



**SHREE H.N.SHUKLA COLLEGE OF I.T & MGMT.**

*(Affiliated to Saurashtra University)*



**Lt. Shree Chimanbhai Shukla**

**B.C.A./B.SC.I.T.-SEMESTER-3**

**RDBMS USING ORACLE**

Shree H.N.Shukla  
College  
2, Vaishali Nagar,  
Nr. Amrapali Under  
Bridge, Rajkot  
Ph. (0281)2440478

Shree H.N.Shukla  
College  
3, Vaishali Nagar,  
Nr. Amrapali Under  
Bridge, Rajkot.  
Ph. (0281)2471645

Website: [www.hnsgroupofcolleges.org](http://www.hnsgroupofcolleges.org)



**UNIT-1 INTRODUCTION OF DBMS & RDBMS**

**INDEX**

**TOPICS**

INTRODUCTION OF ORACLE

WHAT IS INFORMATION?

WHAT IS DATA?

WHAT IS DATABASE?

DIFFERENCE BETWEEN DBMS & RDBMS

SQL

EXPLAIN RELATIONSHIP

EXPLAIN E-R DIAGRAM

EXPLAIN DR.E.F. CODD RULES

SQL\*PLUS

SQL COMMAND

DATA TYPES

SQL VS SQL \* PLUS

SQL\*PLUS FORMATTING TAG

OPERATOR



## Q-1. Introduction Of Oracle.

### ■ **Title Explain:- (Only for Understanding)**

- + What is oracle in simple word

### ■ **Trailer Of topic: (Only for Understanding)**

- + In this topic we can explain who was found oracle
- + oracle market value
- + what was oracle found

### ■ **Detail :(Exam Content)**

- + Oracle corporation is an **american multinational company**
- + Headquartered of oracle corporation is in **redwood city, california (usa).**
- + The company sells **database software and technology.**
- + Oracle was found in **june/16/1977 by larry ellison, bob miner.**
- + Oracle is the **second-largest software company** by revenue and market capitalization **after microsoft.**
- + Total number of employees are **136,000 (2019).**

### ● **Learning outcome: (Summary)**

- + Redwood city head quarter
- + 16<sup>th</sup> June-1977 oracle was found
- + Bob miner and larry elision was found



**ONE WORD QUESTION AND ANSWER**

SR.NO	QUESTION	ANSWER
1	who was found oracle	Larry elision bob miner
2	When was oracle found	16 <sup>th</sup> june1977
3	Head quarter of oracle is in ____	Redwood city

**Q-2 what is information ?**

**■ Title Explain:- (Only for Understanding)**

Information means what?

**■ Trailor Of topic: (Only for Understanding)**

What is detail data

**■ Detail:- (Exam Content)**

Meaning full data is called information.

**■ Learning outcome: (Summary)**

Which types of data are called information

**Q-3. What is data?.**

**■ Title Explain:- (Only for Understanding)**

Data means what?.



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## ■ Trailer of topic:- (Only for Understanding)

- + Any typed of character is called data

## ■ Detail:-(Exam Content)

- + Data is raw material

## ■ Learning outcome: (Summary)

- + it is raw material.

### Q-4what is database?

## ■ Title Explain:- (Only for Understanding)

- + Definition of dbms.

## ■ Trailer Of topic: (Only for Understanding)

- + Any database software data is store in table format.

## ■ Detail:-(Exam Content)

- + Collection of tables is called data base.

## ■ Learning outcome: (Summary)

- + Database is collection of table
- + In all data base data are store.



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**Q-5 what is table?**

■ **Title Explain:- (Only for Understanding)**

- ✚ Definition of table.

■ **Trailer Of Topic:- (Only for Understanding)**

- ✚ We can explain what is table and what is raw and column.

■ **Detail:-(Exam Content)**

- ✚ Table means collection of raw and column

■ **Learning outcome: (Summary)**

- ✚ Raw and column means table
- ✚ In table all the users data are store.

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**Q-6 difference between Dbms & Rdbms.**

■ **Title Explain:- (Only for Understanding)**

- ✚ In this question we can different between dbms and rdbms.



**■ Trailer Of Topic:- (Only for Understanding)**

- ✚ In this topic we can explain dbms and rdbms full form , what is advantages of dbms and rdbms.

**■ Detail:- (Exam Content)**

<u>Dbms</u>	<u>Rdbms</u>
■ Database management system	■ Relational data base management system.
■ In dbms relationship between two table or file are maintain by program	■ In rdbms relationship between two tables or file can create at the time of table creation.
■ Dbms does not support client and server model.	■ Rdbms support client and servermodel
■ Dbms there is no security of data.	■ In rdbms there are multi level of security of data.
■ Each table given extension	■ Many tables are in one data base.
■ Dbms satisfied less then 7 rules of dr.e.f codd rules	■ It satisfied more then 7 reules of dr.ef codd.

**● Learning outcome: (Summary)**

- ✚ Which one is best about both
- ✚ In dbms less then 8 rules are satisfied.
- ✚ In rdbms more then 8 rules are satisfied.
- ✚ Dbms not support client and server.
- ✚ Rdbms support client and server.



**ONE WORD QUESTION AND ANSWER**

<u>SR.NO</u>	<u>QUESTION</u>	<u>ANSWER</u>
1	Full form of dbms	Database management system
2	Full form of rdbms	Relational database management system
3	Dbms support client server ?	No
4	Which one is best?	Rdbms.

**Q-7. Explain Relationship.**

■ **Title Explain:- (Only for Understanding)**

+ Different types of relationship in the database.

■ **Trailer Of Topic:- (Only for Understanding)**

+ In this topic we can explain what is relation ship and what is one to one and one to many and many to many.

■ **Detail:-(Exam Content)**

+ It is way to define relation between Number of tables.

+ There are three types of relationship available like

- 1) One to one relationship
- 2) One to many relation ship
- 3) Many to many relationship

■ **One to one relationship:-**

+ One to one relationship is ,one field of first table is connected only one field of second table.

■ **One to many relationship:-**

+ One field of first table is connected with many field of second table is called one to many relationship.

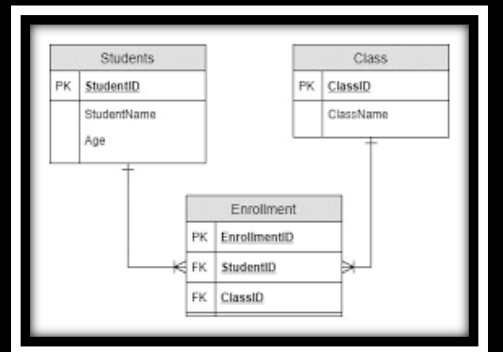
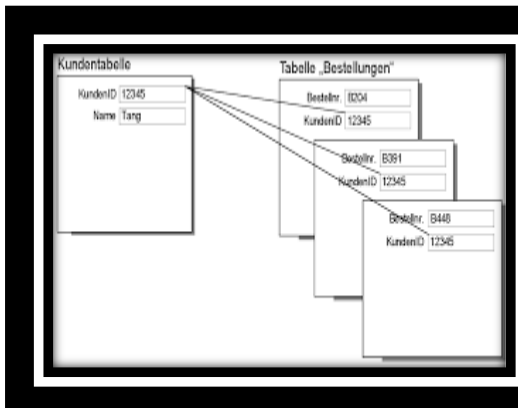


## ■ Many to many Relationship:-

- ✚ Many to many relationship is one or more field of first table is connect to the one or more field of second table.



One to one relationship.



One to many relationship.      Many to many relationship

## ■ Learning outcome:(Summary)

- ✚ In this topic relationship like one column with many other column.

## ✚ ONE WORD QUESTION AND ANSWER

No	QUESTION	ANSWER
1	How many types of relationship are available?	3



2	One to one means?	One field of first table and one field of second table.
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### **Q-8. Explain Dr.E-F Codd Rules.**

#### **Title Explain:- (Only for Understanding)**

- ✚ Explain Edgar F.Codd rules in detail.

#### **Trailer Of Topic:- (Only for Understanding)**

- ✚ In this topic we can explain detail rules of dbbs and rdbms
- ✚ When any software is called dbms and rdbms is based on these rules.
- ✚ If more then 7 rules are satisfied then software is called rdbms
- ✚ If less then 7 rules are satisfied then software is called dbms.

#### **Detail:- (Exam Content)**

- ✚ Dr.edgar.f. codd is ibm reseacher.
- ✚ Who first developed the relation database model in 1970.
- ✚ In 1985 dr.e.f.codd published the list of 12 rules that define anysoftware is dbms or rdbms.
- ✚ Here we can explain some important rules of dr.e.f. codd.

#### **The information rule:-**

- ✚ All the data should be presented in table form.

#### **Guarantee access rule:-**

- ✚ All the data should be access easily.



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## ■ Systematic treatment of null value:

- + A field should be allowed **null** which is **diferent from zero.**
- + This **can not** apply **primary key.**

## ■ View update rule:-

- + each view **support** the **same range of data** manipulation that has direct access to a table available

## ■ High level insert,update,delete:-

- + It **support high level** insert,update and delete. Records of tables.

## ■ Physical data independence:-

- + User should **remain isolated** from the **physical method** of **store** and **retrive** data from the **data base.**

## ■ Logical data independence

- + **How data is view** should **not be change** **when** the logical structure of the **data base** **is changed.**

## ■ Learning outcome:(Summary)

- + Detail of all types of rules given by E.F.Codd.
- + Why we follow this rules in all dbms and rdbms.
- + All types of Formate.



**+ ONE WORD QUESTION AND ANSWER**

<u>No</u>	<u>QUESTION</u>	<u>ANSWER</u>
1	Who was developed rules	Dr.E.F. Codd
2	How many types of rules are available?	12
3	In data is present in tabular format?	Yes.

**Q-9. What is Sql?**

**■ Title Explain:- (Only for Understanding)**

- + Overview of sql

**■ Trailor Of Topic:- (Only for Understanding)**

- + Full form of Sql
- + Developed
- + What is Sql
- + Features & use of Sql

**■ Detail:- (Exam Content)**

- + Sql is known as language of database.
- + Sql is stand for structured query language.
- + Sql is used to communicate with data base.
- + Sql developed by ibm in 1970.
- + It is standard language used to interact with modern data base.
- + Sql is an english like language and it has simple command set which is easy to remember.
- + Sql statement are used to perform task such as insert, update and delete the data.
- + Sql can used by numbers of user, including those with little or no programming experience.



■ **Learning outcome:(Summary)**

- ✚ Sql Stands for Structure Query Language
- ✚ It was developed in 1970.
- ✚ It is language of database.
- ✚ It is used to communicate the data base.

✚ **ONE WORD QUESTION AND ANSWER**

No	QUESTION	ANSWER
1	Sql Stands For	Structure Query Language.
2	Sql is Developed by___	Ibm
3	When was Sql is Developed	1970.
4	Sql is Language of ____	Data base.

**Q-10 . What is Sql \* plus ?**

■ **Title Explain:- (Only for Understanding)**

- ✚ What is Sql\*plus.
- ✚ Over view of Sql\*plus..

■ **Trailer Of Topic:- (Only for Understanding)**

- ✚ What is sql\*plus.
- ✚ Property of oracle
- ✚ Sql\*plus follow oracle

■ **Detail:- (Exam Content)**

- ✚ Sql \* plus is oracle product.
- ✚ It provide command window, where sql command can be written by the user.



■ **Learning outcome:(Summary)**

- ✚ Sql\* plus is oracle product.
- ✚ Sql\*plus is follow oracle rules.
- ✚ It is command window.

✚ **ONE WORD QUESTION AND ANSWER**

No	QUESTION	ANSWER
1	Sql*plus is tool of ____	Oracle
2	When we can write command of oracle?	Sql*plus window.

**Q-11 .Explain Sql command.**

■ **Title Explain:- (Only for Understanding)**

- ✚ Here briefly describe the all types of sql command.
- ✚ Ddl , dml , dcl and dql command we can discuss here.

■ **Trailor Of Topic:- (Only for Understanding)**

- ✚ What is ddl
- ✚ What is dml
- ✚ What is dql
- ✚ What is dcl command.
- ✚ When they all are used in practical program.



■ **Detail:- (Exam Content)**

■ There are four types of SQL command.

- + DDL (Data Definition Language)
- + DML (Data Manipulation Language)
- + DCL (Data Control Language)
- + DQL (Data Query Language)

■ **DDL (Data Definition Language)**

+ DDL contains following commands or statements.

+ **CREATE**: It is used to create objects (table, view, function, procedure, trigger etc) in the database.

+ **ALTER**: It is used to change the structure of database.

+ **DROP**: It is used to delete objects from the database.

+ **TRUNCATE**: It is used to remove all records from the table, including all spaces allocated for the records are removed.

+ **GRANT**: It is used to give different command grant (access rights) to the user.

+ **REVOKE**: It is used to take the given grant back from the user.

■ **DML (Data Manipulation Language)**

+ **INSERT**: it used to insert the data into a table

+ **UPDATE**: it used to update the existing data within a table.

+ **DELETE**: it used to delete all the records from the table, the space will be remaining.

+ **CALL**: it is used to call a PL/SQL program.

■ **DCL (Data Control Language)**



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- + DCL contains following commands or statements.
- + **COMMIT**: it is used to save the work.
- + **SAVEPOINT**: it is used to identify a point in transaction.
- + **ROLLBACK**: Restore database to original since the last commit (like undo).

## ■ DQL (Data Query Language)

- + DQL contain only one statement.
- + **SELECT**: It is used to retrieve data from the database.

## ■ Learning outcome:(Summary)

- + Ddl is first types of command
- + We can create , alter ,drop object in data base.
- + Insert record in table.
- + Update records into table.
- + Select records in to table .
- + Save , commit and roll back.

## + ONE WORD QUESTION AND ANSWER

No	QUESTION	ANSWER
1	Ddl means ____	Data definition language
2	Dml means ____	Data manipulation language.
3	Dql means ____	Data query languages
4	Dcl means ____	Data control language
5	grant means__	Give grant to user
6	Revoke means__	Take back to given grant





**Q-11 .Explain data types.**

■ **Title Explain:- (Only for Understanding)**

- ✚ How many types of data types are available
- ✚ Which data types is used for which purpose

■ **Trailor Of Topic:- (Only for Understanding)**

- ✚ Character
- ✚ varchar
- ✚ varcahr2
- ✚ long
- ✚ raw data types.
- ✚ Size of data types.

■ **Detail:- (Exam Content)**

- ✚ SQL has following data types.

■ **CHAR:**

- ✚ **Syntax: <column name> datatype (<size>)**
- ✚ User can **enter only character** if you specify column with this data type.
- ✚ It is **fixed length character string.**
- ✚ **Example: name CHAR (10).**
- ✚ Now user can enter 10 alphabetic characters into name column.
- ✚ **Maximum size** of this **data type is 255.**

■ **VARCHAR:**

- ✚ **Syntax: <column name> VARCHAR (<size>)**



- + User can enter both character and numeric value if you specify column with this data type.
- + It is variable length character string.
- + **Example: name VARCHAR (10)**
- + Now user can enter 10 alphanumeric digits into name column.
- + Maximum size of this data type are **2000 characters.**

### ■ Varchar2

- + **Syntax: <column name> VARCHAR2 (<size>)**
- + User can enter both character and numeric value if you specify column with this data type.
- + It is variable length character string.
- + **Example: name VARCHAR 2(10).**
- + Maximum size of this data type are **4000 characters**

### ■ Date:-

- + **Syntax: <column name> DATE.**
- + This data type is used to represent date.
- + The standard format is DD-MON-YY.
- + **Example: DOB date**
- + Now user can enter date into DOB column.

### ■ NUMBER(P,S):

- + **Syntax: <column name> NUMBER (P, S)**
- + The number data type is used to store numbers (fixed or floating point).
- + The P (precision) determines the maximum length of the data, whereas the scale determines the number of place to the right of the decimal.
- + If the scale is omitted then the default is zero.



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- + The maximum length of this data type is **38 digits** with Precision and scale.
- + Example: mob NUMBER (10)

## ■ Long:

- + Syntax **<column name> LONG**
- + This data type is used to store variable **length character strings containing upto 2GB.**
- + Only **one long value** can be **defined per table.**
- + Long values **cannot be used** in **sub queries, functions, and expressions.**
- + Example: image LONG

## ■ RAW/RAW LONG:

- + Syntax: **<column name> RAW**
- + **<Column name> RAW LONG**
- + This data type is used to **store binary data, such as picture or images.**
- + The size of RAW data type is **255 bytes.**
- + The size of RAW LONG data type is **2 GB.**

## + ONE WORD QUESTION AND ANSWER

<u>No</u>	<u>QUESTION</u>	<u>ANSWER</u>
1	How many types of data types ?	7
2	Char stands _____	Character
3	Varchar 2 maximum size	4000
4	Number data types maximum size	38 digit
5	Which data types is define only one in per table?	Long.



**Q-12 .Difference between Sql V/s Sql \* plus.**

■ **Title Explain:- (Only for Understanding)**

- ✚ Difference between both of them.

■ **Trailor Of Topic:- (Only for Understanding)**

- ✚ Sql\* plus is oracle product.
- ✚ Sql is created as per ansi standard.
- ✚ Sql\*plus is not advance
- ✚ Sql is very latest.

■ **Detail:- (Exam Content)**

<b>Sql</b>	<b>Sql*plus</b>
SQL is a language	SQL *Plus is an environment
SQL is created as per the ANSI standards	SQL *Plus is ORACLE proprietary
SQL keywords can not be abbreviated	SQL *Plus keywords can be abbreviated.
SQL Statements manipulate data and table definitions in the database.	SQL *Plus commands do not allow manipulation of values in the database
SQL statements are passes to SQL Buffer	SQL *Plus commands are not passes to SQL Buffer



■ **Learning outcome:(Summary)**

- + Full form of Sql
- + Sql is create as per ansi form.
- + Sql\*plus is create as per oracle.
- + Sql is advance
- + Sql \*plus is based on oracle.

+ **ONE WORD QUESTION AND ANSWER**

No	QUESTION	ANSWER
1	Sql*plus is tool of ____	Oracle
2	When we can write command of oracle?	Sql*plus window.
3	Sql is create as per ____ standard	Ansi
4	Sql* plus is ____ tool	Oracle
5	Sql command is abbrivated?	No

**Q-13 Explain Sql\*plus command.**

■ **Title Explain:- (Only for Understanding)**

- + Briefly discuss about all types of sql\* plus formatting command.

■ **Trailer Of Topic:- (Only for Understanding)**

- + Spooling
- + Save
- + Desc
- + Ed
- + Set commnds



■ **Detail:- (Exam Content)**

✚ **SQL \*PLUS HAS 10 SIMPLE COMMANDS.**

■ **SPOOL <filename>:**

✚ This allows **saving SQL statements** together **with their outputs to a file**

■ **SAVE <filename>:**

✚ This allows you to **save buffer contents into a file.**

■ **DESCRIBE <table name>:**

✚ **Lists the attributes of tables and other objects.**

✚ The command **also** can be **written** as **DESC <table name>.**

■ **EDIT [filename]:**

✚ Places you in an **editor** so you can **edit a SQL command.**

✚ The command also **can be written as ED [filename]**

■ **EXIT or QUIT :**

✚ **Disconnect** from the database and **terminate SQL\*Plus**

■ **SET SERVEROUTPUT {OFF|ON}:**

✚ Whether to display the **output of stored procedures** (or PL/SQL blocks).

■ **SET AUTOCOMMIT {OFF|ON}:**

✚ **Commits after each SQL** command or **PL/SQL block automatically.**



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## ■ SET COLSEP { |text} :

- ✚ The text to be **printed between columns** retrieved by SELECT statement.
- ✚ Columns normally separated **by a space.**

## ■ SET SQLPROMPT {SQL|Text}:

- ✚ Sets the **SQL\*Plus command prompt**
- ✚ SQL> SET SQLPROMPT 'HNS';
- ✚ Above command **will change** the prompt To **HNS>**

## ■ Learning outcome:(Summary)

- ✚ Save command
- ✚ Buffer command
- ✚ Set types of all command
- ✚ Sql prompt command

## ✚ ONE WORD QUESTION AND ANSWER

<u>SR.NO</u>	<u>QUESTION</u>	<u>ANSWER</u>
1.	SPOOL MEANS	SPOOLING
2	DESC MEANS	DISPLAY STRUCTURE
3	COMMIT MEANS	SAVE WORK



**Q-14 Explain sql Operator.**

■ **Title Explain:- (Only for Understanding)**

- Over view of sql operator.

■ **Trailer Of Topic:- (Only for Understanding)**

- Arithmetic operator
- Logical operator
- Comparison operator
- Negate operator
- Where clause

■ **Detail:- (Exam Content)**

- Operator is used with SQL statement in where clause.
- SQL has following operator:
  - 1. Arithmetic Operator.
  - 2. Comparison Operator.
  - 3. Logical Operator.
  - 4. Negate Operator.

■ **Arithmetic operator:-**

- +
- -
- \*
- %
- /

■ **Comparison operator**

- =
- <>, !=
- <





- + >
- + >=
- + <=
- + !>
- + !<

■ **Logical operator:-**

**And operator:-**

- + This operator is used to provide **multiple conditions in SQL statements.**
- + Both conditions **must be true.**

**Or operator:-**

- + This operator is used to provide **multiple Conditions in SQL statements.**
- + Either **one or all** condition **may be true.**

**Between operator:-**

- + This operator is used to **search values** between **max and minimum values**

**Exists operator:-**

- + This operator is used to **search for the presence** of a **row** in a specified table.

**Like Operator:-**

- + This operator is used to **compare a string value.**

**In operator:-**

- + This operator is used to **compare value from** a given **list.**



**Is null operator:-**

- ✚ This operator is used to **check the null value.**

■ **Negate operator:-**

**Not operator:-**

- ✚ This operator **reverses the meanings** of the **logical operator** with which it is used.
- ✚ For ex. **NOT EXISTS, NOT BETWEEN, NOT IN etc**

■ **Learning outcome:(Summary)**

- ✚ And operator is used for multiple condition
- ✚ Or operator use for single condition
- ✚ Like means compare string values
- ✚ In means compare from given list
- ✚ Exits means presence of records.

\*

✚ **ONE WORD QUESTION AND ANSWER**

No	QUESTION	ANSWER
1	Both condition must be true in which operator?	And
2	Any one operator is true?	Or
3	Which operator is used for compare value from given list	In
4	Like is used for ____	Compare the string value.

