| Question | Answer1 | Answer2 |
| :---: | :---: | :---: |
| Which of the following relational algebra operations do not require the participating tables to be unioncompatible? | A. Union | B. Intersection |
| Relational Algebra does not have | A. Selection operator | B. Projection operator |
| Tree structures are used to store data in | A. Network model | B. Relational model |
| The rule that a value of a foreign key must appear as a value of some specific table is called a | A. Referential constraint | B. Index |
| It is an abstraction through which relationships are treated as higher level entities. | A. Generalization | B. Specialization |
| The operation which is not considered a basic operation of relational algebra is | A. Join | B. Selection |
| 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 |
| When an E-R diagram is mapped to tables, the representation is redundant for | A. Weak entity sets | B. weak relationship sets |
| If two relations $R$ and $S$ are joined, then the non matching tuples of both $R$ and $S$ are ignored in | A. left outer join | B. right outer join |
| Relational Algebra is | A. Data Definition Language | B. Meta Language |
| If an entity can belong to only one lower level entity then the constraint is | A. disjoint | B. partial |
| The common column is eliminated in | A. theta join | B. outer join |
| In E-R diagram total participation is represented by | A. double lines | B. Dashed lines |
| Relationships among relationships can be represented in an E-R model using | A. Aggregation | B. Association |
| Which of the following constitutes a basic set of operations for manipulating relational data? | A. Predicate calculus | B. Relational calculus |
| Relational calculus is a | A. Procedural language | B. Non-Procedural language |
| Cartesian product in relational algebra is | A. a Unary operator | B. a Binary operator |
| In an E-R diagram attributes are represented by | A. rectangle | B. square |
| In an E-R diagram an entity set is represent by a | A. rectangle | B. ellipse |

$\square$
E-R model uses this symbol to represent weak entity
set?
A．Dotted rectangle B．Diamond

The property of DBMS which ensures that transactions consistency
The property of DBMS which ensures that no two trans Durability The property of DBMS which ensures that changes made in database due to transactions become permanent／persist after committing Durability

The property of DBMS which ensures that database ren isolation after the transaction has been rolled back and the database has been restored to its state prior to the start of the transaction．This state of transaction is known as $\qquad$
Aborted commited is the initial state；the transaction st：Aborted
the system maintains a $\qquad$ to keep track of all transaction operations that affect the values of database items diary $\log$
wnen transactoons are execunng concurrentiy in an interleaved fashion，then the order of execution of operations from all the various transactions is known as
$\qquad$
$\qquad$ いいいy uル
operating by different transactions on the same data item，and at least one of these instructions is a write operation．
schedule program

| interfere | conflict |
| :---: | :---: |
| shared locks are used for those transactions who want Write | Read |
| exclusive locks are used for those transactions who wa Write <br>  no other transaction can modify that data item．This is called as | Read Mutu |

If a transaction Ti has obtained a
on item Q ，then Ti can read，but cannot write， Q ．Exclusive Lock shared lock

If a transaction Ti has obtained an
on item Q ，then Ti can both read and write Q ．
Exclusive Lock
Read Lock
a state viliele וremile $u$ ulese ualisaclivis cair ever proceed with its normal execution.
This situation is called Read Lock shared lock
$\qquad$
locks, but may not release any lock.

$$
\text { Releasing phase } \quad \text { Growing phase }
$$

$\qquad$ A transaction may release locks, but may not obtain any new locks.

Obtaining phase Growing phase

If a transaction Ti has been assigned timestamp TS(Ti), and a new transaction Tj enters the system, then .
$\mathrm{TS}(\mathrm{Ti})>\mathrm{TS}(\mathrm{Tj})$
TS(Ti) !=TS(Tj)
a transaction may not always complete its execut Completed

update
appears only in its own version, not in the actual database itself this is also known as
 has obtained its final lock
(the end of its growing phase) is called the
$\qquad$ Lock Path
conversion from shared to exclusive modes is called $\qquad$ promotion

Aborted abstraction snapshot isolation
conversion from exclusive mode to shared mode is call upgrade
promotion
Ti issues read( $Q$ ) where $Q$ is a data item and If $T S(T i)<V W$ rite operation is Rejヶ Write operation is acc A system is in a deadlock state if there exists a set of transactions such that every
transaction in the set is waiting for another transaction in the set.

DeadLock DeadEnd
when a transaction $T 2$ requests a lock that transaction T1 holds, the lock granted to it may be preempted by rolling back of T1, and granting of the lock to T2. this technique is known as
exemption noncompetent
transactions T14, T15, and T16 have timestamps 5, 10 and 15, respectively. If T14 requests a data item held by T15, then T14 will wait. If T16 requests a data item held by T15, then T16 will be rolled back. This technique is known as

When transaction T1 requests a data item currently
held by T2,
T1 is allowed to wait only if it has a timestamp larger than that of T2 (that is, T1 is younger than T2).
Otherwise, T2 is rolled back This technique is known as WAIT FOR GRAPH
WAIT FOR RESOURCE
In this approach, a transaction that has requested a
lock waits for
at most a specified amount of time. If the lock has not been granted within that time, the transaction is said to timeout Endtime

Deadlocks can be described precisely in terms of a directed graph called $\qquad$ WAIT FOR GRAPH
WAIT FOR RESOURCE
one of the required/mandatory section of PL/SQL block Declaration
Execution
$\qquad$ do not have the code reuse
advantages of stored subprograms. Anonymous blocks subprogram blocks BEGIN BEGIN DBMS_OUTPUT.PUT_DBMS_OUTPUT.PUT LINE ('Hello _LINE (Hello, Welcome to the Welcome to the world of PL SQL'); world of PLSQL');
To print a message "Hello, Welcome to the world of PL END;
END;
To execute a PL/SQL block you must code a
$\qquad$ after the END
keyword.
Examples of acceptable ordinary user-defined identifiers doesnot include
/' \'
t2
last-name

These variables are declared in a outer block and can be referenced by its itself and by its inner blocks.
global variables local variable
global variables local variable

A $\qquad$ is the name of a memory location which stores a value used in a PL/SQL block that remains unchanged throughout the program.

A $\qquad$ data type has no internal
components. It holds a single value

Program Variable

Reference data Type LOB data type

This attribute lets you define the type of variable exactly same as column datatype without knowing its type

Declaring Variable of Same Type as Column last_name of employees table the syntax would be
surname employeeslasurname employees.

100
CREATE SEQUENCE seq_temp1 START WITH 100 INCREMENT BY 4;
a := seq_temp1.NEXTVAL;
DBMS_OUTPUT.PUT_LINE(a);
//What will be the output after twice execution

100
101
Every unit of PL/SQL must be with in a block. As a minimum there must be the delimiting words
$\qquad$
Single-Line comments: Begins with
________ anywhere on a line and extends to
the end of line.
radius**2 means

Used to concatenate character strings in PL/SQL
for finding a particular value or record among the huge set of database tables we use

These type of cursor managed by Oracle itself these type of cursor are used to manage for User/Prgrammer or External Processing

radius squareroot radius square

$$
==
$$

trigger
procedure
implicit cursor/interna External cursor
implicit cursor
explicit cursor
\%NOTFOUND \%FOUND
marks := '45';
IF marks>35 THEN
DBMS_OUTPUT.PUT_LINE('PASS');
ELSE
DBMS_OUTPUT.PUT_LINE('FAIL');
//Answer of this proram would be
pass
a := 'YASHASHREE';
b := 'yashashree';
IF a LIKE b THEN
DBMS_OUTPUT.PUT_LINE(a || 'is Same as ' || b);
ELSE
DBMS_OUTPUT.PUT_LINE(a || 'is not Same as ' || b);
//Answer of this proram would be ?
YASHASHREE is not Sala is not Same as b
when this statement is encountered, the current iteration of the loop completes immediately and control passes to the next iteration of the loop.
FOR a IN 1 .. 10 LOOP
CONTINUE WHEN MOD $(a, 2)=0$;
DBMS_OUTPUT.PUT_LINE('Odd Num := ' ||a); are defined as the
condition that can cause the application into inconsistent state.
all the even numbers all the odd numbers
continue return

Exceptions errors
are exceptions that have been already given names by PL/SQL.
They are named in the STANDARD package in PL/SQL and do not need to be defined by the programmer. The Named Programn Unnamed Exceptions

| To indicate that the values in a column are positive <br> we use__ | Null | Signed |
| :--- | :--- | :--- |
| What is the meaning of "SELECT" clause in Mysql? | Show me all Columns <br> and rows | Show me all columns |


| Delete from pay; statement will delete $\qquad$ the rows from the table pay | All | First five |
| :---: | :---: | :---: |
| The $\qquad$ the aggregate function returns the number of rows containing not null values in the specified column. | Average | Sum |
| To indicate that there should be five integer and to decimal position we use $\qquad$ _. | Decimal (5,2) | Decimal(7,2) |
| The key which helps to uniquely identify each row of the table is called $\qquad$ key. | Primary | Foreign |
| Which of these is a valid call to a function (watch the spaces carefully!) | CONCAT( A , B ) | CONCAT ( $\mathrm{A}, \mathrm{B}$ ) |
| $\qquad$ function returns the string with all alphabets in it converted to to lowercase. | Lower | upper |
| The statement used to perform queries on tables begins with $\qquad$ | Select | Search |
| $\qquad$ temporal data type will update whenever a change is made in the data in the table | Date | Datetime |
| Which among the following belongs to an "aggregate function"? | COUNT | UPPER |
| Can "SELECT" clause be used without the clause "FROM"? | YES | NO |
| Which of the following is NOT available in MySQL: | CREATE VIEW | CREATE SCHEMA |
| $\qquad$ function returns the leftmost characters from the string. | Right | Left |
| The clause used to arrange the rows in the table is $\qquad$ _. | Arranged by | Order by |
| The data type represented by true or false is called $\qquad$ . | Integer | Date |
| The maximum length of the char columns is | 255 bytes | 65, 535 bytes |
| In a LIKE clause, you can could ask for any value ending in "qpt" by writing | LIKE \%qpt | LIKE *ton |
| SQRT function returns the the positive $\qquad$ of x. | Square | RoOT |
| To Cancel the transaction and not save it we use | Commit | Concat |
| In the data type $\operatorname{VARCHAR}()$ data is stored as $\qquad$ length strings. | Fixed | Variable |
| Which layer provides the services to user? | application layer | session layer |
| As the data packet moves from upper layers to lower layers headers are $\qquad$ . | Added | Removed |
| Which "text type" has the maximum number of bytes? | Tiny text | Text |


| In a SELECT with a GROUP BY clause, a WHERE clause, and a HAVING clause, the WHERE conditions are applied before the HAVING conditions. | TRUE | Fasle |
| :---: | :---: | :---: |
| The function used to join the words is | Merge | Move |
| Which declaration doesn't use the same number of bytes and consumption of bytes depends on the input data? | Varchar | Char |
| Which of these commands will delete a table called XXX if you have appropriate authority? | DROP XXX | DELETE XXX WHERE confirm = "YES" |
| The function used to get reminder of x divide by Y is $\qquad$ . | MOD(X,Y) | ABS(X,Y) |
| __is not an aggregate function. | Sum | Min |
| To select database TAX the statement is | Select TAX | Choose TAX |
| Which among the following is the correct syntax for creating table? | CREATE TABLE name; | CREATE name; |
| Which statement is used to count number of rows in table? | SELECT COUNT(*) <br> FROM table_name; | SELECT COUNT ALL(*) FROM table name; |
| The function used to convert lower case letters to uppercase is $\qquad$ . | UPPER | Lower |
| When one query is written within another query it is called as $\qquad$ | Mini query | Net query |
| $\qquad$ data are represented by constants true and false which evaluate to 1 and 0 respectively. | Characters | Boolean |
| To view the structure of the table DEPT the statement is $\qquad$ | Desc DEPT | Decs DEPT |
| Which command is used for the table definition in Mysql? | DESC table name; | DESC table_name |
| To make changes in the data already entered in the table we use $\qquad$ . | Alter table | Update and set |
| To view the names of the database in MYSQL we use $\qquad$ _. | Show Tables | View databases |
| Which clause is used to sort the result of SELECT statement? | SORT BY | ORDER BY |
| The logical operators are | And | Not |
| To save the changes made as a result of a transaction the $\qquad$ the clause is used. | Commit | Start |
| In a table there could be more than one column that uniquely identifies a row in the table, search columns are called $\qquad$ . | Primary key | Secondary key |
| In order to add a new column to an existing table in SQL, we can use the command | MODIFY TABLE | EDIT TABLE |


| The $\qquad$ the operator can be used to match strings containing wildcard characters \% and _ where \% represent one or more characters and_represents a single character. | In | Like |
| :---: | :---: | :---: |
| A database contains one or more___ . | Tables | Rows |
| Processed data is called as ___ . | Data | Information |
| To make changes in the data already entered in the table we use $\qquad$ | Alter table | Update and set |
| The $\qquad$ clause is used to control which Rows are to be displayed as a result of a query. | Order by | Like |
| Which clause is mandatory with clause "SELECT" in Mysql? | FROM | WHERE |
| Is "GROUP BY" clause is similar to "ORDER BY" clause? | Yes | No |
| Which Keyword is used to remove duplicate rows in the result set? | DISTINCTS | MODIFY |
| What is the meaning of "ORDER BY" clause in Mysql? | Sorting your result set using column data | Aggregation of fields |
| Which among the following is an optional Keyword? | DISTINICTS | ALL |
| Which keyword is used for sorting the data in descending order in Mysql? | DESC | ASC |
| How can we define the clause "FROM" in Mysql? | It defines the tables used by a query | It defines the linking of tables in Mysql |
| Which keyword is used for sorting the data in ascending order in Mysql? | DESC | ASC |
| Keyword "ASC" and "DESC" cannot be used without which clause in Mysql? | ORDER BY | GROUP BY |
| What is the meaning of the "WHERE" clause in Mysql? | Filtering out unwanted rows from result set | Filtering out unwanted columns from result set |
| Find odd one out? | GROUP BY | DESC |
| What is the meaning of "GROUP BY" clause in Mysql? | Group data by column values | Group data by row values |
| Which clause is similar to "HAVING" clause in Mysql? | SELECT | WHERE |
| What is the meaning of "HAVING" clause in Mysql? | To filter out the row values | To filter out the column values |
| The maximum value that can be specified to the size of VARCHAR is $\qquad$ | 0 | 127 |
| Which of the following can add a row to a table? | Alter | Add |


| Answer3 | Answer4 |
| :---: | :---: |
| C. Difference | D. Join |
| C. Aggregation operator | D. Division operator |
| C. Hierarchical model | D. File based system |
| C. Integrity constraint | D. Functional dependency |
| C. Aggregation | D. Inheritance |
| C. Union | D. Cross product |
| C. Select * from R union join $S$ | D. Select * from R inner join S |
| C. Strong entity sets | D. strong relationship sets |
| C. full outer join | D. inner join |
| C. Procedural query Language | D. None of the above |
| C. overlapping | D. single |
| C. natural join | D. composed join |
| C. single line | D. Triangle |
| C. Weak entity sets | D. Weak relationship sets |
| C. Relational algebra | D. SQL |
| C. Data definition language | D. High level language |
| C. a Ternary operator | D. not defined |
| C. ellipse | D. triangle |
| C. diamond box | D. circle |


| C. Doubly outlined rectangle | D. None of these |
| :---: | :---: |
| Atomiticiy | isolation |
| isolation | Consistency |
| isolation | Consistency |
| Durability | atomiticity |
| partially committed | active |
| partially committed | active |
| record | register |
| instruction | Execution |
| rival | fight |
| Conflict | Interleave |
| Conflict | Interleave |
| Mutual inclusion | Mutual Explosion |
| Mutual inclusion | Write Lock |
| Mutual Lock | Shared Lock |

deadlock Exclusive Lock

Shrinking phase Obtaining phase

Shrinking phase Releasing phase
$\mathrm{TS}(\mathrm{Ti})<>\mathrm{TS}(\mathrm{Tj}) \quad \mathrm{TS}(\mathrm{Ti})<\mathrm{TS}(\mathrm{Tj})$
Finished active

Encapsulation Exclusion

| Lock Time | DeadLock |
| :--- | :--- |
| upgrade | downgrade |
| demotion | downgrade |
| Read operation is acı Read operation is rejected |  |

TurnEnd
Abortion
preemption
evacuation

```
wait and die Wound-wait scheme
transactionEnd EndLock
WAIT FOR PROCESS IWAIT AND DIE
Exception Header
\begin{tabular}{ll} 
procedure & function \\
BEGIN & \\
DBMS_OUTPUT.PU & \\
T_LINE ('Hello, & BEGIN \\
Welcome to the & DBMS_OUTPUT.PUT_LINE ('Hello, Welcome \\
world of PL SQL'); & to the world of PL SQL); \\
END; & END;
\end{tabular}
,' ;'
phone# credit_limit
scope variable block variable
scope variable block variable
Constant procedure
Composite data type Scalar Data Type
```

surname employees surname employees.last_nameTYPE;

102

102 104
(--) (__)
radius cube radius cuberoot
$+$
function cursor
explicit cursor user defined cursor
internal cursor oracle cursor
\%ISOPEN
\%ROWCOUNT

FAIL no output

YASHASHRI is not Sa। yashashree is not Same as YASHASHREE

```
exit
    break
```

all numbers from 1 t numbers from 1 to 9
bugs Warnings

Named Exception man made exception

| Unsigned | Not signed |
| :--- | :--- |
| Show me all rows | None of the mentioned |
| WHERE | Both GROUP BY and WHERE |
| Should be used to <br> choose the <br> database you want <br> to use once you've <br> connected to <br> MySQL |  |


| Last 10 | First 10 |
| :---: | :---: |
| Max | count |
| Decimal $(2,5)$ | Decimal(9,2) |
| Secondary | Main |
| CONCAT( "A" , "B" ) | CONCAT ( "A" , "B" ) |
| Left | Length |
| Query | Selection |
| Char | Timestamp |
| LOWER | All of the mentioned |
| DEPENDS | None of the mentioned |
| CREATE TRIGGER | CREATE DATABASE |
| MID | Ltrim |
| Sort by | Display by |
| Char | Boolean |
| 256 bytes | None of the mentioned |
| LIKE ton\$ | LIKE ^.*ton\$ |
| Mod | Square root |
| Rollback | Return |
| Changing | Short |
| presentation layer | physical layer |
| Modified | Rearranged |
| Medium text | Long text |


| Either True or False | None of the above |
| :---: | :---: |
| Concat | Join |
| Both Varchar and Char | None of the mentioned |
| DROP XXX <br> WHERE confirm = "YES" | DROP TABLE XXX |
| SQRT(X,Y) | $\operatorname{EXP}(\mathrm{X}, \mathrm{Y})$ |
| Average | AVG |
| Open TAX | Use TAX |
| CREATE TABLE | All of the mentioned |
| SELECT ROWS(*) FROM table_name; | All the above |
| MIN | Max |
| Tied Quarry | Subquery |
| String | Float |
| Show DEPT | Dept DEPT |
| DESC | None of the mentioned |
| Select | Create |
| Show database | Show databases |
| ARRENGE BY | None of the above |
| Or | All the above |
| End | Rollback |
| Candidate key | Foreign key |
| ALTER TABLE | ALTER COLUMNS |


| Logical | Limit |
| :---: | :---: |
| Columns | Data bases |
| Database | Table |
| Select | Create |
| Limit | Sort by |
| Both FROM and WHERE | None of the mentioned |
| Depends | None of the mentioned |
| DISTINCT | All of the mentioned |
| Sorting your result set using row data | None of the mentioned |
| AS | Both AS and ALL |
| ALTER | MODIFY |
| It defines the tables used by a query \& linking of tables in Mysql | None of the mentioned |
| ALTER | MODIFY |
| SELECT | HAVING |
| Filtering out unwanted rows and columns from result set | None of the mentioned |
| ASC | ORDER BY |
| Group data by column and row values | None of the mentioned |
| FROM | None of the mentioned |
| To filter out the row and column values | None of the mentioned |
| 1023 | 65535 |
| Insert | Create |

