

**Second Year B. C. A. (Semester-3)**  
**Relational Database Management System**  
**Assignments**

**E.F. Codd's Rule (Assignment-1)**

**Short Question (2 Marks)**

1. List out any four duties of DBA.

**Answer in Detail. (7 Marks)**

1. List out E.F.T. codd's rule. Explain any four in detail.
2. Define the term RDBMS. List out Codd's law. Explain any three in detail.
3. Write features of RDBMS. What is Codd's Rule ?  
Explain Physical and Logical Independence.
4. Write a detail note on DBA

**Structured Query Language (SQL)(Assignment-2)**

**Short Question (2 Marks)**

1. Define self join.
2. What difference is between truncate and drop table ?
3. Write the difference between unique constraint and primary constraint.
4. What is the difference between unique and primary key constraint?
5. How to drop primary key in a table.
6. What is difference between CYCLE and NO CYCLE option in sequence?
7. Explain intersect clause.
8. Explain Union and Intersect clauses.
9. Write any five string related functions.
10. What is difference between truncate and drop the table ?
11. What is difference between Primary and Unique key ?
12. Explain Minus clause.
13. Write any four Date related functions.
14. Name the functions related to Mathematical work. Any four.
15. What is dual table?
16. What do you mean by "ON DELETE CASCADE" in foreign key ?
17. Write command to give insert and modify privileges on emp from user sonali to user aarya.
18. What is the difference between CYCLE and NO CYCLE option in sequence?
19. What is difference between unique constraint and primary constraint ?

**Answer in Detail. (7 Marks)**

1. What is view ? Explain types of view.

2. What is Data Constraints ? List out all types of constraint.  
Explain foreign key constraint with ON DELETE SET NULL.
3. Discuss types of join.
4. Any four date functions
5. Sequence
6. What is DATA CONSTRAINTS? List out types of constraints.  
Explain primary key and Foreign Key constraints providing their syntax and meaning of ON DELETE CASCADE.
7. What is view? Explain types of view.
8. Sequence
9. Any four Aggregate Functions
10. SQL Joins and its types.
11. Types of keys and joins
12. What is Data Constraints? List out all types of constraint.  
Explain Foreign Key constraint with ON DELETE SETNULL.
13. What is View? Explain types of view.
14. What is Index? Explain types of index.
15. What is Subquery? Explain types of subquery.

### **Assignment-3**

### **Programming Language – Structure Query Language (PL/SQL)**

#### **Short Question (2 Marks)**

1. What is meaning of :New and :Old in trigger ?
2. State the difference between function and procedure in oracle.
3. Give the definition of Active Data Set.
4. What do you mean by save point ? How to createSave point ?
5. How to create two procedures having same name ?
6. What is active data set?
7. Write and explain syntax for creating function in pl/sql.
8. Give difference between NO DATA FOUND and %NOTFOUND.
9. What is a cursor? Give its types.
10. What is meaning of : New and : Old in trigger ?
11. What is database trigger? Can we invoke trigger explicitly?
12. What is the meaning of :new and :old in trigger?
13. List out methods to end transaction in oracle.

#### **Answer in Detail. (7 Marks)**

1. What is Exception ? Explain types of exception handling in oracle. Give one example.
2. Write a note on implicit and explicit cursor with example.
3. Architecture of PL/SQL
4. Trigger
5. What is exception? Explain types of exception handling in oracle give one example.

6. What is package? How a package is created? Why package is useful? Also discuss the components of package.
7. Discuss cursor attributes. Explain the use of each attributes providing appropriate example.
8. Database Triggers
9. Explain PL/SQL Architecture. Discuss various PL/SQL control structures.
10. Explain Cursor Attributes with appropriate example.
11. What is Package ? How a Package is created ?
12. Explain concept of stored procedures.
13. Discuss cursors and their advantages.
14. Database triggers
15. PL / SQL Data types
16. PL/SQL control structures.
17. Define overloading? Explain function overloading in oracle with proper example.
18. How to protect all work and data in oracle? Explain different protective mechanisms in detail.
19. What is Exception? Explain types of Exception handling in oracle. Give one example.
20. What is PL/SQL? Discuss the advantages of PL/SQL. Compare PL/SQL and SQI.
21. What is function? Explain any five functions along with syntax and output.
22. What is FOR Cursor loop? Discuss advantages of FOR cursor over simple cursor. Give an example of REVERSE keyword in FOR loop.
23. What is Cursor? Explain types of cursor.
24. Explain various control statements of PL/SQL.

## **Programs**

1. Consider the following table and do as directed : (any two) **10**

Employee (Empno, Emp-name, Date-Of-Birth,Address,City)

Salary (Emp-no, Basic, DA, HRA, Tax, Gross, NET)

  - (1) Create a procedure which calculate gross and Net Salary after incrementing basic salary by 11% given emp-no.
  - (2) Create a function which return name of employee who is youngest when empno is passed.
  - (3) Create a trigger which removes records of those employees who cross their 45 years of age.

2. (A) Consider table EMP (empno, ename, salary)

Write, PL-SQL Code block that:

Update the salaries of REKHA and RAMESH by Rs 2500  
and 2000 respectively.

If average salary >12000 then undo the updates made  
to salaries.

- (B) Write a PL/SQL code block that will accept customer  
number from the user and deduct a balance by Rs. 1000  
from inputted customer no account in bank only if  
customer has a minimum balance of Rs. 500 after  
amount is deducted, otherwise display message "NOT  
ENOUGH BALANCE". Use appropriate table with  
constraints.
- (C) Create a trigger that will maintain log of transaction on  
ACT\_MST table, when insert, update, delete takes place  
make entry in log table. (ac\_no, trans\_date, trans\_type)

3. Consider Following Tables :

Emp (empno, ename, salary, dept\_no)

Dept (Dept\_no, dept\_name)

- (a) Write a PL/SQL Block which Display Name of Dept,  
Name of employee who is earning highest salary for that  
department.
- (b) Create a function which return name of department  
when employee number is passed.
- (c) Create a trigger which maintain log table and store any  
action performed on Emp table.  
log (log\_no, action, date, time)

4. Consider following tables and solve the following :

Table Name : Student

Fields	Datatype
Rollno	number
Name	varchar
Stream	varchar
Year	number
Semester	number
Percentage	number

Table Name : Toppers

Fields	Datatype
Rollno	number
Name	varchar
Stream	varchar
Year	number
Semester	number

- (i) Consider student table with some records. Write a procedure which enters records of all the toppers in Toppers table. Toppers from all stream wise, year wise and semester wise.
- (ii) Write a function which takes input as stream, year and semester along with other necessary parameters and returns total number of students who are fail in specified stream, year and semester. (Consider less than 40% as fail).
- (iii) Write a trigger which executes at the time of insert in student table and checks whether the current student is topper or not and if the current student is topper then delete topper record from topper table and insert current student's record in topper table.