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**Question Bank –Database Technologies (Solved/Unsolved)**

**Q.1 Fill in the blanks:**

**(1 Mark each)**

1. **Redo Log Buffer** SGA stores all the redo log entries.
  2. **Process** is a 'thread of control' or mechanism in Operating System that executes series of steps.
  3. The data of a row in a table may not be able to fit the same data block. Data for row is stored in a chain of data blocks which is called as **Row chaining**
  4. A sub-query cannot have a \_\_\_\_\_ clause and a \_\_\_\_\_ of selects.
  5. A \_\_\_\_\_ is a set of values that may appear in one or more columns.
  6. PL/SQL provides \_\_\_\_\_ keyword, which is used to name an exception.
  7. An \_\_\_\_\_ defined as the collection of blocks which must be continuous whenever allocation takes place.
  8. A \_\_\_\_\_ is a table that is currently being modified by a DML statement.
  9. The \_\_\_\_\_ character is used to designate wild characters.
  10. Indexes are created in conjunction with \_\_\_\_\_ and \_\_\_\_\_ constraints.
  11. Types of views are \_\_\_\_\_ and \_\_\_\_\_.
  12. The date function that returns a numerical value is \_\_\_\_\_.
  13. To define access keys in the menu give the \_\_\_\_\_ symbol before the desired character.
  14. An index may contain upto \_\_\_\_\_ columns.
  15. To print the message along with the variable ew use the package \_\_\_\_\_.
  16. To select data from a range of values \_\_\_\_\_ operator is used.
  17. A \_\_\_\_\_ expression returns either TRUE or FALSE.
  18. \_\_\_\_\_ number of columns can be used in an ORDER BY clause.
  19. Once the values are inserted in a table, the size of its columns can only be **increased** & can never be **decreased**
  20. ROWID is a **pseudo** column
  21. The 2 pseudo columns present in every Oracle table are **ROWID & ROWNUM**
  22. In DBMS terms, the number of rows in a table is called its **cardinality** & the no. of columns it has defines its **degree**
  23. The most serious drawback in the ER model is that it cannot depict **relationships**
  24. **Dummy records** is used to represent many to many relationship in the Network model
  25. The data structure used in the Network model is **graph** & that used in the hierarchical model is **tree**
  26. The 3 default tablespaces created in Oracle are **System, User & Temp**
  27. The memory area allocated to each Oracle user is called **Schema**
  28. An SQL query is **interpreted** & a PL/SQL block is **compiled** before execution
  29. The 4 phases of processing a cursor are **Declare, Open, Fetch & Close**
  30. The **FOR UPDATE** clause when used with a SELECT query locks a table
  31. When a user executes SELECT ..... FOR UPDATE on a table, it tries to lock it, but if the table is already locked, the user is placed in a no-operation mode. This situation can be prevented by using **NOWAIT** clause
  32. The maximum no. of triggers(of different types) that can be created in Oracle 8 are **13**
  33. The error code and the corresponding error message of every runtime error occurring in Oracle is stored in **SQLCODE & SQLERRM** variables respectively
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34. A table whose primary key retains its uniqueness in the view created over it is called a **key preserved** table
35. **Instead of** trigger is used to take care of operations on columns of a Non Key-preserved table through the join view
36. The main data dictionary in Oracle that keeps the information of all the other data dictionary tables along with their description is **DICTIONARY**
37. The 2 main parts of an Oracle package are **package specification & package body**
38. A tablespace is a collection of **datafiles**
39. The 2 modes in which an Oracle database runs are **ARCHIVELOG & NOARCHIVELOG**
40. The 2 list functions available in Oracle are **GREATEST**, & **LEAST**
41. The SQL query for calculating the cube of 4 is **SELECT POWER(4, 3) FROM dual**
42. **WITH READ ONLY** clause when used with CREATE VIEW statement prevents the users from modifying the underlying base tables through the view
43. The 3 standard roles provided by Oracle are **Connect**, **resource** and **DBA**
44. The **With admin option** clause of the GRANT command makes the recipient the owner of the granted object
45. The **With grant option** clause of the GRANT command allows the recipient to pass the privilege to others
46. The 5 important components of a Database Management system (DBMS) are **Database engine**, **data dictionary**, **query processor**, **report writer** & **form generator**
47. The world's first relational database was **Oracle V.2**
48. Specialization is a **IS-A** relationship and Composition is a **HAS-A** relationship
49. 1NF specifies that there should be no **repeating groups**
50. The join that combines every row (no matter matching or non-matching) of both the tables is a **FULL** join
51. By default, the 3 users created in every Oracle database are **System**, **sys** and **Internal**
52. All uncommitted data during the course of a transaction is stored in **REDO LOG buffer**
53. The source code of an Oracle stored procedure can be retrieved using **USER\_SOURCE** data dictionary.
54. The 3 different flavours of Oracle 8i are **Oracle 8i Workgroup Server**, **Personal Oracle** and **Oracle 8i Enterprise Edition**
55. The precompiler used for SQL statements embedded in a C program is **Pro\*C**
56. DBMS\_OUTPUT is a **package** and PUT\_LINE is a **function**
57. A User defined type(UDT) can be created in Oracle using **create type** statement
58. The 2 implicit variables available to a trigger that contain the row values before and after updates are **:new** and **:old**
59. The error codes for user defined error messages must lie between **-20000**, and **-20999**
60. **RAISE APPLICATION ERROR** statement terminates the PL/SQL block abruptly and displays the specified error message
61. **PRAGMA EXCEPTION\_INIT** statement is used to substitute a user-defined exception in place of a predefined Oracle exception
62. A **NULL** value in the column indicates that the value is not applicable or currently not available

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63. init.ora file contains the no. of failed login attempts after which the SQL\*PLUS application shuts down
64. A Sequence can be used to provide a surrogate key in a table that does not have a primary key of its own
65. A synonym is a logical alias of any database object in Oracle
66. create global temporary table clause is used to create temporary tables in Oracle.
67. Snapshots are the means of creating local copies of remote tables.
68. Materialized views are also known as Snapshots

**Q.2 True or False**

1. The use of DBMS automatically removes redundancies.
2. Relational model requires the use of connectors as 'links'.
3. In the network model a record can have many parents.
4. Char conserves memory as compared to varchar.
5. A table once created can be dropped.
6. The name of a table can be changed with Alter command.
7. A table can have more than one primary key.
8. The columns on which ORDER BY is done must be a part of <Select Statement>
9. For a valid UNION of two result sets, the column names of the result sets should match.
10. Char datatype stores only characters in the database.
11. The VARCHAR2 datatype comes under standard SQL datatypes
12. The maximum length of VARCHAR2 datatype is identical when used in a PL/SQL code and when used in a table
13. The ORDER BY clause whenever used should always be the last clause of an SQL query (True)
14. The size of a column in a table cannot be decreased once a value is inserted in it (True)
15. The UNIQUE and FOREIGN keys cannot have NULL values (False)
16. Online Transaction Processing (OLTP) consists of more DML and less DQL statements ( True)
17. Decision Support System (DSS) is used to understand the trends of data (True)
18. ROWID is the only pseudo column in any Oracle table (False)
19. Database Manager is the person responsible for proper functioning of a DBMS. (False)
20. A set of privileges assembled together is called a ROLE (True)
21. An Oracle SQL query may or may not have a FROM clause (False)
22. The DATE datatype of Oracle occupies 8 bytes (False)
23. The default value of any datatype in Oracle is " " (False)
24. Both an SQL query as well as a PL/SQL code is interpreted in Oracle (False)
25. A SELECT statement cannot be used to lock a table (False)
26. All functions performed by constraints can equally be performed by triggers (True)
27. By default, the trigger is created at ROW level (False)
28. Oracle automatically creates an index on the primary key of a table (True)
29. A single trigger can be used for handling Insert/delete/update on a table (True)

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30. DDL operations, once performed are automatically committed & do not require any commit statement for confirmation (True)
31. No column of a Non-key preserved table can be modified through a view (True)
32. No trigger other than the INSTEAD OF trigger can be applied to a view (True)
33. PL/SQL programs residing at the client side are called named PL/SQL blocks (False)
34. The difference between a procedure and a function is that a procedure needs to be executed explicitly using EXECUTE whereas a function can be executed within an SQL statement as well (True)
35. The datatypes of parameters passed to stored procedures cannot have any width (True)
36. DDL statements cannot be executed within a PL/SQL code (False)
37. Oracle stored procedures can only be written in PL/SQL (False)
38. BOOLEAN is a valid datatype in PL/SQL & not in Oracle database (True)
39. The updates made to a view are not reflected to the underlying base tables (False)
40. A single query cannot have WHERE, GROUP BY, HAVING and ORDER BY clauses simultaneously (False)
41. DECODE is a standard function specified by SQL 92 standards (False)
42. The two SELECT statements joined using UNION, INTERSECT and MINUS must have same no. of columns & datatypes, the size of these columns does not matter (True)
43. The UNION clause does not eliminate duplicates (False)
44. A view is non-updateable if it has a reference to ROWNUM (True)
45. An ORDER BY clause cannot be used in a CREATE VIEW statement (True)
46. Oracle, by default creates an index on every UNIQUE column of a table (True)
47. ROWID is a datatype (True)
48. 2NF applies only to the tables with composite primary keys (True)
49. The inner join (or equi join) is same as the natural join (True)
50. The anonymous PL/SQL blocks stored at the client side are a part of the Oracle database (False)
51. The "i" in Oracle 8i stands for "improved" (False)
52. The implicit variables :new and :old cannot be used in context of table level triggers (True)
53. A function and a table cannot have a same name but a function and a trigger can (True)
54. Oracle completely follows all of the 12 Codd's rules (False)
55. NLS\_DATE\_FORMAT can be used to change the default date format (DD-MON-YY) in Oracle (True)
56. Indexing a table increases the speed of execution of queries based on it (True)
57. The HAVING clause can only contain aggregate functions (True)
58. Oracle stores dates and time as two separate values (False)
59. The ROWNUM column can be modified through update statement (False)
60. SELECT NLOG(7) FROM dual returns the natural log of 7 (False)

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**Q.3 Multiple Choice question**

**(1 Mark each)**

1. Fetching past the last row of a cursor
  - A. Raises the NO\_DATA\_FOUND Exception
  - B. Raises the VALUE\_ERROR Exception
  - C. Raises the CURSOR\_NOT\_FOUND Exception
  - D. Does not raise an exception
  
2. In the FOR UPDATE clause in cursors
  - A. Lock is not obtained on the rows fetched
  - B. All locks are released when COMMIT is issued
  - C. Locks for the rows processed before the COMMIT, are released
  - D. Locks are released when the cursor is closed
  
3. If a User-defined Exception has the same name as a Predefined Exception
  - A. There is a compilation error
  - B. The User-defined Exception overrides the Predefined Exception
  - C. The Predefined Exception overrides the User-defined Exception
  - D. None of the above
  
4. If a row is attempted to be fetched from an unallocated row in a PL/SQL table
  - A. A NULL value is returned
  - B. The VALUE\_ERROR Exception is raised
  - C. The NO\_DATA\_FOUND Exception is raised
  - D. The value of the data returned cannot be predicted
  
5. Given this procedure
 

```

            Procedure dept_salary
            (v_bonus IN BOOLEAN, v_raise IN BOOLEAN,
            v_issue_chk IN OUT BOOLEAN) IS
            BEGIN
                v_issue_chk := v_bonus OR v_raise;
            END;
            
```

 If v\_bonus = TRUE and v\_raise = NULL, which value is assigned to v\_issue\_chk?
  - A. True
  - B. False
  - C. NULL
  - D. None
  
6. You create a view with the following statement
 

```

            CREATE VIEW COW_MILK_VW AS
            (Select cow_name, milk_type from COW_MILK);
            
```

 What will happen when a user attempts to INSERT a new cow\_name and milk\_type via this view?
  - A. The INSERT will fail.
  - B. The INSERT will succeed or fail based on whether the user can see the record once added.
  - C. The INSERT will succeed
  - D. The INSERT will succeed only if the user has the privilege to insert data
  - E. into the view.
  - F. The INSERT will succeed only if the user has the privilege to insert data
  - G. into the table.
  
7. Which of the following objects are dropped automatically when a table is dropped.
  - A. Procedure
  - B. Constraints
  - C. Views
  - D. Synonyms

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8. Consider the following four options from a single statement. Which of the following lines in the SELECT statement below contain an error.
  - A. SELECT DECODE (EMPID, 58385,'INACTIVE','ACTIVE') EMPID
  - B. FROM EMP
  - C. WHERE SUBSTR (LASTNAME, 1, 1) > TO\_NUMBER ('S')
  - D. AND EMPID > 02000
  - E. ORDER BY EMPID DESC, LASTNAME ASC;
  
9. User 'Janko' would like to insert a row into the Emp table, which has 3 columns: empid, lastname, salary. The user would like to enter data for empid 59694, lastname Harry, but no salary. Which statement would work best.
  - A. INSERT INTO EMP VALUES (59694,'Harry', NULL);
  - B. INSERT INTO EMP VALUES (59694,'Harry');
  - C. INSERT INTO EMP (empid, lastname, salary) VALUES (59694,'Harry');
  - D. INSERT INTO EMP VALUES (Select 59694 from 'Harris');
  - E. INSERT INTO EMP(empid, lastname) VALUES (59694,'Harry');
  
10. Examine the trigger
 

```
CREATE OR REPLACE TRIGGER upd_team_salary FOR EACH ROW
BEGIN
    Update team
        Set salary = tot_salary + :new.salary
        Where ID = :new.team_id;
END;
```

Which statement must be added to make this trigger execute after updating the salary column of player table

  - A. After update on player
  - B. After salary update of player
  - C. After update [salary] on player
  - D. After update of salary on player
  
11. For every new ballplayer added to the Player table, a record must be inserted into the Player\_Bat\_Stat table. You have written a trigger to accomplish this task. To which timing will this trigger be assigned.
  - A. After
  - B. Instead of
  - C. Statement
  - D. Pre-Insert
  
12. Which of the following is one of the benefits of using procedures and functions
  - A. Procedures and functions increase the number of calls to the database.
  - B. Procedures and functions are reparsed for multiple users by exploiting shared SQL areas.
  - C. Procedures and functions avoid reparsing for multiple users by exploiting shared SQL areas.
  - D. Testing of procedures and functions requires the database to be restarted to clear out shared SQL areas for future access.
  
13. Overall logical structure of a database can be expressed graphically by \_\_\_\_\_
  - A. ER diagram
  - B. Records
  - C. Relations
  - D. Hierarchy
  
14. A table can have maximum\_\_\_\_\_no. Of Long Raw datatype columns

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- A. One
  - B. No limit
  - C. 255
  - D. depends on tablespace
15. A user is setting up a join operation between Emp and Dept tables. The query should return all the employees, which are assigned dept, as well as the employees which are yet not assigned any dept.
- A. Select e.empid, d.head from emp e, dept d;
  - B. Select e.empid, d.head from emp e, dept d where e.deptno = d.deptno;
  - C. Select e.empid, d.head from emp e, dept d where e.deptno = d.deptno (+);
  - D. Select e.empid, d.head from emp e, dept d where e.deptno (+)= d.deptno;
16. You can enter new ball players to the PLAYER table from different Oracle form applications and from an application written in C. For each new ball player, a record must be inserted into the Player\_Bat\_Stat table. Which action should you perform to accomplish this requirement?
- A. Create an additional function
  - B. Create an additional procedure
  - C. Create a database trigger on player table
  - D. Create a database trigger on the Player\_Bat\_Stat table.
17. Output from a table called PLAYS with two columns, PLAY\_NAME and AUTHOR, is shown next. Which of the following SQL statements produced it?
- ```

PLAY_TABLE
-----
"Midsummer Night's Dream", SHAKESPEARE
"Waiting For Godot", BECKETT
"The Glass Menagerie", WILLIAMS
    
```
- A. select PLAY\_NAME|| AUTHOR from PLAYS;
  - B. select PLAY\_NAME, AUTHOR from PLAYS;
  - C. select PLAY\_NAME||', ' || AUTHOR from PLAYS;
  - D. select PLAY\_NAME||', ' || AUTHOR play\_table from PLAYS;
18. Which of the following statements contains an error?
- A. select \* from EMP where EMPID = 493945;
  - B. select EMPID from EMP where EMPID = 493945;
  - C. select EMPID from EMP;
  - D. select EMPID where EMPID = 56949 and LASTNAME = 'SMITH';
19. Which of the following statements are NOT TRUE about ORDER BY clauses?
- A. Ascending or descending order can be defined with the asc or desc keywords.
  - B. Only one column can be used to define the sort order in an order by clause.
  - C. Multiple columns can be used to define sort order in an order by clause.
  - D. Columns can be represented by numbers indicating their listed order in the select
  - E. clause within order by.
20. A Cartesian product is
- A. A group function
  - B. Produced as a result of a join select statement with no where clause
  - C. The result of fuzzy logic
  - D. A special feature of Oracle server
21. In order to perform an inner join, which criteria must be true?
- A. The common columns in the join do not need to have shared values.
  - B. The tables in the join need to have common columns.

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- C. The common columns in the join may or may not have shared values.  
 D. The common columns in the join must have shared values.
22. A user is setting up a join operation between tables EMP and DEPT. There are some employees in the EMP table that the user wants returned by the query, but the employees are not assigned to department heads yet. Which SELECT statement is most appropriate for this user?  
 A. select e.empid, d.head from emp e, dept d;  
 B. select e.empid, d.head from emp e, dept d where e.dept# = d.dept#;  
 C. select e.empid, d.head from emp e, dept d where e.dept# = d.dept# (+);  
 D. select e.empid, d.head from emp e, dept d where e.dept# (+) = d.dept#;
23. Developer ANJU executes the following statement: CREATE TABLE animals AS SELECT \* from MASTER.ANIMALS; What is the effect of this statement?  
 A. A table named ANIMALS will be created in the MASTER schema with the same data as the ANIMALS table owned by ANJU.  
 B. A table named ANJU will be created in the ANIMALS schema with the same data as the ANIMALS table owned by MASTER.  
 C. A table named ANIMALS will be created in the ANJU schema with the same data as the ANIMALS table owned by MASTER.  
 D. A table named MASTER will be created in the ANIMALS schema with the same data as the ANJU table owned by ANIMALS.
24. Which line of the following statement will produce an error?  
 A. create table GOODS  
 B. (GOODNO number,  
 C. GOOD\_NAME varchar2 check(GOOD\_NAME in (select NAME FROM AVAIL\_GOODS)),  
 D. constraint PK\_GOODS\_01  
 E. primary key (GOODNO));  
 F. There are no errors in this statement.
25. The following statement is issued against the Oracle database. Which line will produce an error?  
 A. create view EMP\_VIEW\_01  
 B. as select E.EMPID, E.LASTNAME, E.FIRSTNAME, A.ADDRESS  
 C. from EMPLOYEE E, EMPL\_ADDRESS A  
 D. where E.EMPID = A.EMPID  
 E. with check option;  
 F. This statement contains no errors.
26. Which of the following is not a feature of a CURSOR FOR loop?  
 A. Record type declaration  
 B. Opening and parsing of SQL statements  
 C. Fetches records from cursor  
 D. Requires exit condition to be defined
27. Which line in the following statement will produce an error?  
 A. cursor action\_cursor is  
 B. select name, rate, action  
 C. into action\_record  
 D. from action\_table;  
 E. There are no errors in this statement.
28. In which areas of the PL/SQL block must code be placed in order to handle Oracle-defined exceptions?  
 A. Declaration section only  
 B. Declaration and executable sections only  
 C. Exception handler only  
 D. Declaration, executable, and exception handler sections



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29. You issue the following statement. What will be displayed if the EMPID selected is 60494?  
 SELECT DECODE(empid,38475, 'Terminated',60494, 'LOA', 'ACTIVE') FROM emp;  
 A. 60494  
 B. LOA  
 C. Terminated  
 D. ACTIVE
30. After executing an UPDATE statement, the developer codes a PL/SQL block to perform an operation based on SQL%ROWCOUNT. What data is returned by the SQL%ROWCOUNT operation?  
 A. A Boolean value representing the success or failure of the update  
 B. A numeric value representing the number of rows updated  
 C. A VARCHAR2 value identifying the name of the table updated  
 D. A LONG value containing all data from the table
31. A procedure declares a user-defined exception but does not raise it explicitly. Which of the following statements is true about this function?  
 A. The user-defined exception will never be raised.  
 B. The user-defined exception will be handled by a WHEN OTHERS exception handler.  
 C. The procedure will fail on compile.  
 D. The user-defined exception is defined incorrectly.
32. Which statement most accurately describes the result of not creating an exception handler for a raised exception?  
 A. The program will continue without raising the exception.  
 B. There will be a memory leak.  
 C. Control will pass to the PL/SQL block caller's exception handler.  
 D. The program will return a %notfound error.
33. Which three of the following are implicit cursor attributes?  
 A. %found  
 B. %too\_many\_rows  
 C. %notfound  
 D. %rowcount  
 E. %rowtype
34. If left out, which of the following would cause an infinite loop to occur in a simple loop?  
 A. loop  
 B. end loop  
 C. if-then  
 D. exit
35. Which of the following is not a feature of a CURSOR FOR loop?  
 A. Record type declaration  
 B. Opening and parsing of SQL statements  
 C. Fetches records from cursor  
 D. Requires exit condition to be defined
36. Developer JANET receives an error due to the following statement in the DECLARATION section: PI CONSTANT NUMBER;. The problem is because:  
 A. There is not enough memory in the program for the constant.  
 B. There is no value associated with the constant.  
 C. There is no datatype associated with the constant.  
 D. PI is a reserved word.
37. The OTHERS exception handler is used to handle the OTHERS raised exception.  
 A. TRUE

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- B. FALSE
38. Which of the following statements are true about WHILE loops?
- Explicit exit statements are required in while loops.
  - Counter variables are required in while loops.
  - An if-then statement is needed to signal when a while loop should end.
  - All exit conditions for while loops are handled in the exit when clause.
39. Which line in the following statement will produce an error?
- cursor action\_cursor is
  - select name, rate, action
  - into action\_record
  - from action\_table;
  - There are no errors in this statement.
40. Which of the following statements is true about implicit cursors?
- Implicit cursors are used for SQL statements that are not named.
  - Developers should use implicit cursors with great care.
  - Implicit cursors are used in cursor for loops to handle data processing.
  - Implicit cursors are no longer a feature in Oracle.
41. The command used to open a CURSOR FOR loop is
- open
  - fetch
  - parse
  - None, cursor for loops handle cursor opening implicitly.
42. After executing an UPDATE statement, the developer codes a PL/SQL block to perform an operation based on SQL%ROWCOUNT. What data is returned by the SQL%ROWCOUNT operation?
- A Boolean value representing the success or failure of the update
  - A numeric value representing the number of rows updated
  - A VARCHAR2 value identifying the name of the table updated
  - A LONG value containing all data from the table
43. A developer would like to use referential datatype declaration on a variable. The variable name is EMPLOYEE\_LASTNAME, and the corresponding table and column is EMPLOYEE, and LASTNAME, respectively. How would the developer define this variable using referential datatypes?
- Use employee.lname%type.
  - Use employee.lname%rowtype.
  - Look up datatype for EMPLOYEE column on LASTNAME table and use that.
  - Declare it to be type LONG.
44. In which areas of the PL/SQL block must code be placed in order to handle Oracle-defined exceptions?
- Declaration section only
  - Declaration and executable sections only
  - Exception handler only
  - Declaration, executable, and exception handler sections
45. An Oracle-defined exception is raised
- By the PL/SQL raise statement
  - In the PL/SQL exception handler
  - Automatically by Oracle
  - By the user
46. The RAISE\_APPLICATION\_ERROR( ) procedure defines errors returned in which of the following numeric ranges?
- 00000 and -99999

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- B. -01200 and -01299  
C. -00030 and -00039  
D. -20000 and -20999
47. When developing a PL/SQL library, the developer defines variable NUM2 as IN OUT in the ADD\_NUMS( ) function. Which of the following statements may happen as a result of this?  
A. The add\_nums( ) function will not compile.  
B. Code running after add\_nums( ) that uses the NUM2 variable may behave unpredictably because NUM2's value was changed in add\_nums( ).  
C. The add\_nums( ) function will return errors to the user when run.  
D. The add\_nums( ) function will cause a memory leak.
48. In which areas of a PL/SQL block must the developer place code for user-defined exceptions? (Choose three)  
A. Command line PL/SQL block call  
B. Variable declaration section  
C. Executable section  
D. Exception handler
49. The @ command in SQL\*Plus will do which of the following with a named PL/SQL block stored in a flat file?  
A. Load the PL/SQL code into its processing buffer only.  
B. Load PL/SQL code into its processing buffer and compile the code against the database only.  
C. Load PL/SQL code into its processing buffer and compile the code on the client side only.  
D. Load, compile, and run PL/SQL code against the Oracle database.
50. A procedure declares a user-defined exception but does not raise it explicitly. Which of the following statements is true about this function?  
A. The user-defined exception will never be raised.  
B. The user-defined exception will be handled by a WHEN OTHERS exception handler.  
C. The procedure will fail on compile.  
D. The user-defined exception is defined incorrectly.
51. Which of the following lines in the PL/SQL source code will return an error?  
A. create procedure estatus (  
B. eid NUMBER, statchar CHAR ) is begin  
C. select status into statchar from EMP where EMPID = eid; end;  
D. There are no errors in this code block
52. Which of the following trigger types will be impacted by constraining factors brought on by mutating tables?  
A. Row triggers only  
B. Statement triggers only  
C. Both row and statement triggers  
D. Neither row or statement triggers
53. The developer issues the following statement:  
CREATE OR REPLACE TRIGGER soccer\_fans\_snacks\_02 BEFORE DELETE ON  
SOCCER\_FANS  
BEGIN  
    DELETE FROM soccer\_fans\_snacks  
        WHERE fan\_id = :old.fan\_id;  
END;  
Why will trigger creation fail?  
A. The row trigger does not properly reference the old value in FAN\_ID.  
B. The statement trigger should have been defined as a row trigger.  
C. The statement trigger fires after the delete statement is processed.

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- D. The row trigger does not properly define the associated table
54. The developer issues the following statement:  
 CREATE OR REPLACE TRIGGER soccer\_fans\_snacks\_02 BEFORE DELETE ON  
 SOCCER\_FANS  
 FOR EACH ROW  
 BEGIN  
 DELETE FROM soccer\_fans\_snacks  
 WHERE fan\_id = :old.fan\_id;  
 END;  
 Which of the following statements best describes the trigger created?
- A. An update trigger that fires before Oracle processes the triggering statement  
 B. An insert trigger that fires after Oracle processes the triggering statement  
 C. An insert trigger that fires after Oracle processes the triggering statement  
 D. A delete trigger that fires before Oracle processes the triggering statement
55. To find information about trigger status, which of the following views are appropriate?  
 A. ALL\_TRIGGERS  
 B. ALL\_OBJECTS  
 C. ALL\_TRIGGER\_COLS  
 D. ALL\_SOURCE
56. UPDATE OR DELETE ON SOCCER\_FAN\_SNACKS. Which two of the following keywords may be useful in your trigger source code to distinguish what should run, and when?  
 A. inserting  
 B. updating  
 C. deleting  
 D. truncating
57. The SOCCER\_FANS table has a trigger associated with it that inserts data into SOCCER\_FANS\_SNACKS whenever rows are inserted into SOCCER\_FANS. A foreign key constraint exists between FAN\_ID on SOCCER\_FANS and SOCCER\_FANS\_SNACKS. What happens when the trigger fires?  
 A. The trigger processes normally.  
 B. The trigger invalidates.  
 C. The trigger execution fails because of a mutating or constraining table.  
 D. The trigger execution succeeds because the trigger is a statement trigger.
58. The developer issues the following statement:  
 CREATE OR REPLACE TRIGGER soccer\_fans\_snacks\_02 BEFORE DELETE ON  
 SOCCER\_FANS  
 FOR EACH ROW  
 BEGIN  
 DELETE FROM soccer\_fans\_snacks  
 WHERE fan\_id = :prechange.fan\_id;  
 END;  
 Why does the trigger fail on creation?
- A. The statement trigger improperly references the changed row data.  
 B. The row trigger does not define prechange as the referencing keyword for old column values.  
 C. Row triggers cannot process before the triggering statement.  
 D. Statement triggers cannot process before the triggering statement.
59. Table SOCCER\_FAN\_SEAT contains two columns: FAN and SEAT\_NUM.  
 A trigger is created in this table, whose triggering statement definition is AFTER UPDATE OF SEAT\_NUM ON SOCCER\_FAN\_SEAT. You issue an UPDATE statement that changes column FAN only. Which of the following best describes what happens next?

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- a) The trigger fires successfully.
  - b) The trigger fires unsuccessfully.
  - c) Nothing, the SEAT\_NUM column was not updated.
  - d) The trigger invalidates
60. The maximum length of varchar2 when used in PL/SQL block is
- A. 16k
  - B. 32k**
  - C. 4k
  - D. Either b or c
61. The max length of varchar2 when used in a table is
- A. 16k
  - B. 32k
  - C. 4k**
  - D. Either b or c
62. Any value added to NULL gives
- A. the value itself.
  - B. 0
  - C. NULL**
  - D. Unpredictable
63. The keys that can have NULL values are
- A. Primary Key
  - B. Unique Key
  - C. Foreign Key
  - D. Both b and c**
64. A Decision Support System (DSS) consists of
- A. More DML, less DQL
  - B. More DQL, less DML**
  - C. Half DML, half DQL
  - D. Only DML
65. The number of columns in a table is known as its
- A. **Degree**
  - B. Cardinality
  - C. Domain
  - D. Range
- ANS-(a)
66. The clause(s) that every Oracle SQL query must have is/are
- A. Select
  - B. From
  - C. Where
  - D. Both (a) and (b)**
  - E. (a),(b) and (c)
67. The clause(s) that every SQL Server query must have is/are
- A. **Select**
  - B. From
  - C. Where
  - D. Both (a) and (b)
  - E. (a),(b) and (c)
68. The name of the implicit cursor used by Oracle is
- A. DEFAULT

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- B. IMPLICIT
  - C. SQL**
  - D. CURSOR
69. The size of DATE data type in Oracle is
- A. **7 bytes**
  - B. 8 bytes
  - C. 4 bytes
  - D. 10 bytes
70. An Oracle PL/SQL block is always
- A. Interpreted
  - B. Compiled**
  - C. Interpreted and then compiled
  - D. Either (a) or (b)
71. The maximum number of triggers (of different types) that can be created in Oracle 8i is
- A. 12
  - B. 13
  - C. >12
  - D. >13**
72. System event triggers are always
- (a) Row level
  - (b) Table level
  - (c) Schema level**
  - (d) Either (b) or (c)
72. Triggers can be written for
- A. Insert, delete, update
  - B. Create, alter, drop
  - C. Login, logout
  - D. Both (a) and (b)
  - E. (a) , (b) and (c)**
73. 15.Rollback and Commit affect
- (a) Only DML statements**
  - (b) Only DDL statements
  - (c) Both (a) and (b)
  - (d) All statements executed in SQL\*PLUS      ANS-(a)
74. 16.The NOWAIT option works for
- (a) Implicit cursors only**
  - (b) Explicit cursors only
  - (c) Both (a) and (b)
  - (d) Neither (a) or (b)      ANS-(a)
75. The query associated with a cursor is executed in
- (a) Declare phase
  - (b) Open phase**
  - (c) Fetch phase
  - (d) Close phase
76. The INSTEAD OF trigger works at
- (a) Row level**
  - (b) Table level
  - (c) Schema level
  - (d) Database level

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77. 19.The stored subprogram(s) available in Oracle is/are  
(a) Procedures  
(b) Functions  
(c) Packages  
(d) Both (a) and (b)  
**(e) (a), (b) and (c)**
78. 20.The default parameter type in stored procedures is  
**(a) IN**  
(b) OUT  
(c) INOUT  
(d) There is no default type
79. GRANT and REVOKE are  
**(a) DDL statements**  
(b) DML statements  
(c) DCL statements  
(d) None of these
80. Oracle 8i can be best described as  
(a) Object-based DBMS  
(b) Object-oriented DBMS  
(c) Object-relational DBMS  
(d) Relational DBMS                      ANS-(c)
81. An Oracle 8i database can store  
(a) Text  
(b) Audio/Video  
(c) Images  
(d) All the above                      Ans-(d)
82. The host string used to connect to the Oracle server (for eg. ORCL) is called as  
(a) System identifier  
(b) Net service name  
(c) Both (a) and (b)  
(d) Database name                      ANS-(c)
83. INITCAP ('oracle') returns  
(a) oracle  
(b) ORACLE  
(c) ORACLe  
(d) None of these                      ANS-(d)
84. The value of INSTR('CALIFORNIA','A',1,2) is  
(a) 2  
(b) 1  
(c) 10  
(d) 9                      ANS-(c)
85. The SQL query to retrieve current time in Oracle is  
(a) Select SysTime from dual  
(b) Select SysDate from dual  
(c) Select TO\_CHAR (SysDate,'HH:MI:SS') from dual  
(d) Select TO\_CHAR (SysDate,'HH:MM:SS') from dual  
(e) Both (c) and (d)                      ANS-(c)

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86. The correct syntax of DECODE statement is  
(a) DECODE(if1,then1,if2,then2,.....,else)  
(b) DECODE(if1,then1,else1,if2,then2,else2.....,)  
(c) DECODE(value,if1,then1,else1,if2,then2,else2.....,)  
(d) None of these                      ANS-(d)
87. Consider the following where clause  
WHERE A.no=B.no(+)  
The above outer join lists  
(a) All matching & non-matching rows of table B  
(b) All matching & non-matching rows of table A  
(c) All non-matching rows of table B  
(d) All non-matching rows of table A      ANS-(b)
88. TRUNCATE TABLE statement  
(a) Drops a table temporarily  
(b) Removes all rows of a table  
(c) Removes specified number of rows from a table  
(d) Removes all constraints from a table      ANS-(b)
89. The file that contains the Oracle server address, its port number and resolves the Oracle's net service name (for eg. ORCL) is  
(a) listener.ora  
(b) tnsnames.ora  
(c) init.ora  
(d) sqlnet.ora                      ANS-(b)
90. When both the Oracle name server as well as tnsnames.ora file is used simultaneously, the priority between the two is resolved by  
(a) listener.ora  
(b) tnsnames.ora  
(c) init.ora  
(d) sqlnet.ora                      ANS-(d)
91. Consider a table OLD with few rows. The statement  
CREATE TABLE new AS SELECT \* FROM OLD  
WHERE 1=2  
(a) copies all the rows from OLD to NEW  
(b) creates a dummy NEW table  
(c) creates an empty NEW table with column definitions same as OLD  
(d) creates a table NEW that acts as a synonym for OLD      ANS-(c)
92. Oracle 8i runs on  
(a) Windows NT  
(b) UNIX  
(c) Solaris  
(d) (a) and (b)  
(e) (a), (b) and (c)      ANS-(e)
93. The owner of all data dictionary tables in Oracle is  
(a) SYSTEM  
(b) SYS  
(c) INTERNAL  
(d) Users                      ANS-(b)



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94. The standard port number at which the Oracle server listens for client requests is  
(a) 3128  
(b) 8080  
(c) 7071  
(d) none of these      Ans-(d)
95. The address of the Oracle name server is contained in  
(e) listener.ora  
(f) tnsnames.ora  
(g) init.ora  
(h) sqlnet.ora      ANS-(d)
96. Which of the following is not a RDBMS  
(a) MS Access  
(b) Oracle 8i  
(c) MS SQL Server  
(d) Informix      ANS-(a)
97. The character used for concatenating strings in Oracle is  
(a) &&  
(b) +  
(c) |  
(d) None of these      ANS-(d)
98. The datafiles in Oracle, in which the user tables and other objects are stored, resides at  
(a) Client side  
(b) Server side  
(c) Both (a) and (b)  
(d) Depends on the configuration      ANS-(b)
99. The number of users that can be handled by Oracle 8i server is approximately  
(a) 5000  
(b) 10000  
(c) 1000  
(d) 100000 ANS-(b)
100. A precompiler converts  
(a) PL/SQL code into executable machine code  
(b) Embedded SQL statements into native library calls  
(c) A program written in a 3GL into a PL/SQL code  
(d) A PL/SQL code into a 3GL code      ANS-(b)
101. In a query with a GROUP BY clause, the columns in the SELECT clause  
(a) must be aggregate functions only  
(b) must also appear in the GROUP BY clause  
(c) must also appear in the GROUP BY and HAVING clauses  
(d) Both (a) and (b)  
(e) Can be selected arbitrarily      ANS-(d)
102. OCI stands for  
(a) Open Call Interface  
(b) Oracle Call Interface  
(c) Oracle Communication Interface  
(d) Oracle Connection Interface ANS-(b)
103. The name of the only column in the DUAL table is  
(a) X

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- (b) C  
 (c) DUMMY  
 (d) None of these      ANS-(c)
104.      TNS in the file tnsnames.ora stands for  
 (a) Transparent Network Substrate  
 (b) Transport Network Substrate  
 (c) Transparent Network System  
 (d) Transparent Network Server      ANS-(a)
105.      Comments in a PL/SQL code are inserted using  
 (a) –  
 (b) /\* \*/  
 (c) Both (a) and (b)  
 (d) #      ANS-(c)
106.      The CHAR and NCHAR data types  
 (a) have no difference  
 (b) belong to two different character sets  
 (c) have different storage requirements  
 (d) have different storage requirements and retrieval time      ANS-(b)
107.      Consider a table TAB with a single row  
           NAME  
           CHARRIS  
 Then, the query  
 SELECT SUBSTR(Name,-3) FROM TAB gives  
 (a) RIS  
 (b) CHA  
 (c) ARRIS  
 (d) ARR      ANS-(a)
108.      The wild card character % used in strings means  
 (a) any number of characters  
 (b) one or more characters  
 (c) at least one character  
 (d) at least one alphabet      ANS-(a)

**Q.4 Answer the following**

**(1 Mark each)**

1. What is a select statement? Name the two required components of a select statement.
2. What is a schema?
3. What is the DUAL table? Why is it used?
4. What does NULL mean in the context of Oracle SQL?
5. What is a column alias? For what situations might column aliases be useful?
6. What are two ways to define aliases for columns?
7. What is column concatenation? What special character sequence is used to concatenate columns?
8. How can a user put row data returned from a select statement in order? What are the various sort orders that can be used with this option?
9. What are the two ways to specify the column on which sort order should be defined?
10. What is a where clause? On what principle does this clause operate to determine which data is selected?

*Question Bank –Database Technologies (Solved/Unsolved)*

11. Identify some of the character, number, and date functions available in SQL. What are two functions that allow you to transform column values regardless of the datatype?
12. What are other types of functions that perform operations on columns of specific datatypes?
13. What is the purpose of the nvl( ) function? What datatypes does it accept? What is the purpose of a decode( ) statement? What datatypes does it accept?
14. Name some character functions? Can two functions be combined? Why or why not?
15. Name some single-value number functions. What types of applications are these functions typically used in?
16. What function is used to determine the size in bytes of a given value or column?
17. Which date functions return information in the DATE datatype? Which one returns information in a datatype other than DATE?
18. How are dates stored in Oracle?
19. Identify some conversion functions. Which conversion functions are commonly used?
20. What is a table join? How is a table join produced?
21. How does an outer join remedy the situation where a lack of corresponding values in the shared column of two tables causes rows from neither table to be selected? What is the special character used to denote outer joins?
22. What is a self join? How might a self join be used?
23. How are group functions incorporated into select statements? How many rows of output can usually be expected from a query using a group function?
24. What is ROWID? Is ROWID stored in a table?
25. How is the group by clause of a select statement used? (With Example)
26. Identify some situations where statements containing the group by clause return errors.
27. What is the having clause, and what function does it serve?
28. How can the user specify values to fulfill having criteria without actually knowing what the values themselves are?
29. What is a subquery? When might a user want to incorporate a subquery into a database select statement?
30. What are some situations where a where clause may be sufficient in place of a subquery?
31. What is variable scope? What is a local variable? What is a global variable?
32. What is the distinct keyword, and how is it used?
33. Can you use the order by clause within select statements with subqueries? Why or why not?
34. What special character is used to specify a runtime variable? How does Oracle prompt for runtime variable change?
35. What are three types of data relationships?
36. What is functional dependency?
37. What is required of two tables in order for the tables to be related?
38. What is a relational database model?
39. What are the components of a relational database? How are they used?
40. What is an entity-relationship diagram and how is it read?

**Question Bank –Database Technologies (Solved/Unsolved)**

41. What is a logical data model? Identify some methods used to translate an entity-relationship diagram into a data model.
42. What command is used to create tables?
43. What is an integrity constraint? What are the five types of integrity constraints?
44. Describe some table naming conventions.
45. What should be included in the name of a table that has a referential integrity constraint with another table, in which the table referring to the other table is the child table?
46. Which datatypes are introduced for Oracle8 ?
47. What are some of the differences between the CHAR and the VARCHAR2 datatype?
48. How is data stored in the DATE datatype? What is the ROWID datatype?
49. How can a table be created with data already populated in it?
50. What is the data dictionary?
51. When can a user not change data in a table?
52. What statement is used to remove data from an Oracle table? What clauses in this statement are mandatory?
53. What statement is used to change the definition of a table?
54. What process is used to change a NULLable column to one with a NOT NULL constraint?
55. What are some of the rules and guidelines for changing column definitions?
56. What are some of the ways integrity constraints can be changed on a table?
57. What are some rules that must be adhered to for modification of each type of constraint?
58. What are two options for deleting data from a table?
59. Is truncating a table part of DML or DDL? Explain.
60. How is a database object name changed? What are some of the effects of renaming a table?
61. What is another way to duplicate the effect of renaming a table?
62. How can table remarks be entered and where are they stored?
63. How can you reference comments on a database object?
64. What is a sequence? What are some ways a sequence can be used?
65. What are CURRVAL and NEXTVAL? What happens to CURRVAL when NEXTVAL is selected?
66. What statement is used for creating a sequence?
67. What are the options used for sequence creation?
68. What statement is used to modify a sequence definition?
69. When do changes to a sequence take effect?
70. What are the effects of dropping a sequence?
71. What are two reasons for using views?
72. What is a simple view? How does it differ from a complex view?
73. What statement is used to alter the definition of a view?
74. Identify two reasons for using indexes.

**Q.5 Answer the following**

**(2 Marks each)**

*Question Bank –Database Technologies (Solved/Unsolved)*

1. What is a Transaction in Oracle
2. What is SGA?
3. What is PGA?
4. What is Database Buffer Cache
5. What are Redo Log Files?
6. What are procedures?
7. What are Packages?
8. How do u implement the If statement in the Select Statement
9. What are snapshots?
10. What are different types of views?
11. What are the OOPS concepts in Oracle?
12. What are the Pct Free and Pct Used?
13. What is a 2 Phase Commit?
14. What is the difference between deleting and truncating of tables?
15. What are mutating tables?
16. What is the Difference between a post query and a pre query?
17. Can U disable database trigger? How?
18. What is clustered index?
19. What are the datatypes supported by oracle (INTERNAL)?
20. What are the advantages of normalization of data?
21. What is a sequence? How is it activated? Give one use
22. What is the purpose of having an Execution section in a Package Body?
23. What is the advantage of using stored procedures?
24. What is the difference between nested query and co-related query?
25. Explain different types of views
26. Explain cursors? What are reference cursors?
27. What are some advantages of using PL/SQL to access the database?
28. Where is PL/SQL compiled and stored?
29. Name some benefits to accessing the Oracle database with PL/SQL.
30. What are the three parts of a PL/SQL code block? Name four different types of code blocks in Oracle. What are some program constructs available in PL/SQL?
31. What is the difference between a named and an anonymous code block?
32. Identify some of the database and nondatabase datatypes in PL/SQL that can be used.
33. How can you declare PL/SQL variables without explicitly identifying the datatype? How do you declare a variable with an initialized value?
34. How do you declare a constant? Why might you use a constant?
35. Where can a variable be assigned a value?
36. What is the assignment operator? How does it differ from the equality operator?

*Question Bank –Database Technologies (Solved/Unsolved)*

37. What special characters are required for using data manipulation statements in PL/SQL?
38. Explain how Oracle assigns values to elements in a record.
39. What value can implicit cursor attributes serve in PL/SQL code?
40. What are some of the implicit cursor attributes a developer can use in PL/SQL?
41. How is nested conditional statement processing handled?
42. What are three different types of loops? What is an exit when statement? What is a loop counter, and for which type of loop is it most commonly used? Which type of loop doesn't require an explicit exit statement?
43. What is an implicit cursor and what is the syntax for creating one?
44. What is an explicit cursor? Why might a developer use an explicit cursor rather than an implicit one?
45. What is the syntax for creating an explicit cursor?
46. What must be done in order to make a cursor exist in memory?
47. What step must be accomplished to put data in a cursor?
48. How is data retrieved from a cursor?
49. What value does passing parameters to a cursor provide?
50. How can a cursor be defined to accept parameters?
51. What steps in cursor loop handling does a cursor for loop handle implicitly?
52. How is the exit condition defined for a cursor for loop?
53. What is a user-defined error? Where must code be defined in order to create a user-defined exception?
54. What is the others exception, and how is it used?
55. What syntax is used to create procedures in PL/SQL? What is the difference between is and as?
56. In what area of a named procedure is variable declaration handled?
57. What are the three ways PL/SQL will move parameters back and forth between program units?
58. Explain how each parameter passing method works in PL/SQL.
59. What syntax is used to create functions in PL/SQL?
60. What parameter passing type is not allowed in functions that is allowed in procedures?
61. What is a functions "purity level" and what are the conditions for meeting that purity level? If that level is met, can you call the function from a SQL statement? Why or why not?
62. What command is used to run a stored procedure from the SQL prompt in SQL\*Plus? What error occurs when the procedure name is entered without this command?
63. How are functions called using SQL\*Plus? How do you pass parameters out of order from how the function or procedure defines them?
64. Identify some Oracle-defined exceptions. When are Oracle-defined exceptions raised?
65. Where is PL/SQL execution control passed if an unhandled exception is raised?
66. What is the others exceptions handler, and how is it used?
67. In what parts of a PL/SQL block must code appear supporting a user-defined exception? How is a user-defined exception raised?
68. Does the others exception handler support user-defined exceptions? Explain.
69. What parameters are passed to the raise\_application\_error( ) procedure?

**Question Bank –Database Technologies (Solved/Unsolved)**

70. Describe two things that can be identified uniquely by using raise\_application\_error( ).
71. Describe how exceptions are reported when the raise\_application\_error( ) procedure is used.
72. Define a database trigger. What programming language is a trigger developed with?
73. Define a stored procedure. Where are database triggers and stored procedures stored?
74. How does a database trigger differ from a stored procedure?
75. What determines when a trigger will fire with respect to its triggering event?
76. What special character must precede a reference to old or new data involved in the row trigger execution?
77. With row triggers, is it more efficient to define the trigger to fire before or after the triggering event is complete? Why?
78. How many triggers can be attached to a table? What are the different types of triggers you can attach? What datatype issues do you run into with triggers and the LONG datatypes?
79. What is a trigger called when it changes data in another table such that another trigger fires? How many times can this happen before Oracle gives an error?
80. What is a constraining table? A mutating table? What restrictions are there on row triggers regarding these two situations?

**Q.6 Answer the following**

**(3 Marks each)**

1. What are Commits, Rollback, SavePoint statements in Oracle
2. Explain cursors and its various attributes?
3. Explain functions?
4. How many Integrity Rules are there and what are they
5. What are the Various Master and Detail relationships?
6. What are the Various Block Coordination Properties?
7. Explain Materialized Views
8. What is the difference between candidate key, unique key and primary key.
9. Explain in short about Privileges and Grants
10. What are pseudo columns? Explain them?
11. State any 6 of Codd's Twelve rules for a Relational Database
12. Explain the modes of passing parameters to Procedures and Functions
13. What are the ways of handling Unnamed Exceptions in PL/SQL. Explain any one.
14. Write a short note on Temporary Tables.
15. Write a short note on Refreshing Materialized views
16. Write a short note on Autonomous transaction
17. Write a short note on Normalization
18. Write a short note on VARRAYs v/s Nested tables
19. What is ROWID? Is ROWID stored in a table?
20. What is a subquery? When might a user want to incorporate a subquery into a database select statement?
21. What is an integrity constraint? What are the types of integrity constraints?
22. What is the data dictionary?

*Question Bank –Database Technologies (Solved/Unsolved)*

23. Consider a table : STUDENT (Name, Marks)  
Write a query to retrieve 5 top scorers from the above table
24. Explain clearly, the differences between Super key, Candidate key, Primary key and alternate key with examples
25. Describe in brief, the contents of init.ora, listener.ora, tnsnames.ora and sqlnet.ora files
26. Explain E-R Model, its drawbacks and remedies
27. What is the criteria for a DBMS to be called a full fledged RDBMS
28. Explain any 5 Codd's rules and explain how Oracle follows them
29. Enumerate the differences between Network, Hierarchical and Relational data models giving examples of each.
30. Explain the differences between "WITH GANT OPTION" and "WITH ADMIN OPTION" clauses
31. Enlist the functions of an Oracle DBA
32. Define cursor and describe its types giving examples
33. Can a SELECT query be used to lock rows of a table? If yes, explain how the system can be prevented from going into a no-operation mode.
34. Explain the various steps to be taken for processing an explicit cursor
35. What are the various cursor attributes? Explain them
36. What is a trigger? Explain different types of triggers available in Oracle 8i.
37. Explain clearly, the difference between CHAR, VARCHAR, NCHAR, NVARCHAR & VARCHAR2 datatypes
38. Write a trigger that prevents a user from inserting, deleting & updating a table.
39. What are the different events for which a trigger can be written in Oracle 8 and in Oracle 8i
40. Describe the basic structure of a PL/SQL program
41. Enlist and explain the implicit variables available to a trigger with an example. Are these also available in a table level trigger?
42. Explain how exceptions can be handled in a PL/SQL block
43. What are the standard exceptions occurring in Oracle? Explain with reasons
44. What are the reference datatypes available in Oracle? Explain
45. What implicit variables are used to access the information about the errors occurring in Oracle?
46. Explain the process by which a user-defined name can be given to a predefined exception.
47. Explain the difference between natural join, inner join, self join, outer join and
48. Equi joins.
49. Describe in brief, the various control structures available in PL/SQL
50. What is the difference between disabling and dropping a trigger and how is it done?
51. What is RAISE\_APPLICATION\_ERROR? When and how is it used?
52. How are exceptions explicitly generated and caught in a PL/SQL program? Explain
53. Write a trigger to count the number of logins of a particular user in a day.
54. What is a view? How is it different from a table?
55. What are the conditions for a view to be updateable?



**Question Bank –Database Technologies (Solved/Unsolved)**

56. What are the advantages of a view? Is a view really stored?
57. What is de-normalization? When and why is it used?
58. What is a key-preserved and a non key-preserved table? In what context are they used? Explain with example.
59. What are INSTEAD OF triggers? When are they used?
60. What are the various types of triggers that can be applied to a view?
61. What are named and unnamed (anonymous) PL/SQL blocks? Why are they called so?
62. What are the different stored subprograms available in Oracle? Explain the scenario when each is used.
63. What are the differences between a procedure, function & a package?
64. What are the various types of parameters that can be passed to stored procedure? Explain when each is used.
65. Write the complete syntax of any 2 of the following ---
66. Procedure, Function and Package
67. Explain how the service name of an Oracle Server (for eg ORCL) is resolved when used by its users.
68. Where are the tables and other user objects stored in Oracle? Explain
69. What is a datafile? What does it contain & where is it stored?
70. Why is Oracle called an Object-Relational database? Explain
71. What are the datatypes for storing large objects in Oracle 8i? How are the images, audio, videos stored?
72. What are correlated queries? Explain their application with examples
73. Consider a table EMPLOYEE (Emprname, Deptname)
74. Write a query to find first 2 highly populated departments.
75. Considering above table, find departments with more than 10 employees

**Q.7 Answer the following**

**(5 Marks each)**

1. What are the background processes in Oracle and what are they?
2. Write short notes on Physical Storage of the Data
3. What are Codd Rules
4. Explain Normalisation and its various forms.
5. Write the necessary select statements based on tables below:

|                      |                      |                                                              |
|----------------------|----------------------|--------------------------------------------------------------|
| <b>Supplier</b>      | <b>Parts</b>         | <b>Orders</b>                                                |
| <b>Scode (P Key)</b> | <b>Pcode (P Key)</b> | <b>OrderNo</b>                                               |
| <b>Sname</b>         | <b>Pname</b>         | <b>Scode (Foreign key –references<br/>Scode of supplier)</b> |
| <b>Status</b>        | <b>Colour</b>        | <b>Pcode (Foreign key –references<br/>Pcode of parts)</b>    |
| <b>City</b>          | <b>Qty_in_hand</b>   | <b>Qtysupplied</b>                                           |
|                      | <b>Reorder_level</b> | <b>Orderdate</b>                                             |
|                      | <b>Weight</b>        | <b>Supplydate</b>                                            |

- a) Display the names of suppliers who have sold the maximum overall quantity.
- b) Get suppliers supplying atleast one part supplied by Supplier S2
- c) Get all suppliers not supplying Nuts

*Question Bank –Database Technologies (Solved/Unsolved)*

- d) For each part supplied get partno and names of cities supplying that part.
  - e) Find out the total quantity supplied by each supplier.
6. What are Tablespaces? Explain in detail with datafiles
  7. Explain various background processes
  8. What are the parts of a PL/SQL code block? Name different types of code blocks in Oracle. What are some program constructs available in PL/SQL?
  9. How can you declare PL/SQL variables without explicitly identifying the datatype?
  10. How does a database trigger differ from a stored procedure?
  11. Write a short note on the various standard table spaces in Oracle
  12. Explain the Oracle Server Architecture
  13. What are the various modes of operation of an Oracle Server? How do they differ?
  14. What are the various database support processes in Oracle 8i? Explain
  15. Explain the following functions with examples---  
INSTR RPAD SOUNDX TRANSLATE DECODE
  16. Explain GROUP BY and HAVING clauses with example. Explain the scenario where these are used.
  17. Describe following clauses in context of an SQL query ----  
UNION INTERSECT MINUS
  18. Explain those Codd's rules that are completely followed by the Oracle 8i database
  19. Explain the various DDL, DML and DCL statements with respect to the Oracle database
  20. Explain the various types of constraints in a DBMS giving example of each.
  21. What is a Database Management system? Explain its need and enumerate its advantages with examples
  22. What is Normalization? Why is it done? Explain its advantages and disadvantages.
  23. Write a note on any 2 of the following –  
4NF, 5NF, BCNF
  24. What are sequences? Explain with example giving the scenario where they are used.
  25. What are the differences between a Database Manager and a DBA? Can there be more than one DBA for an Oracle database?
  26. Describe any 5 DATE manipulation functions in Oracle 8i.
  27. Enumerate and explain any 5 data dictionary tables in Oracle 8i.
  28. How does Oracle internally store DATE values? What is the default DATE format and how it can be changed?
  29. Write an Oracle trigger such that nobody should be allowed to alter any of your tables.
  30. Write a note on Oracle stored procedures. How are they different from PL/SQL programs created at the client side?
  31. What are the default users created with Oracle database? Explain their functions and responsibilities
  32. What are the various phases a query goes through after it is submitted and before the result is displayed?
  33. Describe various Oracle functions that are not in standard ANSI SQL specifications How are these functions substituted when the system using these is ported to some other DBMS?
  34. What are the various parts of a ROWID? What do they signify?

*Question Bank –Database Technologies (Solved/Unsolved)*

35. What is meant by partitioning of a table? Why is it done?
36. Explain the difference between column level and table level constraints with proper examples
37. Compare and contrast SQL and PL/SQL with proper reasoning.
38. What are the steps in executing a stored procedure with OUT parameters? Explain with example.
39. Explain how all the functionalities provided by various constraints can be equally achieved through triggers.
40. Write the syntax of a trigger that will fire on insert/update/delete of a particular column of a table. Is such a trigger possible? If not, why?
41. What are Roles? What are the 3 standard roles provided by Oracle?
42. What is the difference between a Role and a privilege? Explain the syntax of granting and revoking privileges.
43. Consider 3 users – A, B and C. Suppose A grants certain privileges to B who then forwards them to C. Now A revokes privileges from B. What will happen to the privileges given to C? Explain with proper reasons.
44. What are the different types of backups taken of a database? Explain the scenario when which is used.
45. Explain the problems encountered while porting software from one RDBMS to other. Also suggest how to circumvent them.
46. What is Oracle Enterprise Manager? How and when is it used?
47. Write a note on EXPORT and IMPORT in Oracle.
48. What are the main components in a SQL SERVER database? Explain
49. Compare and contrast SQL in Oracle and SQL in MS SQL SERVER
50. Explain how physical location transparency is achieved in Oracle?
51. Explain in brief the history of Oracle database.
52. Describe how Oracle server handles multiple client connections simultaneously
53. Explain the contents and functions of login.sql file. When is it executed?
54. What are the different types of locks in Oracle? Explain with example
55. Describe when are the following clauses used in an SQL query with examples ---  
EXISTS ANY IN
56. Explain the basic features for Internet provided in Oracle 8i
57. Can an SQL query have another sub query in its FROM clause? Describe the scenario when it might be used.
58. “When the exact size of data is known beforehand, the CHAR data type is preferable over VARCHAR”.  
Justify
59. Describe the different flavors of Oracle 8i available today. Also indicate the user community for which each is designed.
60. Describe any 5 DDL, DML and DCL statements along with examples.
61. How many types of Sql Statements are there in Oracle.
62. Explain Database Triggers
63. Explain Exceptions
64. What are Table Spaces, Data Files, Parameter File, and Control Files?