-user database application

Question 35: Databases overall structure is maintained in a file called
(A) Control file
(B) Data file
(C) Redolog file
(D) None of these
Ans: A
Control file

Question 36: The first step in the transaction processing cycle is _____
(A) Audit
(B) Database operations
(C) User inquiry
(D) Data entry
Ans: D
Data entry

Question 37: A tuple is a
(A) row of a table
(B) key of a table
(C) column of a table
(D) two-dimensional table
Ans: A
row of a table

Question 38: The following are components of a database except _____
(A) reports
(B) indexes
(C) metadata
(D) user data
Ans: A
reports

Question 39:_____is one reason for problems of data integrity.
(A) Data redundancy
(B) Security constraints
(C) Data inconsistency
(D) Data availability constraints
Ans: A
Data redundancy

Question 40: The smallest logical data entity is called a data item or data
(A) Field
(B) Collection
(C) Base
(D) Bank
Ans: A
Field

Question 41:_____represents raw facts, whereas____is data made meaningful.
(A) Data, information
(B) Information, reporting
(C) Information, bits
(D) Records, bytes
Ans: A
Data, information

Question 42: Which of the following places the common data elements in order from smallest to largest?
(A) Character, file record, field, database
(B) Character, record, field, file, database
(C) Bit, byte, character, record, field, file, database
(D) Character, field, record, file, database
Ans: D
Character, field, record, file, database

Question 43: A collection of unprocessed items is _____
(A) Reports
(B) Memory
(C) Data
(D) Information
Ans: C
Data

Question 44: A collection of conceptual tools for describing data, relationships, semantics and constraints is referred to as
(A) DBMS
(B) Data model
(C) Database
(D) ER model
Ans: B
Data model

Question 45: A telephone number, a birth date, and a customer name are all examples of
(A) A database
(B) A file
(C) Data
(D) A record
Ans: D
A record

Question 46: The issues that deals with the collection and use of data about individuals is
(A) Accuracy
(B) Access
(C) Privacy
(D) Publicity
Ans: C
Privacy

Question 47: The database administrator is, in effect, the coordinator between them_____and the _____
(A) Database, users
(B) Application program; database
(C) DBMS; database
(D) Application programs; users
Ans: A
Database, users

Question 48: In order to understand DBMS, it is important to understand?
(A) The physical schema
(B) One sub schema
(C) All sub schema that are system support
(D) Both (a) and (b)
Ans: B
One sub schema

Question 49: Where will we find the referential integrity command?
(A) Table
(B) Tools
(C) Format
(D) None of these
Ans: D
None of these

Question 50: The DBMS that is most difficult to use is _____
(A) Oracle Corporation's Oracle
(B) Microsoft's Access
(C) Microsoft's SQL Server
(D) None of these
Ans: A
Oracle Corporation's Oracle

Question 51: Which of the following component of a computer system is the most important to a database management system?
(A) High speed, large capacity disk
(B) High resolution video display
(C) Mouse
(D) Printer
Ans: A
High speed, large capacity disk

Question 52: A collection of interrelated records is called a
(A) Database
(B) Spreadsheet
(C) Management information system
(D) Text file
Ans: A
Database

Question 53: In a relational schema, each tuple is divided into fields called
(A) Domains
(B) Queries
(C) Relations
(D) None of these
Ans: A
Domains

Question 54: The logical data structure with a one-to-many relationship is a
(A) Tree/ Hierarchical
(B) Chain
(C) Network
(D) All of these
Ans: A
Tree/ hierarchical

Question 55: In a database, related fields are grouped to
(A) File
(B) Bank
(C) Menu
(D) Data record
Ans: D
Data record

Question 56: A DBMS that combines a DBMS and an application generator is _____
(A) Oracle Corporation's Oracle
(B) Microsoft's SQL Server
(C) Microsoft's Access
(D) None of these
Ans: C
Microsoft's Access

Question 57:
The distinguishable parts of a record are called
(A) Fields
(B) Files
(C) Data
(D) All of these
Ans: A
Fields

Question 58: In E-R diagram, relationship is represented by
(A) Diamond shaped
(B) Dashed shaped
(C) Ellipse shaped
(D) Rectangle shaped
Ans : A
Diamond shaped

Question 59: A_____is an abstract model that describes how the data are organised and represented.
(A) Database
(B) Schema
(C) Instances
(D) Data model
Ans: D
Data model

Question 60:_____describe what is in database fields.
(A) Field names
(B) Field definitions
(C) Field markers
(D) Structures
Ans: A
Field names

Question 61: The most popular commercial DBMS is
(A) Oracle
(B) MySQL
(C) Microsoft Access
(D) Microsoft SQL Server
Ans: A
Oracle

Question 62: A_____consists of a collection of interrelated data and a collection of programs to access that data.
(A) DBA
(B) DBMS
(C) Schema
(D) Database
Ans: B
DBMS

Question 63:
In a relational model, relations are termed as
(A) Rows
(B) Tables
(C) Attributes
(D) Tuples
Ans: B
Tables

Question 64: A database management system
(A) Allows simultaneous access to multiple files
(B) Can do more than a record management system
(C) Is a collection of programs for managing data into a single file
(D) Both a and b
Ans: D
Both a and b

Question 65: Which of the following is/are the primary features of a DBMS?
(A) To provide an environment that is congenial to user
(B) To store the information
(C) To retrieve information
(D) All of the above
Ans: D
All of the above

Question 66: In an E-R diagrams, ellipses represents
(A) Attributes
(B) Link between attributes and entity sets
(C) Relation among entity set
(D) Entity set
Ans: A
Attributes

Question 67: In a relational modes, a cardinality is termed as
(A) Number of constraints
(B) Number of tables
(C) Number of attributes
(D) Number of tuples
Ans: D
Number of tuples

Question 68: Which of the following is not a type of database?
(A) Relational
(B) Hierarchical
(C) Network
(D) Transition
Ans: D
Transition

Question 69: DBMS helps to achieve
(A) Data independence
(B) More redundancy
(C) Centralized manner to control of data
(D) Both a and c
Ans: D
both a and c

Q. 70: What do you mean by one to many relationship between Teacher and Class table?
A. One class may have many teachers
B. One teacher can have many classes
C. Many classes may have many teachers
D. Many teachers may have many classes
Answer: One teacher can have many classes **[Option: B]**

Q. 71: What are the different views to present a Table?
A. Datasheet View
B. Design View
C. Pivot Table View
D. All of Above
Answer: All of Above **[Option: D]**

Q. 72: In one-to-many relationship the table on 'many' side is called _____
A. Parent
B. Child
C. Sister
D. Master
Answer: Child **[Option: B]**

Q. 73: In which state one gathers and list all the necessary fields for the database design project.
A. Data Definition
B. Data Refinement
C. Establishing Relationship
D. None Of The Above
Answer: Data Definition **[Option: A]**

Q. 74: In one-to-many relationship the table in 'one' side is called _____
A. Child
B. Owner
C. Parent
D. Owner
Answer: Parent [Option: C]

Q. 75: It is used to establish an association between related tables.
A. Line
B. Relationship
C. Primary Key
D. Records
Answer : Relationship [Option: B]

Q. 76: Which name must be unique within a database?
A. Table
B. Field
C. Record
D. Character
Answer: Table [Option: A]

Q. 77: The third stage of designing a database is when we create_____between tables
A. Relationship
B. Join
C. Query
D. None of These
Answer: Relationship [Option: A]

Q. 78: In a database Table, the each category of information Is called _____
A. Tuple
B. Field
C. Record
D. All Of Above
Answer: Field [Option: B]

Q. 79: which of the following is not a database object?
A. Tables
B. Queries
C. Relationships
D. Reports
Answer: Relationships **[Option: C]**

Q. 80: Which of the following is not a database model?
A. Network Database Model
B. Relational Database Model
C. Object Oriented Database Model
D. None
Answer: None **[Option: D]**

Q. 81: The overall description of a database is called_____.
A. Data integrity
B. Data manipulation
C. Database schema
D. Data definition
Answer: Database schema **[Option: C]**

Q. 82: A data dictionary is a repository that manages _____
A. Memory
B. Metadata
C. Spell Checker
D. Data Validator
Answer: Metadata **[Option: B]**

Question Bank for Multiple Choice Questions

Program: Diploma in Computer Engineering	Program Code:- CO
Scheme:- I	Semester:- Third
Course:- Database Management System	Course Code:- 22319

Unit 02 – Relational Data Model	Marks:-18

2.1 Fundamentals of RDBMS-Record, fields, data types, tables and database
2.2 Concept of RDBMS, E. F Codd"s Rule for RDBMS, Key concepts-Candidate key, Primary key, Foreign key.
2.3 Normalization: Normalization Concepts, Need of Normalization, Types of Normalizatoion-1NF,2NF,3NF
2.4 Introduction to structured query language, Data types in SQL, Components of SQL-DDL,DML,DCL,DQL
2.5 DDL commands: CREATE, ALTER, DROP, TRUNCATE, DESC, RENAME
2.6 Data integrity constraint: types of data integrity constraint: I/O constraint-Primary key
Foreign key, Unique key constraint, business rule constraint-Null, Not Null and check constraint.
2.7 DML commands: INSERT, UPDATE, DELETE
2.8 DCL Commands: COMMIT, ROLLBACK, SAVEPOINT, GRANT and REVOKE
2.9 DQL commands: SELECT
2.10 SQL Operators: Arithmetic Operators, comparison operators, Logical Operators, Set operators, Range searching operators- Between, Pattern matching operators-LIKE

1. Which one of the following is used to define the structure of the relation, deleting relations and relating schemas?
a) DML(Data Manipulation Language)
b) DDL(Data Definition Language)
c) Query
d) Relational Schema
Answer: b
Explanation: Data Definition language is the language which performs all the operation in defining structure of relation.

2. Which one of the following provides the ability to query information from the database and to insert tuples into, delete tuples from, and modify tuples in the database?
a) DML(Data Manipulation Language)
b) DDL(Data Definition Language)
c) Query
d) Relational Schema
Answer: a
Explanation: DML performs the change in the values of the relation.

3. CREATE TABLE employee (name VARCHAR, id INTEGER)
What type of statement is this?
a) DML
b) DDL
c) View
d) Integrity constraint
Answer: b
Explanation: Data Definition language is the language which performs all the operation in defining structure of relation.

4. `SELECT * FROM employee`
What type of statement is this?
a) DML
b) DDL
c) View
d) Integrity constraint
Answer: a
Explanation: Select operation just shows the required fields of the relation. So it forms a DML.

5. The basic data type char(n) is a_____length character string and varchar (n) is_____length character.
a) Fixed, equal
b) Equal, variable
c) Fixed, variable
d) Variable, equal
Answer: c
Explanation: Varchar changes its length accordingly whereas char has a specific length which has to be filled by either letters or spaces.

6. An attribute A of datatype varchar (20) has the value "Avi". The attribute B of data type char(20) has value "Reed". Here attribute A has_____spaces and attribute B has_____spaces.
a) 3, 20
b) 20, 4
c) 20, 20
d) 3, 4
Answer: a
Explanation: Varchar changes its length accordingly whereas char has a specific length which has to be filled by either letters or spaces.

7. To remove a relation from an SQL database, we use the_____command.
a) Delete
b) Purge
c) Remove
d) Drop table
Answer: d
Explanation: Drop table deletes the whole structure of the relation .purge removes the table which cannot be obtained again.

8.
```
DELETE FROM r;   //r - relation
```
This command performs which of the following action?
a) Remove relation
b) Clear relation entries
c) Delete fields
d) Delete rows
Answer: b
Explanation: Delete command removes the entries in the table.

9.
```
INSERT INTO instructor VALUES (10211, 'Smith', 'Biology', 66000);
```
What type of statement is this?
a) Query
b) DML
c) Relational
d) DDL
Answer: b
Explanation: The values are manipulated. So it is a DML.

10. Updates that violate_____are disallowed.
a) Integrity constraints
b) Transaction control
c) Authorization
d) DDL constraints
Answer: a
Explanation: Integrity constraint has to be maintained in the entries of the relation.

11. Which of these query will display the table given below?

Name
Annie
Bob
Callie

a) Select employee from name
b) Select name
c) Select name from employee
d) Select employee
Answer: c
Explanation: The field to be displayed is included in select and the table is included in the from clause.

12. Here which of the following displays the unique values of the column?
SELECT_____dept_name **FROM** instructor;
a) All
b) From
c) Distinct
d) Name
Answer: c
Explanation: Distinct keyword selects only the entries that are unique.

13. The_____clause allows us to select only those rows in the result relation of the_____clause that satisfy a specified predicate.
a) Where, from
b) From, select
c) Select, from
d) From, where
Answer: a
Explanation: Where selects the rows on a particular condition. From gives the relation which involves the operation.

14. The query given below will not give an error. Which one of the following has to be replaced to get the desired output?
SELECT ID, name, dept name, salary * 1.1 WHERE instructor;
a) Salary*1.1
b) ID
c) Where
d) Instructor
Answer: c
Explanation: Where selects the rows on a particular condition. From gives the relation which involves the operation. Since Instructor is a relation it has to have from clause.

15. The_____clause is used to list the attributes desired in the result of a query.
a) Where
b) Select
c) From
d) Distinct
Answer: b
Explanation: None

16. This Query can be replaced by which one of the following?
```
SELECT name, course_id  FROM instructor, teaches  WHERE instructor_ID= teaches_ID;
```
a) Select name, course_id from teaches, instructor where instructor_id=course_id;
b) Select name, course_id from instructor natural join teaches;
c) Select name, course_id from instructor;
d) Select course_id from instructor join teaches;
Answer: b
Explanation: Join clause joins two tables by matching the common column.

17.
```
SELECT * FROM employee WHERE salary>10000 AND dept_id=101;
```
Which of the following fields are displayed as output?
a) Salary, dept_id
b) Employee
c) Salary
d) All the field of employee relation
Answer: d
Explanation: Here * is used to select all the fields of the relation.

18.

Employee_id	Name	Salary
1001	Annie	6000
1009	Ross	4500
1018	Zeith	7000

This is Employee table.
Which of the following employee_id will be displayed for the given query?
```
SELECT * FROM employee WHERE employee_id>1009;
```
a) 1009, 1001, 1018
b) 1009, 1018
c) 1001
d) 1018
Answer: d
Explanation: Greater than symbol does not include the given value unlike >=.

19. 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";
Answer: d
Explanation: This query do not have from clause which specifies the relation from which the values has to be selected.

20. In the given query which of the keyword has to be inserted?

```
INSERT INTO employee_____(1002,Joey,2000);
```

a) Table
b) Values
c) Relation
d) Field

Answer: b

Explanation: Value keyword has to be used to insert the values into the table.

21.

```
SELECT name_____instructor name, course id FROM instructor, teaches WHERE instructor.ID= teaches.ID;
```

Which keyword must be used here to rename the field name?

a) From
b) Rename
c) As
d) Join

Answer: c

Explanation: As keyword is used to rename.

22.

```
SELECT * FROM employee WHERE dept_name="Comp Sci";
```

In the SQL given above there is an error . Identify the error.

a) Dept_name
b) Employee
c) “Comp Sci”
d) From

Answer: c

Explanation: For any string operations single quoted(„) must be used to enclose.

23. Which one of the following has to be added into the blank to select the dept_name which has Computer Science as its ending string?

```
SELECT emp_name FROM department WHERE dept_name LIKE "_____Computer Science";
```

a) %
b) _
c) ||
d) $

Answer: a

Explanation: The % character matches any substring.

24. "_ _ _ "matches any string of_____three characters. "_ _ _ %" matches any string of at _____ three characters.

a) Atleast, Exactly
b) Exactly, Atleast
c) Atleast, All
d) All, Exactly

Answer: b

Explanation: None.

25. By default, the order by clause lists items in_____order.

```
SELECT name FROM instructor HERE dept name = 'Physics"ORDER BY name;
```

a) Descending
b) Any
c) Same
d) Ascending

Answer: d

Explanation: Specification of descending order is essential but it not for ascending.

26. SELECT * FROM instructor ORDER BY salary ____, name _ ;
To display the salary from greater to smaller and name in ascending order which of the following options should be used?
a) Ascending, Descending
b) Asc, Desc
c) Desc, Asc
d) Descending, Ascending
Answer: c
Explanation: None.

27. SELECT name FROM instructor WHERE salary <= 100000 AND salary >= 90000;
This query can be replaced by which of the following ?
a) **SELECT** name **FROM** instructor **WHERE** salary **BETWEEN** 90000 **AND** 100000;
b) **SELECT** name **FROM** employee **WHERE** salary <= 90000 **AND** salary>=100000;
c) **SELECT** name **FROM** employee **WHERE** salary **BETWEEN** 90000 **AND** 100000;
d) **SELECT** name **FROM** instructor **WHERE** salary **BETWEEN** 100000 **AND** 90000;
Answer: a
Explanation: SQL includes a between comparison operator to simplify where clauses that specify that a value be less than or equal to some value and greater than or equal to some other value.

28. SELECT instructor.* FROM instructor, teaches WHERE instructor.ID= teaches.ID;
This query does which of the following operation?
a) All attributes of instructor and teaches are selected
b) All attributes of instructor are selected on the given condition
c) All attributes of teaches are selected on given condition
d) Only the some attributes from instructed and teaches are selected
Answer: b
Explanation: The asterisk symbol " * " can be usedin the select clause to denote "all attributes."

29. In SQL the spaces at the end of the string are removed by_____function.
a) Upper
b) String
c) Trim
d) Lower
Answer: c
Explanation: The syntax of trim is Trim(s); where s-string.

30. _____operator is used for appending two strings.
a) &
b) %
c) ||
d) _
Answer: c
Explanation: || is the concatenation operator.

31. Dates must be specified in the format
a) mm/dd/yy
b) yyyy/mm/dd
c) dd/mm/yy
d) yy/dd/mm
Answer: b
Explanation: yyyy/mm/dd is the default format in sql.

32. CREATE DOMAIN YearlySalary NUMERIC(8,2) CONSTRAINT salary VALUE test_____;
In order to ensure that an instructor's salary domain allows only values greater than a specified value use:
a) Value>=30000.00
b) Not null;
c) Check(value >= 29000.00);
d) Check(value)
Answer: c
Explanation: Check(value „condition') is the syntax.

39. In contemporary databases, the top level of the hierarchy consists of_____each of which can contain _____
a) Catalogs, schemas
b) Schemas, catalogs
c) Environment, schemas
d) Schemas, Environment
Answer: a
Explanation: None.

40. Which of the following statements creates a new table temp instructor that has the same schema as an instructor?
a) create table temp_instructor;
b) Create table temp_instructor like instructor;
c) Create Table as temp_instructor;
d) Create table like temp_instructor;
Answer: b
Explanation: None.

Question Bank for Multiple Choice Questions

Program: Diploma in Computer Engineering	**Program Code:- CO**
Scheme:- I	**Semester:- Third**
Course:- Database Management System	**Course Code:- 22319**
Unit 03 – Interactive SQL & Advance SQL: SQL Performance Tuning	**Marks:-14**

3.1 In-built functions: string, arithmetic
3.2 Date and time, Aggregate functions
3.3 Queries using Group by, having and order by clause, Joins-inner and outer join, sub queries
3.4 Views: concept of view, the create view command, updating views ,Views and joins, sub queries, dropping views,
3.5 Sequences: creating sequences, altering sequences, Dropping sequences
3.6 Indexes: index types, creating of an index: simple unique
3.7 Composite index, dropping indexes
3.8 Synonyms: creating Synonyms, Dropping synonyms

1. Which of the following creates a virtual relation for storing the query?
a) Function
b) View
c) Procedure
d) None of the mentioned
Answer: b
Explanation: Any such relation that is not part of the logical model, but is made visible to a user as a virtual relation, is called a view.

2. Which of the following is the syntax for views where v is view name?
a) Create view v as "query name";
b) Create "query expression" as view;
c) Create view v as "query expression";
d) Create view "query expression";
Answer: c
Explanation: <query expression> is any legal query expression. The view name is represented by v.

3. **SELECT** course_id **FROM** physics_fall_2009 **WHERE** building= 'Watson';
Here the tuples are selected from the view. Which one denotes the view.
a) Course_id
b) Watson
c) Building
d) physics_fall_2009
Answer: c
Explanation: View names may appear in a query any place where a relation name may appear.

4. Materialized views make sure that
a) View definition is kept stable
b) View definition is kept up-to-date
c) View definition is verified for error
d) View is deleted after specified time
Answer: b
Explanation: None.

5. Updating the value of the view
a) Will affect the relation from which it is defined
b) Will not change the view definition
c) Will not affect the relation from which it is defined
d) Cannot determine
Answer: a
Explanation: None.

6. SQL view is said to be updatable (that is, inserts, updates or deletes can be applied on the view) if which of the following conditions are satisfied by the query defining the view?
a) The from clause has only one database relation
b) The query does not have a group by or having clause
c) The select clause contains only attribute names of the relation and does not have any expressions, aggregates, or distinct specification
d) All of the mentioned
Answer: d
Explanation: All of the conditions must be satisfied to update the view in sql.

7. Which of the following is used at the end of the view to reject the tuples which do not satisfy the condition in where clause?
a) With
b) Check
c) With check
d) All of the mentioned
Answer: c
Explanation: Views can be defined with a with check option clause at the end of the view definition; then, if a tuple inserted into the view does not satisfy the view's where clause condition, the insertion is rejected by the database system.

8. Consider the two relations instructor and department
Instructor:

ID	Name	Dept_name	Salary
1001	Ted	Finance	10000
1002	Bob	Music	20000
1003	Ron	Physics	50000

Department:

Dept_name	Building	Budget
Biology	Watson	40000
Chemistry	Painter	30000
Music	Taylor	50000

Which of the following is used to create view for these relations together?
a) **CREATE VIEW** instructor_info **AS SELECT** ID, name, building
FROM instructor, department **WHERE** instructor.dept name= department.dept name;
b) **CREATE VIEW** instructor_info **SELECT** ID, name, building **FROM** instructor, department;
c) **CREATE VIEW** instructor_info **AS SELECT** ID, name, building **FROM** instructor;
d) **CREATE VIEW** instructor_info **AS SELECT** ID, name, building **FROM** department;
Answer: a
Explanation: None.

9. For the view Create view instructor_info as
SELECT ID, name, building **FROM** instructor, department
WHERE instructor.dept name= department.dept name;
If we insert tuple into the view as insert into instructor info values ('69987', 'White', 'Taylor');
What will be the values of the other attributes in instructor and department relations?
a) Default value
b) Null
c) Error statement
d) 0
Answer: b
Explanation: The values take null if there is no constraint in the attribute else it is an Erroneous statement.

10. CREATE VIEW faculty AS SELECT ID, name, dept name **FROM** instructor;
Find the error in this query.
a) Instructor
b) Select
c) View …as
d) None of the mentioned
Answer: d
Explanation: Syntax is – create view v as <query expression>;.

11. In ordered indices the file containing the records is sequentially ordered, a_____is an index whose search key also defines the sequential order of the file.
a) Clustered index
b) Structured index
c) Unstructured index
d) Nonclustered index
Answer: a
Explanation: Clustering index are also called primary indices; the term primary index may appear to denote an index on a primary key, but such indices can in fact be built on any search key.

12. Indices whose search key specifies an order different from the sequential order of the file are called_____indices.
a) Nonclustered
b) Secondary
c) All of the mentioned
d) None of the mentioned
Answer: c
Explanation: Nonclustering index is also called secondary indices.

13. An_____consists of a search-key value and pointers to one or more records with that value as their search-key value.
a) Index entry
b) Index hash
c) Index cluster
d) Index map
Answer: a
Explanation: The pointer to a record consists of the identifier of a disk block and an offset within the disk block to identify the record within the block.

14. In a_____clustering index, the index record contains the search-key value and a pointer to the first data record with that search-key value and the rest of the records will be in the sequential pointers.
a) Dense
b) Sparse
c) Straight
d) Continuous
Answer: a
Explanation: In a dense nonclustering index, the index must store a list of pointers to all records with the same search-key value.

15. In a_____index, an index entry appears for only some of the search-key values.
a) Dense
b) Sparse
c) Straight
d) Continuous
Answer: a
Explanation: Sparse indices can be used only if the relation is stored in sorted order of the search key, that is if the index is a clustering index.

16. Incase the indices values are larger, index is created for these values of the index. This is called
a) Pointed index
b) Sequential index
c) Multilevel index
d) Multiple index
Answer: c
Explanation: Indices with two or more levels are called multilevel indices.

17. A search key containing more than one attribute is referred to as a_____search key.
a) Simple
b) Composite
c) Compound
d) Secondary
Answer: b
Explanation: The structure of the index is the same as that of any other index, the only difference being that the search key is not a single attribute, but rather is a list of attributes.

18. In B+ tree the node which points to another node is called
a) Leaf node
b) External node
c) Final node
d) Internal node
Answer: d
Explanation: Nonleaf nodes are also referred to as internal nodes.

19. Insertion of a large number of entries at a time into an index is referred to as_____of the index.
a) Loading
b) Bulk insertion
c) Bulk loading
d) Increase insertion
Answer: c
Explanation: Bulk loading is used to improve efficiency and scalability.

20. While inserting the record into the index, if the search-key value does not appear in the index.
a) The system adds a pointer to the new record in the index entry
b) The system places the record being inserted after the other records with the same search-key values
c) The system inserts an index entry with the search-key value in the index at the appropriate position
d) None of the mentioned
Answer: c
Explanation: If the index entry stores pointers to all records with the same search key value, the system adds a pointer to the new record in the index entry.

21. What is the purpose of the index in sql server?
a) To enhance the query performance
b) To provide an index to a record
c) To perform fast searches
d) All of the mentioned
Answer: d
Explanation: A database index is a data structure that improves the speed of data retrieval operations on a database table at the cost of additional writes.

22. How many types of indexes are there in sql server?
a) 1
b) 2
c) 3
d) 4
Answer: b
Explanation: They are clustered index and non-clustered index.

23. How non- clustered index point to the data?
a) It never points to anything
b) It points to a data row
c) It is used for pointing data rows containing key values
d) None of the mentioned
Answer: c
Explanation: Non clustered indexes have a structure separate from the data rows. A non-clustered index contains the non-clustered index key values and each key value entry has a pointer to the data row that contains the key value.

24. Which one is true about clustered index?
a) Clustered index is not associated with table
b) Clustered index is built by default on unique key columns
c) Clustered index is not built on unique key columns
d) None of the mentioned
Answer: b
Explanation: Non clustered indexes have a structure separate from the data rows. A non-clustered index contains the non-clustered index key values and each key value entry has a pointer to the data row that contains the key value.

25. What is true about indexes?
a) Indexes enhance the performance even if the table is updated frequently
b) It makes harder for sql server engines to work to work on index which have large keys
c) It doesn't make harder for sql server engines to work to work on index which have large keys
d) None of the mentioned
Answer: b
Explanation: Indexes tend to improve the performance.

26. Does index take space in the disk?
a) It stores memory as and when required
b) Yes, Indexes are stored on disk
c) Indexes are never stored on disk
d) Indexes take no space
Answer: b
Explanation: Indexes take memory slots which are located on the disk.

27. What are composite indexes?
a) Are those which are composed by database for its internal use
b) A composite index is a combination of index on 2 or more columns
c) Composite index can never be created
d) None of the mentioned
Answer: b
Explanation: A composite index is an index on two or more columns of a table.

28. If an index is_____the metadata and statistics continue to exists
a) Disabling
b) Dropping
c) Altering
d) Both Disabling and Dropping
Answer: a
Explanation: A database index is a data structure that improves the speed of data retrieval operations on a database table at the cost of additional writes.

29. In_____index instead of storing all the columns for a record together, each column is stored separately with all other rows in an index.
a) Clustered
b) Column store
c) Non clustered
d) Row store
Answer: b
Explanation: A database index is a data structure that improves the speed of data retrieval operations on a database table at the cost of additional writes.

30. A_____index is the one which satisfies all the columns requested in the query without performing further lookup into the clustered index.
a) Clustered
b) Non Clustered
c) Covering
d) B-Tree
Answer: c
Explanation: A covered query is a query where all the columns in the query's result set are pulled from non-clustered indexes.

31. The____condition allows a general predicate over the relations being joined.
a) On
b) Using
c) Set
d) where
answer: a
Explanation: On gives the condition for the join expression.

32. Which of the join operations do not preserve non matched tuples?
a) Left outer join
b) Right outer join
c) Inner join
d) Natural join
Answer: c
Explanation: INNER JOIN: Returns all rows when there is at least one match in BOTH tables.

33. SELECT * FROM student JOIN takes USING (ID);
The above query is equivalent to
a) **SELECT** * **FROM** student **INNER JOIN** takes **USING** (ID);
b) **SELECT** * **FROM** student **OUTER JOIN** takes **USING** (ID);
c) **SELECT** * **FROM** student **LEFT OUTER JOIN** takes **USING** (ID);
d) None of the mentioned
Answer: a
Explanation: Join can be replaced by inner join.

34. What type of join is needed when you wish to include rows that do not have matching values?
a) Equi-join
b) Natural join
c) Outer join
d) All of the mentioned
Answer: c
Explanation: An outer join does not require each record in the two joined tables to have a matching record.

35. How many tables may be included with a join?
a) One
b) Two
c) Three
d) All of the mentioned
Answer: d
Explanation: Join can combine multiple tables.

36. Which are the join types in join condition:
a) Cross join
b) Natural join
c) Join with USING clause
d) All of the mentioned
Answer: d
Explanation: There are totally four join types in SQL.

37. How many join types in join condition:
a) 2
b) 3
c) 4
d) 5
Answer: d
Explanation: Types are inner join, left outer join, right outer join, full join, cross join.

38. Which join refers to join records from the right table that have no matching key in the left table are include in the result set:
a) Left outer join
b) Right outer join
c) Full outer join
d) Half outer join
Answer: b
Explanation: RIGHT OUTER JOIN: Return all rows from the right table and the matched rows from the left table.

39. The operation which is not considered a basic operation of relational algebra is
a) Join
b) Selection
c) Union
d) Cross product
Answer: a
Explanation: None.

40. In SQL the statement select * from R, S is equivalent to
a) Select * from R natural join S
b) Select * from R cross join S
c) Select * from R union join S
d) Select * from R inner join S
Answer: b
Explanation: None.

41. A_____is a query that retrieves rows from more than one table or view:
a) Start
b) End
c) Join
d) All of the mentioned
Answer: c
Explanation: An SQL join clause combines records from two or more tables in a database. It creates a set that can be saved as a table or used as it is. A JOIN is a means for combining fields from two tables by using values common to each.

42. A condition is referred to as _____
a) Join in SQL
b) Join condition
c) Join in SQL & Condition
d) None of the mentioned
Answer: b
Explanation: An SQL join clause combines records from two or more tables in a database. It creates a set that can be saved as a table or used as it is. A JOIN is a means for combining fields from two tables by using values common to each.

43. Which oracle is the join condition is specified using the WHERE clause:
a) Oracle 9i
b) Oracle 8i
c) Pre-oracle 9i
d) Pre-oracle 8i
Answer: c
Explanation: Oracle 9i is a version of the Oracle Database. The i stands for "Internet" to indicate that 9i is "Internet ready".

44. How many join types in join condition:
a) 2
b) 3
c) 4
d) 5
Answer: d
Explanation: INNER JOIN, LEFT JOIN, RIGHT JOIN, FULL JOIN, EQUIJOIN.

45. Which are the join types in join condition:
a) Cross join
b) Natural join
c) Join with USING clause
d) All of the mentioned
Answer: d
Explanation: INNER JOIN, LEFT JOIN, RIGHT JOIN, FULL JOIN, EQUIJOIN are the types of joins.

46. Which product is returned in a join query have no join condition:
a) Equijoins
b) Cartesian
c) Both Equijoins and Cartesian
d) None of the mentioned
Answer: b
Explanation: A Cartesian coordinate system is a coordinate system that specifies each point uniquely in a plane by a pair of numerical coordinates.

47. Which is a join condition contains an equality operator:
a) Equijoins
b) Cartesian
c) Both Equijoins and Cartesian
d) None of the mentioned
Answer: a
Explanation: An equi-join is a specific type of comparator-based join, that uses only equality comparisons in the join-predicate.

48. Which join refers to join records from the write table that have no matching key in the left table are include in the result set:
a) Left outer join
b) Right outer join
c) Full outer join
d) Half outer join
Answer: b
Explanation: A right outer join will return all the rows that an inner join returns plus one row for each of the other rows in the second table that did not have a match in the first table. It is the same as a left outer join with the tables specified in the opposite order.

49. Which operation are allowed in a join view:
a) UPDATE
b) INSERT
c) DELETE
d) All of the mentioned
Answer: d
Explanation: The DELETE statement is used to delete rows in a table. The UPDATE statement is used to update existing records in a table. The INSERT INTO statement is used to insert new records in a table.

50. Which view that contains more than one table in the top-level FROM clause of the SELECT statement:
a) Join view
b) Datable join view
c) Updatable join view
d) All of the mentioned
Answer: c
Explanation: The DELETE statement is used to delete rows in a table. The UPDATE statement is used to update existing records in a table. The INSERT INTO statement is used to insert new records in a table.

51. Which SQL function is used to count the number of rows in a SQL query?
A. COUNT()
B. NUMBER()
C. SUM()
D. COUNT(*)
Answer : OPTION D

52. Which SQL keyword is used to retrieve a maximum value?

A. MOST
B. TOP
C. MAX
D. UPPER

Answer: OPTION C

53. Which of the following SQL clauses is used to DELETE tuples from a database table?

A. DELETE
B. REMOVE
C. DROP
D. CLEAR

Answer: OPTION A

54. _____removes all rows from a table without logging the individual row deletions.

A. DELETE
B. REMOVE
C. DROP
D. TRUNCATE

Answer: OPTION D

55. Which of the following is not a DDL command?

A. UPDATE
B. TRUNCATE
C. ALTER
D. None of the Mentioned

Answer: OPTION A

56. Which of the following are TCL commands?

A. UPDATE and TRUNCATE
B. SELECT and INSERT
C. GRANT and REVOKE
D. ROLLBACK and SAVEPOINT

Answer: OPTION D

57. ___is not a category of SQL command.

A. TCL
B. SCL
C. DCL
D. DDL

Answer: OPTION B

58. If you don't specify ASC or DESC after a SQL ORDER BY clause, the following is used by default ____

A. ASC
B. DESC
C. There is no default value
D. None of the mentioned

Answer: OPTION A

59. Which of the following statement is true?

A. DELETE does not free the space containing the table and TRUNCATE free the space containing the table
B. Both DELETE and TRUNCATE free the space containing the table
C. Both DELETE and TRUNCATE does not free the space containing the table
D. DELETE free the space containing the table and TRUNCATE does not free the space containing the table

Answer: OPTION A

60. What is the purpose of the SQL AS clause?

A. The AS SQL clause is used to change the name of a column in the result set or to assign a name to a derived column
B. The AS clause is used with the JOIN clause only
C. The AS clause defines a search condition
D. All of the mentioned

Answer: OPTION A

61. Which of the following is a legal expression in SQL?

A. SELECT NULL FROM SALES;
B. SELECT NAME FROM SALES;
C. SELECT * FROM SALES WHEN PRICE = NULL;
D. SELECT # FROM SALES;

Answer: OPTION B

62. DCL provides commands to perform actions like

A. Change the structure of Tables
B. Insert, Update or Delete Records and Values
C. Authorizing Access and other control over Database
D. None of Above

Answer: OPTION C

63. The COUNT function in SQL returns the number of _____

A. Values
B. Distinct values
C. Group By
D. Columns

Answer: OPTION A

64. Which data type can store unstructured data in a column?

A. RAW
B. CHAR
C. NUMERIC
D. VARCHAR

Answer: OPTION A

65. A SQL query will not work if there are no indexes on the relations - Is it true?

A. NO
B. YES

Answer: OPTION B

66. Table Employee has 10 records. It has a non-NULL SALARY column which is also UNIQUE.
The SQL statement
SELECT COUNT(*) FROM Employee WHERE SALARY > ANY (SELECT SALARY FROM EMPLOYEE);
prints

A. 10
B. 9
C. 5
D. 0

Answer: OPTION B

67. The SQL statement - SELECT SUBSTR('abcdefghij', INSTR('123321234', '2', 3, 2), 2) FROM DUAL; Prints

A. gh
B. 23
C. bc
D. ab

Answer: OPTION A

68. The SQL statement - SELECT ROUND(45.926, -1) FROM DUAL;

A. is illegal
B. prints garbage
C. prints 045.926
D. prints 50

Answer: OPTION D

69. Which of the following must be enclosed in double-quotes?

A. Dates
B. Column Alias
C. Strings
D. All of the above

Answer: OPTION B

70. Which of the following command makes the updates performed by the transaction permanent in the database?

A. ROLLBACK
B. COMMIT
C. TRUNCATE
D. DELETE

Answer: OPTION B

71. A subquery in an SQL SELECT statement is enclosed in:

A. parenthesis -- (...).
B. brackets -- [...].
C. CAPITAL LETTERS.
D. braces -- {...}.

Answer: OPTION A

72. The result of a SQL SELECT statement is a_____.

A. file
B. report
C. table
D. form

Answer: OPTION C

73. In an SQL SELECT statement querying a single table, according to the SQL-92 standard the asterisk (*) means that:

A. all columns of the table are to be returned.
B. all records meeting the full criteria are to be returned.
C. all records with even partial criteria met are to be returned.
D. None of the above is correct.

Answer: OPTION A

74. The HAVING clause does which of the following?

A. Acts EXACTLY like a WHERE clause.
B. Acts like a WHERE clause but is used for columns rather than groups.
C. Acts like a WHERE clause but is used for groups rather than rows.
D. Acts like a WHERE clause but is used for rows rather than columns.

Answer: OPTION C

75. Which of the following do you need to consider when you make a table in SQL?

A. Data types
B. Primary keys
C. Default values
D. All of the above.

Answer: OPTION D

76. Which of the following operator can be used with a multiple-row subquery?

a. =
b. BETWEEN
c. NOT IN
d. <>

Answer: C

Explanation: The multiple-row subqueries produces multiple rows of results. We can only use the NOT IN operator in SQL can only be used with multiple-row subqueries. And all other operators must be used with single row subquery only. Therefore, BETWEEN, '=', and '<>' operators work with single row subquery. Hence option C is the correct choice.

Evaluate the SQL statement:

77. SELECT ROUND (TRUNCATE (MOD (1600, 10), -1), 2) FROM dual;

What will be displayed?

a. 0
b. 1
c. 00
d. An error statement

Answer: A

Explanation: This statement will give the result 0. A function MOD(1600, 10) returns 0 by calculating the modulus of 1600 when 1600 is divided by 10 until no further whole number can be produced. TRUNCATE(x, y) function truncates x to the decimal precision of y. Finally, the ROUND(x, y) function rounds x to the decimal precision of y. Hence option A is the correct choice.

78. Evaluate the SQL statement:

```
1. SELECT a.emp_name, a.sal, a.dept_id, b.maxsal FROM employees a,
2. (SELECT dept_id, MAX(sal) maxsal FROM employees GROUP BY dept_id) b
3. WHERE a.dept_id = b.dept_id AND a.sal < b.maxsal;
```

Which of the following statement is correct?

a. The statement gives an error at line 1.
b. The statement gives an error at line 6.
c. The statement produces the employee name, salary, department ID, and maximum salary earned in the employee department for all departments that pay less salary than the maximum salary paid in the company.
d. The statement produces the employee name, salary, department ID, and maximum salary earned in the employee department for all employees who earn less than the maximum salary in their department.

Answer: D

Explanation: Option D is the correct choice because it is the example of an inline view, which is the subquery in the FROM clause of the main query.

79. Which of the following statement is correct to display all the cities with the condition, temperature, and humidity whose humidity is in the range of 60 to 75 from the 'whether' table?

a. SELECT * FROM weather WHERE humidity IN (60 to 75)
b. SELECT * FROM weather WHERE humidity BETWEEN 60 AND 75
c. SELECT * FROM weather WHERE humidity NOT IN (60 AND 75)
d. SELECT * FROM weather WHERE humidity NOT BETWEEN 60 AND 75

Answer: B

Explanation:

The BETWEEN is a conditional operator that is used to retrieve values from an expression within a range. It can be used with the SELECT, INSERT, UPDATE and DELETE statement.

The IN is a conditional operator used to reduce the use of multiple OR conditions in the SELECT, INSERT, UPDATE and DELETE statement.

Hence the option B is the correct choice.

80. Find the cities name with the condition and temperature from table 'whether' where condition = sunny or cloudy but temperature >= 60.

a. SELECT city, temperature, condition FROM weather WHERE condition = 'cloudy' AND condition = 'sunny' OR temperature >= 60
b. SELECT city, temperature, condition FROM weather WHERE condition = 'cloudy' OR condition = 'sunny' OR temperature >= 60
c. SELECT city, temperature, condition FROM weather WHERE condition = 'sunny' OR condition = 'cloudy' AND temperature >= 60
d. SELECT city, temperature, condition FROM weather WHERE condition = 'sunny' AND condition = 'cloudy' AND temperature >= 60

Answer: C

Explanation: We know that the AND operator gives the output only when both the first conditions are true. In contrast, the OR operator gives the output when either the first condition OR the second condition is true. Hence the option C is the correct choice.

81. When the wildcard in a WHERE clause is useful?

a. When an exact match is required in a SELECT statement.
b. When an exact match is not possible in a SELECT statement.
c. When an exact match is required in a CREATE statement.
d. When an exact match is not possible in a CREATE statement.

Answer: B

Explanation: The wildcard is a character used to search complex data from the database quickly. We can use it in conjunction with the LIKE or NOT LIKE comparison operators and the WHERE clause to find the result for a specified pattern. Hence, the wildcard is very useful when the exact match is not possible in the SELECT statement.

82. What is the full form of SQL?

a. Structured Query List
b. Structure Query Language
c. Sample Query Language
d. None of these.

Answer: B

Explanation: SQL is a programming language used for managing data in a relational database management system. It is pronounced as See-Qwell.

83. Which of the following is not a valid SQL type?

a. FLOAT
b. NUMERIC
c. DECIMAL
d. CHARACTER

Answer: C

Explanation:

DECIMAL is not a valid SQL type because it is nothing but numeric only in SQL.
NUMERIC has fixed precision, and scale numbers range from -10^38+1 to 10^38-1.
FLOAT has floating precision number ranges from -1.79E + 308 to 1.79E + 308.
CHARACTER is a fixed-width character string data type that can be up to 8000 characters.

84. **Which of the following is not a DDL command?**

a. TRUNCATE
b. ALTER
c. CREATE
d. UPDATE

Answer: D

Explanation: DDL commands are used to define the structure of the database, table, schemas, etc. It enables us to perform the operations like CREATE, DROP, ALTER, RENAME, and TRUNCATE schema objects.

An UPDATE command is used for managing the data stored in a database. It is an example of a DML command that also includes the INSERT and DELETE commands.

85. Which of the following are TCL commands?

a. COMMIT and ROLLBACK
b. UPDATE and TRUNCATE
c. SELECT and INSERT
d. GRANT and REVOKE

Answer: A

Explanation: TCL stands for Transaction Control Commands used for managing the changes made by DML commands like INSERT, DELETE, and UPDATE. The TCL commands are automatically committed in the database; that's why we cannot use them directly while creating tables or dropping them.

86. Which statement is used to delete all rows in a table without having the action logged?

a. DELETE
b. REMOVE
c. DROP
d. TRUNCATE

Answer: D

Explanation: TRUNCATE statement removes all rows in a table without logging the individual row deletions. It uses fewer system and transaction log resources, which makes its execution fast. This statement is similar to the DELETE statement without the WHERE clause.

87. SQL Views are also known as

a. Simple tables
b. Virtual tables
c. Complex tables
d. Actual Tables

Answer: B

Explanation: A view is also known as a virtual table because it contains rows and columns similar to a real table. It shows the table interface but cannot be stored in a database.

88. How many Primary keys can have in a table?

a. Only 1
b. Only 2
c. Depends on no of Columns
d. Depends on DBA

Answer: A

Explanation: The primary key can consist of a single or combination of the field that uniquely identifies each record in a table. It cannot be null or empty. A table may have duplicate columns, but it can contain only one primary key.

89. Which datatype can store unstructured data in a column?

a. CHAR
b. RAW
c. NUMERIC
d. VARCHAR

Answer: B

Explanation:

RAW datatype stores variable-length binary data that can be queried and inserted but not manipulated. Its maximum length is 32767 bytes.

CHAR stores character data in a fixed length.

NUMERIC stores numeric values only.

VARCHAR stores variable string data in a fixed length. Its maximum length is 4000 bytes.

90. Which of the following is not Constraint in SQL?

a. Primary Key
b. Not Null
c. Check
d. Union

Answer: D

Explanation:

Constraint specifies the rule to allow or restrict what data will be stored in a table. The PRIMARY KEY, NOT NULL, and CHECK are the constraints that specify rules for data insertion.

UNION is an operator that combines two or more results from multiple SELECT queries into a single result set.

91. Which of the following is not a valid aggregate function?

a. COUNT
b. COMPUTE
c. SUM
d. MAX

Answer: B

Explanation: Aggregate function is used to perform calculations on multiple values and return the output in a single value. It is mostly used with the SELECT statement. COUNT, SUM, and MAX are all aggregate functions.

COMPUTE is not an aggregate function. It is used to generate totals as an additional column at the end of the result set.

92. **Which data manipulation command is used to combines the records from one or more tables?**

a. SELECT
b. PROJECT
c. JOIN
d. PRODUCT

Answer: C

Explanation: JOIN command is used with the SELECT statement to retrieve data from multiple tables. It must be needed whenever we want to fetch records from two or more tables.

93. Which operator is used to compare a value to a specified list of values?

a. ANY
b. BETWEEN
c. ALL
d. IN

Answer: D

Explanation: The IN operator easily tests the expression if it matches any value in a specified list of values. It reduces the use of multiple OR conditions.

The WHERE or HAVING clause uses the ANY and ALL operators. ANY gives the result when any subquery value matches the specified condition. The ALL give the result when all subquery values match the specified condition.

The BETWEEN operator selects values only in the given range.

94. What operator tests column for absence of data

a. NOT Operator
b. Exists Operator
c. IS NULL Operator
d. None of the above

Hide Answer Workspace

Answer: C

Explanation: The IS NULL operator is used to testing the empty values in the table's column. It returns true if column values are NULL.

The NOT operator gives the result only when the specified condition is not true.

The EXISTS operator used in combination with a subquery, and if a subquery returns any record, this operator returns true. Otherwise, it will return false.

95. In which of the following cases a DML statement is not executed?

a. When existing rows are modified.
b. When a table is deleted.
c. When some rows are deleted.
d. All of the above

Answer: B

Explanation: The DML statement is used to access and manipulate the data in an existing table. Therefore, it cannot be used in table deletion.

96. If we have not specified ASC or DESC after a SQL ORDER BY clause, the following is used by default

a. DESC
b. ASC
c. There is no default value
d. None of the mentioned

Answer: B

Explanation: If we have not specified any sorting with the ORDER BY clause, SQL always uses the ASC as a default sorting order. SQL treats Null as the lowest possible values while sorting.

97. Which of the following statement is true?

a. TRUNCATE free the table space while DELETE does not.
b. Both TRUNCATE and DELETE statements free the table's space.
c. Both TRUNCATE and DELETE statement does not free the table's space.
d. DELETE free the table space while TRUNCATE does not.

Answer: A

Explanation:

The TRUNCATE statement in SQL removes all data from the table and free the table's space.

SQL's DELETE statement removes all data from the table but does not free the table's space.

98. What is returned by INSTR ('JAVAT POINT', 'P')?

a. 6
b. 7
c. POINT
d. JAVAT

Answer: B

Explanation: The INSTR function searches the string for substring and returns the numeric value of the specified character's first occurrence.

99. A command that lets you change one or more field in a table is:

a. INSERT
b. MODIFY
c. LOOK-UP
d. All of the above

Answer: B

Explanation: The modify command is used to change one or more columns in the existing table. It is generally used with ALTER TABLE statement as follows.

LTER TABLE table_name MODIFY column_name column_type;

100. Which of the following is also called an INNER JOIN?

a. SELF JOIN
b. EQUI JOIN
c. NON-EQUI JOIN
d. None of the above

Answer: B

Explanation: The INNER JOIN returns data from the two or more tables that match the specified condition and hides other records. EQUI JOIN is similar to INNER JOIN that returns records for equality or matching column(s) values of the relative tables.

NON-EQUI JOIN is returned those records that are not matching in the relative tables.

SELF JOIN returns records from the tables by joining itself.

101. Which of the following is true about the HAVING clause?

a. Similar to the WHERE clause but is used for columns rather than groups.
b. Similar to WHERE clause but is used for rows rather than columns.
c. Similar to WHERE clause but is used for groups rather than rows.
d. Acts exactly like a WHERE clause.

Answer: C

Explanation: The HAVING clause is always used with the GROUP BY clause and returns the rows where the condition is TRUE.

102. _____clause creates temporary relation for the query on which it is defined.

a. WITH
b. FROM
c. WHERE
d. SELECT

Answer: A

Explanation: The WITH clause in SQL allows us to provide a sub-query block, a name that can be referenced in several places within the main query. It is used for defining a temporary relation whose definition is available by the query in which the WITH clause is associated.

103. The SQL statement:

SELECT ROUND (65.726, -1) FROM DUAL;

Prints:

a. is illegal
b. garbage
c. 726
d. 70

Answer: D

Explanation: Here, the ROUND() function statement will produce the rounded result of the given number 65.726 from the left of decimal point up to 1.

104. Which of the following is true about the SQL AS clause?

a. The AS clause in SQL is used to change the column name in the output or assign a name to a derived column.
b. The SQL AS clause can only be used with the JOIN clause.
c. The AS clause in SQL is used to defines a search condition.
d. All of the mentioned

Answer: A

Explanation: SQL AS clauses are defined for columns and tables to give an alias name. Basically, aliases are created to increase the readability of the query and column headings in the output.

105. _____command makes the updates performed by the transaction permanent in the database?

a. ROLLBACK
b. COMMIT
c. TRUNCATE
d. DELETE

Answer: B

Explanation:

The COMMIT statement is a transactional command used to end the current transaction and make all changes performed in the transaction permanent.
The ROLLBACK statement is a transactional command used to back out or cancels the current transaction changes and restores changed data in its previous state.
TRUNCATE and DELETE are not transactional commands.

106. How can you change "Thomas" into "Michel" in the "LastName" column in the Users table?

a. UPDATE User SET LastName = 'Thomas' INTO LastName = 'Michel'
b. MODIFY Users SET LastName = 'Michel' WHERE LastName = 'Thomas'
c. MODIFY Users SET LastName = 'Thomas' INTO LastName = 'Michel'
d. UPDATE Users SET LastName = 'Michel' WHERE LastName = 'Thomas'

Answer: D

Explanation: The UPDATE statement is used for modifying the table data by using the SET and WHERE clause. The SET clause is used to change the values of the column specified in the WHERE clause. See the below syntax:

UPDATE table SET column1 = expression1, column2 = expression2,... WHERE conditions

107. Which command is used to change the definition of a table in SQL?

a. CREATE
b. UPDATE
c. ALTER
d. SELECT

Answer: C

Explanation: The ALTER statement is used to change our table's definition, such as table name, column name, column constraint, etc. It also allows us to add or delete an existing column in a table. This statement must be used with ADD, DROP, and MODIFY clauses according to the situation.

108. Which type of JOIN is used to returns rows that do not have matching values?

a. Natural JOIN
b. Outer JOIN
c. EQUI JOIN
d. All of the above

Answer: B

Explanation:

OUTER JOIN is the only join that returned the unmatched rows in one or both tables. It can be classified into the following types:

- LEFT JOIN that shows only the unmatched rows from the left table.
- RIGHT JOIN that shows only the unmatched rows from the right table.
- FULL OUTER JOIN that shows the unmatched rows from both tables.

EQUI JOIN shows records for equality or matching column(s) values of the relative tables.

A Natural join can only be performed if at least one common attribute exists between two relations (the attributes should be the same name and domain).

109. A CASE SQL statement is_____?

a. A way to establish a loop in SQL.
b. A way to establish an IF-THEN-ELSE in SQL
c. A way to establish a data definition in SQL
d. All of the above.

Answer: B

Explanation: A CASE statement is one of the control flow function that allows us to write an if-else or if-then-else logic in a SQL query. This expression validates various conditions and shows the output when the first condition is true, and stops traversing. If any condition is not true, it executes the else block. It shows a null value if the else block is not found.

110. Which statement is true regarding routines and triggers?

a. Both run automatically.
b. Both are stored in the database.
c. Both consist of procedural code.
d. Both have to be called to operate.

Answer: C

Explanation:

Routines, also known as subroutines, are the group of multiple commands that can be called whenever required.

Triggers are a special type of stored procedure containing a set of SQL statements that will be fired automatically whenever any database event occurs. It always resides in the system catalog.

So option C is the correct choice.

111. Which statement is true regarding procedures?

a. They include procedural and SQL statements.
b. They work similarly to the functions.
c. It does not need unique names.
d. It cannot be created with SQL statements.

Answer: A

Explanation: A procedure is a prepared SQL code that can be saved in the system and reused whenever needed. It can return one or more values through parameters. So option A is the correct choice.

112. Which of the following is the basic approaches for joining tables?

a. Union JOIN
b. Natural JOIN
c. Subqueries
d. All of the above

Answer: D

Explanation:

We already know that Union and Natural are the approaches for joining two or more tables.
A subquery is a query nested into another SQL query. It can be embedded with SELECT, INSERT, UPDATE or DELETE statement. A subquery is known as the inner query. In many cases, we can use the subquery instead of a JOIN. Therefore, option D is the correct choice.

113. Why we need to create an index if the primary key is already present in a table?

a. Index improves the speed of data retrieval operations on a table.
b. Indexes are special lookup tables that will be used by the database search engine.
c. Indexes are synonyms of a column in a table.
d. All of the above

Answer: A

Explanation: When we define a primary key in a table, the Database Engine enforces the data's uniqueness by creating a unique index for those columns. This indexing process improves data retrieval when the primary key is used in queries. Therefore, we need to create an index if a primary key is already present in a table.

114. Group of operations that form a single logical unit of work is known as

a. View
b. Network
c. Unit
d. Transaction

Answer: D

Explanation: A transaction is a sequential group of statements such as select, insert, update or delete to perform as one single logical unit of work that can be committed or rolled back

115. Shared locks are applied while performing

a. Read operations
b. Write operations
c. A & B both
d. None of the above

Answer: A

Explanation: A shared lock can only be applied while reading or changing in data is performed. It is also known as the READ lock. Therefore, option A is the right choice.

116. Sequence can generate

a. Numeric value
b. Alphanumeric value
c. A & B both
d. None of the above

Answer: C

Explanation: A sequence is an arrangement of integers that generates unique values (numeric or alphanumeric) in ascending order on specific demand.

117. A sequence in SQL can generate a maximum number:

a. 39 digits
b. 38 digits
c. 40 digits
d. 37 digits

Answer: B
Explanation: The number generated using a sequence can have a maximum of 38 digits.

118. Which of the following is the correct order of a SQL statement?

a. SELECT, GROUP BY, WHERE, HAVING
b. SELECT, WHERE, GROUP BY, HAVING
c. SELECT, HAVING, WHERE, GROUP BY
d. SELECT, WHERE, HAVING, GROUP BY

Answer: B
Explanation: In SQL statements, the WHERE clause always comes before GROUP BY, and the HAVING clause always comes after GROUP BY. Therefore, option B is the correct choice.

119. What is the difference between a PRIMARY KEY and a UNIQUE KEY?

a. Primary key can store null value, whereas a unique key cannot store null value.
b. We can have only one primary key in a table while we can have multiple unique keys
c. Primary key cannot be a date variable whereas unique key can be
d. None of these

Answer: B
Explanation:
The primary key is a single or combination of the field that identifies each record in a table uniquely. It cannot take a NULL value. A table can have only one primary key. Also, we can create a date variable as a primary key in a table.
Unique key also determines each row of the table uniquely, but it can take null value into. A table can have more than one unique key. We cannot create a date variable as a unique key in a table.

120. Which of the following are the synonyms for Column and ROW of a table?

1. Row = [Tuple, Record]
2. Column = [Field, Attribute]
3. Row = [Tuple, Attribute]
4. Columns = [Field, Record]

a. 1 and 2
b. 3 and 4
c. Only 1
d. Only 2

Answer: A
Explanation: In Database Management System (DBMS), we can say that each record is also called a tuple and rows. And each column is called fields and attributes.

121. Which operator is used to compare the NULL values in SQL?

a. Equal
b. IN
c. IS
d. None of Above

Answer: C
Explanation:
In SQL, we can use the IS operator to compare a NULL. This operator can be used with select, insert, update, and delete commands.

The IN is a conditional operator used to reduce the use of multiple OR conditions in select, insert, update, and delete commands.
The EQUAL operator is used to check whether the given expressions are equal or not. The condition becomes true if the expressions are equal and then return matched records.

122. Which of the following statement is correct regarding the difference between TRUNCATE, DELETE and DROP command?
I. DELETE operation can be rolled back but TRUNCATE and DROP operations cannot be rolled back.
II. TRUNCATE and DROP operations can be rolled back but DELETE operations cannot be rolled back.
III. DELETE is an example of DML, but TRUNCATE and DROP are examples of DDL.
IV. All are an example of DDL.

a. I and III
b. II and III
c. II and IV
d. II and IV

Answer: A
Explanation:
DELETE is used to remove existing records from the database. DELETE command is a DML statement so that it can be rolled back.
DROP is used to delete the whole table, including its structure. DROP is a DDL command that lost the data permanently, and it cannot be rolled back.
TRUNCATE is used to delete the whole records, but it preserves the table's schema or structure. TRUNCATE is a DDL command, so it cannot be rolled back.
Hence, option A is the correct answer.

123. Which of the following options are correct regarding these three keys (Primary Key, Super Key, and Candidate Key) in a database?
I. Minimal super key is a candidate key
II. Only one candidate key can be a primary key
III. All super keys can be a candidate key
IV. We cannot find a primary key from the candidate key

a. I and II
b. II and III
c. I and III
d. II and IV

Answer: A
Explanation: Candidate key in SQL is a set of fields that identify each record in a table uniquely. It is a super key with no repeated fields that means the minimal super key is a candidate key. A table can contain multiple candidate keys, but it can have only a single primary key. Therefore option A is the correct choice.

124. When the wildcard in a WHERE clause is useful?

a. When an exact match is required in a SELECT statement.
b. When an exact match is not possible in a SELECT statement.
c. When an exact match is required in a CREATE statement.
d. When an exact match is not possible in a CREATE statement.

125. _____is NOT a type of constraint in SQL language?

a. FOREIGN KEY
b. PRIMARY KEY
c. UNIQUE
d. ALTERNATE KEY

126. Find the cities name with the condition and temperature from table 'whether' where condition = sunny or cloudy but temperature >= 60.

a. SELECT city, temperature, condition FROM weather WHERE condition = 'cloudy' AND condition = 'sunny' OR temperature >= 60
b. SELECT city, temperature, condition FROM weather WHERE condition = 'cloudy' OR condition = 'sunny' OR temperature >= 60
c. SELECT city, temperature, condition FROM weather WHERE condition = 'sunny' OR condition = 'cloudy' AND temperature >= 60
d. SELECT city, temperature, condition FROM weather WHERE condition = 'sunny' AND condition = 'cloudy' AND temperature >= 60

Hide Answer Workspace

Answer: C

Explanation: We know that the AND operator gives the output only when both the first conditions are true. In contrast, the OR operator gives the output when either the first condition OR the second condition is true. Hence the option C is the correct choice.

127. Which of the following statement is correct to display all the cities with the condition, temperature, and humidity whose humidity is in the range of 60 to 75 from the 'whether' table?

a. SELECT * FROM weather WHERE humidity IN (60 to 75)
b. SELECT * FROM weather WHERE humidity BETWEEN 60 AND 75
c. SELECT * FROM weather WHERE humidity NOT IN (60 AND 75)
d. SELECT * FROM weather WHERE humidity NOT BETWEEN 60 AND 75

Hide Answer Workspace

Answer: B

Explanation:

The BETWEEN is a conditional operator that is used to retrieve values from an expression within a range. It can be used with the SELECT, INSERT, UPDATE and DELETE statement.

The IN is a conditional operator used to reduce the use of multiple OR conditions in the SELECT, INSERT, UPDATE and DELETE statement.

Hence the option B is the correct choice.

128. _____is a program that performs some common action on database data and also stored in the database.

a. Stored Procedure
b. Trigger
c. Stored Function
d. None of the above

Hide Answer Workspace

Answer: A

Explanation: A stored procedure is a precompiled set of SQL commands that we can save in our database. It can be reused over and over again whenever we need to perform some common tasks.

A trigger is also the set of SQL commands that reside in a system catalog, but it will be invoked automatically in response to an event. It is a special kind of stored procedure.

A stored function is one of the types of stored programs used to encapsulate the common business rules or formulas reusable in stored programs. It returns a single value or sometimes does not produce any result.

Hence the option A is the correct choice.

129. Which statement is used to get all data from the student table whose name starts with p?

a. SELECT * FROM student WHERE name LIKE '%p%';
b. SELECT * FROM student WHERE name LIKE 'p%';
c. SELECT * FROM student WHERE name LIKE '_p%';
d. SELECT * FROM student WHERE name LIKE '%p';

Hide Answer Workspace

Answer: B

Explanation: The '%' symbol indicates zero or more characters next to where it will be used. And the _ symbol is used to match exactly one character. Therefore option B is the correct choice.

130. What is the advantage of the clustered index?

a. It is fast to update the records.
b. It does not need extra work for SQL queries.
c. It minimizes the page transfer and maximizes the cache hits.
d. None of the above is correct.

Hide Answer Workspace

Answer: C

Explanation: A clustered index is actually a table where the data is stored in rows. It stores data in only one way based on the key values. It helps us to store data and indexes simultaneously but takes a long time to update the records. They are scan and index seek that minimizes the page transfer and maximizes the cache hits. Hence option C is the correct choice.

131. Evaluate the SQL statement:

1. SELECT a.emp_name, a.sal, a.dept_id, b.maxsal FROM employees a,
2. (SELECT dept_id, MAX(sal) maxsal FROM employees GROUP BY dept_id) b
3. WHERE a.dept_id = b.dept_id AND a.sal **< b.maxsal**;

Which of the following statement is correct?

a. The statement gives an error at line 1.
b. The statement gives an error at line 6.
c. The statement produces the employee name, salary, department ID, and maximum salary earned in the employee department for all departments that pay less salary than the maximum salary paid in the company.
d. The statement produces the employee name, salary, department ID, and maximum salary earned in the employee department for all employees who earn less than the maximum salary in their department.

Hide Answer Workspace

Answer: D

Explanation: Option D is the correct choice because it is the example of an inline view, which is the subquery in the FROM clause of the main query.

132. Which of the following are the DATETIME data types that can be used in column definitions?

a. TIMESTAMP
b. INTERVAL MONTH TO DAY
c. INTERVAL YEAR TO MONTH
d. TIMESTAMP WITH DATABASE TIMEZONE

Hide Answer Workspace

Answer: A, C

Explanation:

Options A and C are correct. It is because they are the DATETIME data types that can be used to specify column definitions.

Option B cannot be used to specify the column definitions because there are only INTERVAL DAY TO SECOND and INTERVAL YEAR TO MONTH data types.
Option D cannot be used to specify the column definitions because there are only TIMESTAMP WITH TIME ZONE and TIMESTAMP WITH LOCAL TIME ZONE data types.

133. Which data dictionary table can be used to show the object privileges granted to the user on specific columns?

a. USER_TAB_PRIVS_MADE
b. USER_COL_PRIVS_MADE
c. USER_TAB_PRIVS
d. USER_COL_PRIVS

Hide Answer Workspace
Answer: D
Explanation: The USER_COL_PRIVS data dictionary table will display the object privileges granted to the user on specific columns. The USER_TAB_PRIVS data dictionary table will display the object privileges granted to the user on the tables. Options A and B are not data dictionary.

134. Evaluate the SQL statement:

SELECT ROUND (TRUNCATE (MOD (1600, 10), -1), 2) FROM dual;

What will be displayed?

a. 0
b. 1
c. 00
d. An error statement

Hide Answer Workspace
Answer: A
Explanation: This statement will give the result 0. A function MOD(1600, 10) returns 0 by calculating the modulus of 1600 when 1600 is divided by 10 until no further whole number can be produced. TRUNCATE(x, y) function truncates x to the decimal precision of y. Finally, the ROUND(x, y) function rounds x to the decimal precision of y. Hence option A is the correct choice.

135. What is the need for our query to execute successfully on an existing view?

a. The specified table must contain data.
b. We must have a SELECT privilege on the view.
c. We should have a SELECT privilege only on the specified table.
d. The specified table must be in the same database or schema.

Hide Answer Workspace
Answer: B
Explanation: It is required to have a SELECT privilege to query on the existing view. Hence option B is the right choice.

136. Which of the following operator can be used with a multiple-row subquery?

a. =
b. BETWEEN
c. NOT IN
d. <>

Hide Answer Workspace
Answer: C
Explanation: The multiple-row subqueries produces multiple rows of results. We can only use the NOT IN operator in SQL can only be used with multiple-row subqueries. And all other operators must be used with single row subquery only. Therefore, BETWEEN, '=', and '<>' operators work with single row subquery. Hence option C is the correct choice.

137. _____is a constraint that can be defined only at the column level?

a. UNIQUE
b. NOT NULL
c. CHECK
d. PRIMARY KEY

Hide Answer Workspace

Answer: B

Explanation: The SQL NOT NULL constraint prevents inserting NULL values into the specified column. It enforces that a value must be defined for this column cannot accept a NULL value. Hence, we can say that the NOT NULL constraint can be defined only at the column level.

Question Bank for Multiple Choice Questions

Program: Diploma in Computer Engineering	**Program Code:- CO**
Scheme:- I	**Semester:- Third**
Course:- Database Management System	**Course Code:- 22319**
Unit 4: PL/SQL Programming	**Marks:- 16**

4.1 Introduction of PL/SQL, Advantages of PL/SQL, Block structure, execution environment, PL/SQL data types, variable, constant
4.2 Control structure::conditional control. iterative control, Sequential control,
4.3 Exception handling: predefined exception, User defined exception
4.4 Cursor: implicit and explicit cursor, declaring and opening cursor, Fetching a record from cursor, cursor for loops, parameterized cursor
4.5 Procedure: advantages, creating procedure, Executing and deleting a stored procedure
4.6 Functions: advantages, creating function, Executing and deleting a stored function
4.7 Database triggers: use of database triggers, how to apply database triggers, Types of triggers, syntax for creating trigger, deleting trigger

1. **PL / SQL is a completely portable, high-performance transaction processing language.**
   a. True
   b. False

   ANSWER: True
   Explanation:
   PL/SQL is a completely portable, high-performance transaction processing language because of the following advantages:-
   - Support for SQL
   - Support for object-oriented programming
   - Better performance
   - Higher productivity
   - Full portability
   - Tight integration with Oracle
   - Tight security

2. **PL/SQL stored procedures move application code from the server to the client.**
   a. True
   b. False
   ANSWER: False
   Explanation:
   A stored procedure has its own limitations. All the applications are stored on the server and they can be accessed by the clients. If it is stored on clients it becomes difficult to access.

3. **Which is a simple or compound symbol that has a special meaning to PL/SQL?**
   a. Delimiters
   b. Identifiers
   c. Literals
   d. Comments
   ANSWER: Delimiters
   Explanation:
   A delimiter is a sequence of one or more characters used to specify the boundary between separate, independent regions in plain text or other data streams.

4. **How many types of literals are available in PL/SQL?**
   a. 6
   b. 2
   c. 5
   d. 4
   ANSWER: 5
   Explanation:
   PL/SQL supports the following kinds of literals:
   - Numeric Literals
   - Character Literals
   - String Literals
   - BOOLEAN Literals
   - Date and Time Literals

5. **Which operator tests set membership?**
   a. IN Operator
   b. BETWEEN Operator
   c. LIKE Operator
   d. IS NULL Operator
   ANSWER: IN Operator
   Explanation:
   The IN condition helps to reduce the need to use multiple OR conditions.

6. **Which of the following has internal components that can be manipulated individually, such as the elements of an array, record, or table?**
   a. A Composite
   b. A LOB
   c. A Reference
   d. A Scalar
   ANSWER: A Composite
   Explanation:
   A composite has internal components that can be accessed from anywhere.

7. **Which subtypes are used to declare fixed-point numbers with a maximum precision of 38 decimal digits?**
   a. INTEGER,INT, SMALLINT
   b. DOUBLE PRECISION,FLOAT
   c. DEC,DECIMAL,NUMERIC
   d. None of the above
   ANSWER: DEC, DECIMAL, NUMERIC

8. **A RECORD is a collection of data items, which differ from each other in data type, but are logically related.**
   a. True
   b. False
   ANSWER: True

9. **What is the maximum number of ELSE clauses that can be included in an IF clause that is not nested?**
   a. 1
   b. 0
   c. 15
   d. Any number
   ANSWER: 1
   Explanation:
   We can have else clause for every IF clause. But if the IF clause is not nested there is only one else.

10. **"NO_DATA_FOUND" and "TOO_MANY_ROWS" are the two most common errors found when executing a SELECT statement.**
    a. True
    b. False
    ANSWER: True
    Explanation:
    The "NO_DATA_FOUND" error is where the program is not able to find any data. This type of error can be trapped by the exception block.
    The "TOO_MANY_ROWS" error is where one row data is conflicting with another row data so it is unable to fetch a particular data. This error too can be trapped by the exception block.

11. **Varrays are a good choice when -**
    a. The number of elements is known in advance.
    b. The elements are usually all accessed in sequence.
    c. Both A & B
    d. None of the above
    ANSWER: Both A & B
    Explanation:
    A varray can store a fixed sequential collection of elements of the same type. It is used to store ordered collection of data.

12. **When building up a single SQL statement in a string, do not include any semicolon at the end.**
    a. Yes
    b. No
    ANSWER: Yes
    Explanation:
    When we are building a single statement we need not add a semicolon at the end but if we are creating an PL/SQL block then we should add a semicolon at the end of each statement.

13. **Dynamic SQL enables you to build SQL statements dynamically at runtime.**
    a. True
    b. False
    ANSWER: True
    Explanation:
    Dynamic SQL helps to write programs that refer SQL statements whose full text is not known until the runtime.

14. Which of the following returns the current value in a specified sequence.

a. CURRVAL
b. NEXTVAL
c. Both A & B
d. None of the above

ANSWER: CURRVAL

Explanation:

The CURRVAL returns the current value of the sequence.

17) Which operators combine the results of two queries into one result?

a. Set operator
b. Row Operator
c. Both A & B
d. None of the above

ANSWER: Set operator

Explanation:

The set operators combines the results of two queries into a single result. Queries which contain these set operators are known as compound queries.

18) A recursive subprogram is one that calls itself.

a. True
b. False

ANSWER: True

Explanation:

Every recursive call creates a new instance of the items declared in the subprogram including parameters, variables, cursors and exceptions.

19) Which of the following provides a way for your program to select multiple rows of data from the database and then process each row individually.

a. PL/SQL Cursors
b. PL/SQL Trigger
c. PL/SQL Select
d. PL/SQL Process

ANSWER: PL/SQL Cursors

Explanation:

Oracle creates a memory area which is known as the context area where the SQL statement is processed and which contains all the information which is needed for the processing. The cursor is the pointer to this context area.

20) Abbreviate SMTP?

a. Single Mail Transaction Protocol
b. Simple Mail Transfer Protocol
c. Simple Mail Transaction Protocol
d. Simple Mail Transfer Package

ANSWER: Simple Mail Transfer Protocol

Explanation:

SMTP is an internet standard email transmission. This protocol is widespread used today. It by default uses TCP port 25.

21) Which structure executes a sequence of statements repeatedly as long as a condition holds true?
a. Selection structure
b. Iteration structure
c. Sequence structure
d. None of the above
ANSWER: Iteration structure
Explanation:
The iteration structure is obtained by the use of loop constructs.

22) PL/SQL Exception message consists of -
a. Type of Exception
b. An Error Code
c. A message
d. All mentioned above
ANSWER: All mentioned above
Explanation:
The exception is written in an block called as the exception block. The errors are described in this block.

24) The subprogram is called through a database link or as an external procedure.
a. True
b. False
ANSWER: True
Explanation:
The NOCOPY is a hint and not a directive means that the compiler can ignore and pass the parameters by value without producing the errors. The above statement is a situation where the NOCOPY hint will be ignored.

25) The values of any IN OUT parameters are copied before the subprogram is executed.
a. Yes
b. No
ANSWER: Yes
Explanation:
The IN OUT parameters are passed by values by default. During the subprogram execution the temporary variables hold the output parameter values. If the program is normal the values are copied to the actual parameters. If the program exits with an unhandled exception the original parameters remain unchanged.

26) PL/SQL provides a feature to handle the Exceptions which occur in a PL/SQL Block known as exception Handling.
a. True
b. False
ANSWER: True
Explanation:
An exception handling block is used so that we can avoid the errors in the program. The exception message consists of
1. Type of exception
2. An error code
3. A message

27) Which Exception is also known as Oracle named exception handler?
a. Predefined Exception
b. Internal Exception
c. User defined Exception
d. None of the above
ANSWER: Predefined Exception
Explanation:
A predefined exception is the one which is executed whenever a program violates any database rule. Example of this type of exception can be the exception NO_DATA_FOUND.

28) WRAP command is used to encrypt a PL/SQL application.
a. True
b. False
ANSWER: True
Explanation:
The WRAP command is used while we are delivering a PL/SQL application without exposing the source code. Syntax for this would be wrap iname=[file] oname=[file]

29) PL/SQL Expressions are constructed using.
a. Operands
b. Operators
c. Both A & B
d. None of the above
ANSWER: Both A & B
Explanation:
The PL/SQL Expressions are a combination of operands and operators. They can even be constructed using a single of them.

30) Which keyword is used instead of the assignment operator to initialize variables?
a. NOT NULL
b. DEFAULT
c. %TYPE
d. %ROWTYPE
ANSWER: DEFAULT
Explanation:
Using the default value for a variable will give it a typical value. The value for that variable will be fixed.

31) PL/SQL programs are written as lines of text using a specific set of characters.
a. Upper- and lower-case letters A .. Z and a .. z
b. Numerals 0 .. 9
c. Symbols ( ) + - * / < > = ! ~ ^ ; : . ' @ % , " # $ & _ | { } ? [ ]
d. Tabs, spaces, and carriage returns
e. All mentioned above
ANSWER: All mentioned above
Explanation:
PL/SQL is not a case-sensitive language. The character set has some specific set of characters which are used for the writing PL/SQL programs.

32) How many bytes does each character in the AL16UTF16 encoding take up?

a. 1
b. 2
c. 3
d. 6

ANSWER: 2

Explanation:

AL16UTF16 comes with a fixed width that is 2 bytes. They are used when the storage requirement is high otherwise the bytes get wasted.

33) LOB locators are values, which specify the location of the large object.

a. True
b. False

ANSWER: True

Explanation:

A LOB data type is given to any column of a table the values that are stored for references are known as LOB locators which in turn help in specifying the location of large objects.

34) Which statements execute a sequence of statements multiple times?

a. EXIT
b. LOOP
c. Both A & B
d. None of the above

ANSWER: LOOP

Explanation:

A loop helps us in executing a statement or a group of statement multiple times depending on the block of code.

35) Oracle predefined errors are not associated with specific error codes.

a. True
b. False

ANSWER: False

36) Which of the following cannot be used with associative arrays?

a. EXTEND
b. TRIM
c. Both A & B
d. None of the above

ANSWER: Both A & B

Explanation:

The associative arrays are sets of key value pairs where each key is unique and used to locate a corresponding value in the array.

37) In the Restrictions on Record Inserts and Updates, which of the following are not supported?

a. Nested record types
b. Functions that return a record
c. Record inserts and updates using the EXECUTE IMMEDIATE statement
d. All mentioned above

ANSWER: All mentioned above

Explanation:

The restrictions on the record are made on the DML statements. Some of the DML statements are restricted too.

38) By using which clause, the mode is OUT, so you cannot specify a parameter mode for output bind arguments?
a. USING Clause
b. RETURNING INTO Clause
c. Both A & B
d. None of the above
ANSWER: RETURNING INTO Clause
Explanation:
By using the USING clause the default mode is IN, so we need not specify a parameter mode for the input bind arguments. With the RETURNING INTO clause the mode is OUT so we cannot specify a parameter mode for output bind arguments.

39) You can use the BULK COLLECT INTO clause with the EXECUTE IMMEDIATE statement to store values from each column of a query's result set in a separate collection.
a. Yes
b. No
ANSWER: Yes
Explanation:
The BULK sql passes an entire collection to and fro. The BULK COLLECT INTO clause is used to execute the statements immediately.

40) Which of the following returns all distinct rows selected by either query?
a. INTERSECT
b. MINUS
c. UNION
d. UNION ALL
ANSWER: UNION
Explanation: The union operator is used to combine result set of two or more select statements. It avoids duplication.

41) Which statements are used to control a cursor variable?
a. OPEN-FOR
b. FETCH
c. CLOSE
d. All mentioned above
ANSWER: All mentioned above
Explanation:
There are three statements used to control a cursor variable:
1. OPEN-FOR - open a cursor variable for multi-row query
2. FETCH - it fetches the rows for the result set
3. CLOSE - when all the rows are processed the cursor variable is closed.

42) What is the maximum number of triggers that can apply to a single table?
a. 14
b. 10
c. 12
d. 16
ANSWER: 12
Explanation: We can have N number of triggers on a table but the maximum type of triggers on a single table can be 3*2*2=12 that is the division is done as Insert/Update/Delete= 3
Before/After= 2
Row Level/Statement Level=2

43) The variables or expressions passed from the calling subprogram are -
a. Actual Parameters
b. Formal Parameters
c. Both A & B
d. None of the above
ANSWER: Actual Parameters
Explanation:
Variables which are declared in a subprogram specified and referred to in the subprogram body are formal parameters. Variables or the expressions which are passed from the calling subprograms are actual parameters.

44) Subprograms are named PL/SQL blocks that can be called with a set of parameters.
a. True
b. False
ANSWER: True
Explanation:
There are two types of subprograms procedures and functions. The procedure is used to perform an action and the function is used to compute a value.

45) Which of the following is not a schema object?
a. Packages
b. Indexes
c. Public Synonyms
d. Triggers
ANSWER: Public Synonyms
Explanation:
A alternative name for a table,view etc is known as a synonym. A synonym which is accessible to all the users is known as a public synonym. Hence, a public synonym is not a schema object.

46) Which package lets PL/SQL programs read and write operating system (OS) text files?
a. UTL_HTTP
b. UTL_FILE
c. UTL_SMTP
d. None of the above

47) You can pass parameters to procedures or functions in a package.
a. True
b. False
ANSWER: True
Explanation:
The parameters can be passed as default also to the procedures and the functions.

48) When creating a function, in which section will you typically find a return key word?
a. Header Only
b. Declarative
c. Executable and Header
d. Executable and exception handling
ANSWER: Executable and Header
Explanation:
The return keyword is an executable statement. It is mandatory to write this keyword in a function.

49) Which of the following returns the current error message text?
a. SQLERRM
b. SQLCODE
c. Both A & B
d. None of the above
ANSWER: SQLERRM
Explanation: Using this function the associated error message with the most recent raised error exception is displayed. The exception handling section will display this function.

50) Which datatypes are PL/SQL-only datatypes that are more efficient than the SQL datatypes NUMBER or INTEGER for integer arithmetic?
a. PLS_INTEGER
b. BINARY_INTEGER
c. Both A & B
d. None of the above
ANSWER: Both A & B
Explanation: The BINARY_INTEGER is used to store signed integers. They require less storage than the number values. Arithmetic operations work faster. PLS_INTEGER have the same advantages as the BINARY_INTEGER.

51) In which binding operation a database value is assigned to a PL/SQL variable or a host variable by the RETURNING clause of an INSERT, UPDATE, or DELETE statement.
a. out-bind
b. in-bind
c. define
d. None of the above
ANSWER: out-bind
Explanation: The INSERT,UPDATE,DELETE statements have the out bind variables. They are bulk binded with the RETURNING BULK COLLECT INTO clause of EXECUTE IMMEDIATE.

52) Which datatypes make it practical to write PL/SQL programs to do number-crunching, for scientific applications involving floating-point calculations.
a. BINARY_FLOAT
b. BINARY_DOUBLE
c. Both A & B
d. None of the above
ANSWER: Both A & B
Explanation: Explanation: The BINARY_FLOAT and BINARY_DOUBLE require less storage space which make them more efficient. They do not represent fractional values precisely so they should not be used where accuracy is needed.

53) Which of the following is used to declare a record?
a. %ROWTYPE
b. %TYPE
c. Both A & B
d. None of the above
ANSWER: %ROWTYPE
Explanation: The %ROWTYPE attribute helps in creating table and cursor based records.

54) Which of the following has a return type in its specification and must return a value specified in that type?

a. Function
b. Procedure
c. Package
d. None of the above

ANSWER: Function

Explanation: Functions in a subprogram act like new expressions and operators. A function computes a value in a subprogram. The function has a return clause.

55) PL/SQL is completely portable, high-performance transaction processing language that offers which of the following advantages -

a. Tight Integration with SQL
b. Better Performance
c. Higher Productivity,Full Portability,Tight Security
d. All mentioned above

ANSWER: All mentioned above

56) From the following PL/SQL Delimiters which symbol is exponentiation operator.

a. <>
b. ~=
c. **
d. –

ANSWER: **

Explanation: The **(Exponentiation operator) raises one operand to the power of the other.

57) In CASE Expressions, which expression selects a result from one or more alternatives, and returns the result?

a. Simple CASE Expression
b. Searched CASE Expression
c. Both A & B
d. None of the above

ANSWER: Simple CASE Expression

Explanation: The CASE statement helps to select and execute one set of statements. It uses a selector rather than the multiple Boolean expression to select the sequence. An expression whose value will be used to select one of the several alternatives is known as an selector.

58) Which of the following is an explicit numeric, character, string, or BOOLEAN value not represented by an identifier?

a. Delimiters
b. Literals
c. Comments
d. None of the above

ANSWER: Literals

Explanation: Literals are similar to the constants. There are 4 types of literals

1. Text literals
2. Integer literals
3. Number
4. Date/Time literals.

59) PL/SQL provides many powerful functions to help you manipulate data. These built-in functions fall into which of these following categories?

a. Error reporting,Character, Datatype conversion
b. Number,Date,Object reference
c. Miscellaneous
d. All mentioned above

ANSWER: All mentioned above

60) A searched CASE expression lets you test different conditions instead of comparing a single expression to various values.

a. Yes
b. No

ANSWER: Yes

Explanation: A searched CASE expression does not contain any selector. A search condition can also be found in each WHEN clause to determine a BOOLEAN value. Besides this, it also allows the testing of different variables or multiple conditions in a single WHEN clause.

61) PL/SQL Server Pages (PSPs) enable you to develop Web pages with dynamic content.

a. True
b. False

ANSWER: True

Explanation: PL/SQL Server Pages (PSPs) enable you to develop Web pages with dynamic content. In this the PL/SQL scripts are embedded in the HTML pages.

63) Which internal exception is raised when a program references a nested table or varray element using an index number larger than the number of elements in the collection.

a. NO_DATA_FOUND
b. COLLECTION_IS_NULL
c. SUBSCRIPT_OUTSIDE_LIMIT
d. SUBSCRIPT_BEYOND_COUNT

ANSWER: SUBSCRIPT_BEYOND_COUNT

Explanation: The SUBSCRIPT_BEYOND_COUNT error is where the in-limit of a subscript was greater than that of the count of a varray or was too large for a nested table.

64) A package cursor is a cursor which you declare in the package specification without an SQL statement.

a. Yes
b. No

ANSWER: Yes

65) In which of the following, do you specify the same parameters in the same order as they are declared in the procedure?

a. Positional notation
b. Named notation
c. Mixed notation
d. All mentioned above

ANSWER: Positional notation

Explanation: Calling a stored procedure by simply just passing the parameter values and assuming that the values will be associated with the parameters in the order of the declaration is known as positional notation. In this notation the value which is passed first is associated with the first parameter, the second value with the second parameter and so on so forth. Here, the values must be passed in a proper order in a stored procedure.

66) In which mode parameter lets you pass values to the subprogram being called? It cannot be assigned a value.
a. Using the IN mode
b. Using the OUT mode
c. Both A & B
d. None of the above
ANSWER: Using the IN mode
Explanation: IN parameter is which helps us to pass a value to the subprogram. This parameter is a read-only parameter and it acts like a constant in a subprogram. No value can be assigned to it.

67) To call a subprogram directly, users must have the EXECUTE privilege on that subprogram. By granting the privilege, you allow a user to -
a. Call the subprogram directly
b. Compile functions and procedures that call the subprogram
c. Both A & B
d. None of the above
ANSWER: Both A & B
Explanation: The EXECUTE privilege is a schema object privilege for procedures. It is granted to the users who execute or compile a procedure which calls it.

68) Which is a database object that groups logically related PL/SQL types, objects and subprograms?
a. Package
b. Module
c. Body
d. Name
ANSWER: Package
Explanation: A package is divided into 2 parts a specification and a body. The specification is an interface to the package and it declares the types, variables, subprograms etc. which can be referenced from outside the package. The body consists of queries for the cursor and the code for subprograms.

69) Only EXISTS can be applied to automatically null collections. If you apply another method to such collections, PL/SQL raises COLLECTION_IS_NULL.
a. Yes
b. No
ANSWER: Yes
Explanation: A built in function or procedure which is operated on collections and usually called using the dot notation is known as a collection method.

70) Which collection exception is raised when a subscript designates an element that was deleted, or a nonexistent element of an associative array?
a. NO_DATA_FOUND
b. COLLECTION_IS_NULL
c. SUBSCRIPT_BEYOND_COUNT
d. SUBSCRIPT_OUTSIDE_LIMIT
ANSWER: NO_DATA_FOUND
Explanation: The NO_DATA_FOUND exception is raised when the FETCH statement is not able to find the relevant data that we have asked for.

71) Which collection exception is raised when a subscript exceeds the number of elements in a collection?
a. VALUE_ERROR
b. COLLECTION_IS_NULL
c. SUBSCRIPT_BEYOND_COUNT
d. SUBSCRIPT_OUTSIDE_LIMIT
ANSWER: SUBSCRIPT_BEYOND_COUNT
Explanation: The SUBSCRIPT_BEYOND_COUNT error is where the in-limit of a subscript was greater than that of the count of a varray or was too large for a nested table.

72) Which of the following executes the query and identifies the result set, consisting of all rows that meet the query search criteria.
a. Fetching with a Cursor
b. Opening a cursor
c. Fetching bulk data with a cursor
d. None of the above
ANSWER: Opening a cursor
Explanation: Once we have declared the cursor the next thing would be to open the cursor. The cursor is opened with the OPEN statement.
Syntax: OPEN cursor_name;

73) Which statement associates a cursor variable with a multi-row query, executes the query, and identifies the result set?
a. OPEN-FOR
b. FETCH
c. CLOSE
d. All mentioned above
ANSWER: OPEN-FOR
Explanation: The query associated with a cursor variable executes using the OPEN-FOR statement. It helps in identifying the result set.

74) LOB parameters are not permitted in a server-to-server RPC.
a. Yes
b. No
ANSWER: Yes

75) The CLOSE statement enables a cursor variable and makes the associated result set undefined.
a. True
b. False
ANSWER: False
Explanation: The above statement is false. The correct statement is: The CLOSE statement disables the cursor, and the result set becomes undefined.

76) You use cursor variables to pass query result sets between PL/SQL stored subprograms and various clients.
a. Yes
b. No
ANSWER: Yes
Explanation: You use cursor variables to pass query result sets between PL/SQL stored subprograms and client programs because any client program or PL/SQL does not own a result set, a pointer is shared in the work area where the result set will be stored.

77) A sub query is a query (usually enclosed by parentheses) that appears within another SQL data manipulation statement.

a. True
b. False

ANSWER: True

Explanation: On evaluation a value or a set of values to the statement is provided by the subquery. The WHERE clause is used by the subqueries. An evaluation which is done once for each table is carried out by the subquery and a correlated subquery evaluates only once for for each of the rows.

78) A nested cursor is implicitly opened when the containing row is fetched from the parent cursor. The nested cursor is closed in which of the following case(s)?

a. The nested cursor is explicitly closed by the user
b. The parent cursor is re-executed
c. The parent cursor is closed
d. The parent cursor is canceled
e. All mentioned above

ANSWER: All mentioned above

79) Which datatype is used to store large blocks of character data in the database, in-line or out-of-line? Both fixed-width and variable-width character sets are supported.

a. BLOB
b. CLOB
c. BFILE
d. NCLOB

ANSWER: CLOB

80) Is it possible to define a CONSTANT value in a record?

a. Yes
b. No

ANSWER: No

Explanation:

A CONSTANT is a reserved word whose value does not change at all.

81) Which data type supports only sequential access of objects?

a. LONG
b. LOB
c. Both A & B
d. None of the above

ANSWER: LONG

Explanation:

LONG is a data type of PL/SQL. It stores variable length character strings.

82) Can BOOLEAN datatype be used in functions that are called from SQL statements?

a. Yes
b. No

ANSWER: No

Explanation: The BOOLEAN datatype answers in either a YES or a NO and a function cannot be returned as a YES or no.

83) PL/SQL is a transaction processing procedural language that has which of the following advantages?

a. Integration with database
b. Better Performance
c. Higher Productivity
d. Portability
e. All mentioned above

ANSWER: All mentioned above

84) Explicit datatypes, %TYPE and %ROWTYPE, without size specification can be used for parameters in a procedure.

a. True
b. False

ANSWER: True

Explanation: These attributes allow parameters because the result of both are unconstrained declarations.

85) Oracle-supplied package called DBMS_LOB is used to manipulate the LOB objects.

a. True
b. False

ANSWER: True

Explanation: The subprograms which are required to operate on BLOBs, CLOBs, NCLOBs, BFILEs, and temporary LOBs are provided by the DBMS_LOB package. They are used to access and manipulate the specific parts of the LOB or complete LOBs.

86) What is the advantage of using the %ROWTYPE datatype?

a. It is useful to retrieve an entire row from a table. If you do not use the %ROWTYPE datatype, then you have to declare variables for each column separately.
b. It can be used even if data type of the table columns is not known.
c. It ensures that data type of the variable changes dynamically if the underlying table is altered.
d. All mentioned above
e. Both A & B

ANSWER: All mentioned above

87) The LOB objects can be stored in-line or out-of-line. The in-line storage means that objects are stored.

a. Along with the row
b. Outside the row
c. Both A & B
d. None of the above

ANSWER: Along with the row

Explanation: It means that there is a locater which stores the row along with the other table columns which in turn points to the real data.

Question Bank for Multiple Choice Questions

Program: Diploma in Computer Engineering	**Program Code:- CO**
Scheme:- I	**Semester:- Third**
Course:- Database Management System	**Course Code:- 22319**

Unit 5: Database security and Transaction Processing	**Marks:- 10**
5.1 Database security :introduction to Database security, data security requirement, Types of database user, creating and deleting users 5.2 Protecting the data within database: database privileges, System privileges and object privileges, Granting and revoking privileges 5.3 Transaction: concept, properties and state of transaction 5.4 Database backup-types of failure, causes of failure, Database backup introduction, types of Database backup 5.5 Database recovery-concept, Recovery techniques-roll forward and roll back	

1. A_____consists of a sequence of query and/or update statements.
a) Transaction
b) Commit
c) Rollback
d) Flashback
Answer: a
Explanation: Transaction is a set of operation until commit.

2. Which of the following makes the transaction permanent in the database?
a) View
b) Commit
c) Rollback
d) Flashback
Answer: b
Explanation: Commit work commits the current transaction.

3. In order to undo the work of transaction after last commit which one should be used?
a) View
b) Commit
c) Rollback
d) Flashback
Answer: c
Explanation: Rollback work causes the current transaction to be rolled back; that is, it undoes all the updates performed by the SQL statements in the transaction.

4. Consider the following action:
TRANSACTION.....
Commit;
ROLLBACK;
What does Rollback do?
a) Undoes the transactions before commit
b) Clears all transactions
c) Redoes the transactions before commit
d) No action
Answer: d
Explanation: Once a transaction has executed commit work, its effects can no longer be undone by rollback work.

5. In case of any shut down during transaction before commit which of the following statement is done automatically?
a) View
b) Commit
c) Rollback
d) Flashback
Answer: c
Explanation: Once a transaction has executed commit work, its effects can no longer be undone by rollback work.

6. In order to maintain the consistency during transactions, database provides
a) Commit
b) Atomic
c) Flashback
d) Retain
Answer: b
Explanation: By atomic, either all the effects of the transaction are reflected in the database, or none are (after rollback).

7. Transaction processing is associated with everything below except
a) Conforming an action or triggering a response
b) Producing detail summary or exception report
c) Recording a business activity
d) Maintaining a data
Answer: a

8. A transaction completes its execution is said to be
a) Committed
b) Aborted
c) Rolled back
d) Failed
Answer: a
Explanation: A complete transaction always commits.

9. Which of the following is used to get back all the transactions back after rollback?
a) Commit
b) Rollback
c) Flashback
d) Redo
Answer: c

10. _____will undo all statements up to commit?
a) Transaction
b) Flashback
c) Rollback
d) Abort
Answer: c
Explanation: Flashback will undo all the statements and Abort will terminate the operation.

11. Consider money is transferred from (1)account-A to account-B and (2) account-B to account-A. Which of the following form a transaction?
a) Only 1
b) Only 2
c) Both 1 and 2 individually
d) Either 1 or 2
Answer: c
Explanation: The term transaction refers to a collection of operations that form a single logical unit of work.

12. A transaction is delimited by statements (or function calls) of the form _____
a) Begin transaction and end transaction
b) Start transaction and stop transaction
c) Get transaction and post transaction
d) Read transaction and write transaction
Answer: a
Explanation: The transaction consists of all operations executed between the begin transaction and end transaction.

13. Identify the characteristics of transactions
a) Atomicity
b) Durability
c) Isolation
d) All of the mentioned
Answer: d
Explanation: Because of the above three properties, transactions are an ideal way of structuring interaction with a database.

14. Which of the following has "all-or-none" property?
a) Atomicity
b) Durability
c) Isolation
d) All of the mentioned
Answer: a
Explanation: Either all operations of the transaction are reflected properly in the database, or none are.

15. The database system must take special actions to ensure that transactions operate properly without interference from concurrently executing database statements. This property is referred to as

a) Atomicity
b) Durability
c) Isolation
d) All of the mentioned

Answer: c

Explanation: Even though multiple transactions may execute concurrently, the system guarantees that, for every pair of transactions Ti and Tj, it appears to Ti that either Tj finished execution before Ti started or Tj started execution after Ti finished.

16. The property of a transaction that persists all the crashes is

a) Atomicity
b) Durability
c) Isolation
d) All of the mentioned

Answer: b

Explanation: After a transaction completes successfully, the changes it has made to the database persist, even if there are system failures.

17. _____states that only valid data will be written to the database.

a) Consistency
b) Atomicity
c) Durability
d) Isolation

Answer: a

Explanation: If for some reason, a transaction is executed that violates the database's consistency rules, the entire transaction will be rolled back and the database will be restored to a state consistent with those rules.

18. Transaction processing is associated with everything below except

a) Producing detail summary or exception reports
b) Recording a business activity
c) Confirming an action or triggering a response
d) Maintaining a data

Answer: c

Explanation: Collections of operations that form a single logical unit of work are called transactions.

19. The Oracle RDBMS uses the_____statement to declare a new transaction start and its properties.

a) BEGIN
b) SET TRANSACTION
c) BEGIN TRANSACTION
d) COMMIT

Answer: b

Explanation: Commit is used to store all the transactions.

20. ____means that the data used during the execution of a transaction cannot be used by a second transaction until the first one is completed.

a) Consistency
b) Atomicity
c) Durability
d) Isolation

Answer: d

Explanation: Even though multiple transactions may execute concurrently, the system guarantees that, for every pair of transactions Ti and Tj, it appears to Ti that either Tj finished execution before Ti started or Tj started execution after Ti finished.

21. Collections of operations that form a single logical unit of work are called _____

a) Views
b) Networks
c) Units
d) Transactions

Answer: d

Explanation: Collections of operations that form a single logical unit of work are called transactions. A database system must ensure proper execution of transactions.

22. The "all-or-none" property is commonly referred to as _____

a) Isolation
b) Durability
c) Atomicity
d) None of the mentioned

Answer: c

Explanation: The all or none policy is commonly referred to as atomicity. It ensures that a work is either completed or not completed and there are no intermediate stages.

23. Which of the following is a property of transactions?

a) Atomicity
b) Durability
c) Isolation
d) All of the mentioned

Answer: d

24. Execution of translation in isolation preserves the_____of a database

a) Atomicity
b) Consistency
c) Durability
d) All of the mentioned

Answer: b

Explanation: Execution of translation in isolation preserves the consistency of a database. It ensures that no other transaction is running concurrently.

25. Which of the following is not a property of a transaction?
a) Atomicity
b) Simplicity
c) Isolation
d) Durability
Answer: b
Explanation: Simplicity is not a property of a transaction. Atomicity, Isolation, Durability are all parts of ACID properties.

26. Which of the following systems is responsible for ensuring durability?
a) Recovery system
b) Atomic system
c) Concurrency control system
d) Compiler system
Answer: a
Explanation: The recovery system is responsible for the maintenance of durability. In addition, it also ensures atomicity.

27. Which of the following systems is responsible for ensuring isolation?
a) Recovery system
b) Atomic system
c) Concurrency control system
d) Compiler system
Answer: c
Explanation: The concurrency control system is responsible for ensuring isolation in a database system.

28. State true or false: Information residing in the volatile storage does not usually survive system crashes
a) True
b) False
Answer: a
Explanation: Information residing in the volatile storage does not usually survive system crashes but the information in stable storage can survive system crashes efficiently.

29. A transaction that has not been completed successfully is called as _____
a) Compensating transaction
b) Aborted transaction
c) Active transaction
d) Partially committed transaction
Answer: b
Explanation: Aborted transaction is a state after the transaction has been rolled back and the database has been restored to the state prior to the transaction.

30. Which of the following is not a transaction state?
a) Active
b) Partially committed
c) Failed
d) Compensated
Answer: d
Explanation: Compensated is not a transaction state. But active, partially committed and failed are different states of a transaction.

31. The execution sequences in concurrency control are termed as _____
a) Serials
b) Schedules
c) Organizations
d) Time tables
Answer: b
Explanation: The execution sequences in concurrency control are known as schedules.

32. The scheme that controls the interaction between executing transactions is called as _____
a) Concurrency control scheme
b) Multiprogramming scheme
c) Serialization scheme
d) Schedule scheme
Answer: a
Explanation: The scheme that controls the interaction between executing transactions is called as concurrency control scheme.

33. What is true about data security?
A. Data security is the protection of programs and data in computers and communication systems against unauthorized access
B. It refers to the right of individuals or organizations to deny or restrict the collection and use of information
C. Data security requires system managers to reduce unauthorized access to the systems by building physical arrangements and software checks.
D. All of the above
Ans: D
Explanation: All of the above statement are true.

34. Which of the following are data security considerations?
A. Backups
B. Archival Storage
C. Disposal of Data
D. All of the above
Ans: D
Explanation: All of the above are data security consideration.

35. Which of the following is most used rule for backup?
A. 4-2-1 Rule
B. 3-2-1 Rule
C. 4-3-2 Rule
D. 4-3-1 Rule
Ans : B
Explanation: To use the Backup 3-2-1 Rule is very popular.

36. In 3-2-1 rule 2 represents?
A. copies of our data
B. different formats
C. off-site backup
D. None of the above
Ans : B
Explanation: Two different formats, i.e., hard drive+tape backup or DVD (short term)+flash drive

37. Which of the following is not a recovery technique?
A. Deferred update
B. Immediate update
C. Two-phase commit
D. Recovery management
Answer: C

38. Checkpoints are a part of
A. Recovery measures
B. Security measures
C. Concurrency measures
D. Authorization measures
Answer: C

39. ..... deals with soft errors, such as power failures.
A. system recovery
B. media recovery
C. database recovery
D. failure recovery
Answer: D

40. ..... is an essential part of any backup system.
A. Filter
B. Recovery
C. Security
D. Scalability
Answer: C

41. Media recovery deals with .....
A. disk errors
B. hard errors
C. system errors
D. power failures
Answer: A

42. For a backup/restore system, ... is a prerequisite for service in a enterprise.
A. Filter
B. Recovery
C. Security
D. Scalability
Answer: D

43. Failure recovery and media recovery fall under .....
A. transaction recovery
B. database recovery
C. system recovery
D. value recovery
Answer: C

44. The ..... consists of the various applications and database that play a role in a backup and recovery strategy.
A. Recovery Manager environment
B. Recovery Manager suit
C. Recovery Manager file
D. Recovery Manager database
Answer: A

45. In which the database can be restored up to the last consistent state after the system failure?
A. Backup
B. Recovery
C. Both
D. None
Answer: B

46. A ..... is a block of Recovery Manager(RMAN)job commands that is stored in the recovery catalogue.
A. recovery procedure
B. recovery block
C. stored block
D. stored script
Answer: D

47. In log based recovery, the log is sequence of .....
A. filter
B. records
C. blocks
D. numbers
Answer: B

48. The enrolling of a database in a recovery catalogue is called .....
A. set up
B. registration
C. start up
D. enrolment
Answer: B

49. ..... is an alternative of log based recovery.
A. Disk recovery
B. Shadow paging
C. Dish shadowing
D. Crash recovery
Answer: B

50. Most backup and recovery commands in ..... are executed by server sessions.
A. Backup Manager
B. Recovery Manager
C. Backup and Recovery Manager
D. Database Manager
Answer: B

51. ..... systems typically allows to replace failed disks without stopping access to the system.
A. RAM
B. RMAN
C. RAD
D. RAID
Answer: D

52. An ..... is an exact copy of a single datafile, archived redo log file, or control file.
A. image copy
B. datafile copy
C. copy log
D. control copy
Answer: A

53. ..... known as memory-style error correcting-code(ECC) organization, employs parity bits.
A. RAID level 1
B. RAID level 2
C. RAID level 3
D. RAID level 4
Answer: B

54. The remote backup site is sometimes called the ..... site.
A. primary
B. secondary
C. ternary
D. None of the above
Answer: B

55. EXP command is used.....
A. to take Backup of the Oracle Database
B. to import data from the exported dump file
C. to create Rollback segments
D. to create Schedule.
Answer: A

56. The simplest approach to introducing redundancy is to duplicate every disk is called .....
A. mirroring
B. imaging
C. copying
D. All of the above
Answer: A

Prepared By Mr. Vijay B. Mohite	**Verified By** Module Coordinator	**Re-Verified By** Dept. Academic Coordinator	**Approved By** Prof. S.B. Tamboli HoD (Comp. Engg.)