GOVERNMENT GRADUATE COLLEGE (W), SATELLITE TOWN GUJRANWALA

BS-IT(7TH) Semester 2024

Examination: B.S. 4 Years Program

Roll no:

PAPER: Database Administration Lab **TIME ALLOWED:2hrs.**

Course Code:DI-324 L **MAX. MARKS: 50**

Attempt this Paper on Separate Answer Sheet Provided **(Group 1)**

Questions

Q1. Create database and Login with sys user (10)

- Describe how the user management is handled in oracle database?
- Create a new user named As John.
- After creation assign privileges GRANT, REVOKE
- Assign object privileges to user. (Select, Insert)
- Make user 1 as admin so he can assign other object privileges to another user
- In all scenario you have to create two users

Q2. Create table Emp and department in Oracle database in user management (10)

- Insert at least 5 columns like (id, name,address,salary,city)
- Apply primary key and foreign key on the table.
- Assign tablespaces by default on all these tables quota will be 100MB.

Q3. Write all the dictionary views of sp file (5)

- How sp file is converted into pfile
- using RMAN to recover a database in Nonarchivelog Mode

Q4. Take full backup and incremental backup of your datafiles and control file.(10)

- For this you can use RMAN application. Configure RMAN and connect with the sql plus.
- Take online backups of datafile, control file and redo log file

Q5. Viva voice (15)

Solution:

1.a. User Management Process:

1. User Creation: A database administrator (DBA) creates a new user account using the CREATE USER statement.

2. User Authentication: The user provides a username and password to connect to the database.

3. User Authorization: The DBA grants privileges and roles to the user to perform specific tasks.

4. User Account Management: The DBA manages user accounts, including resetting passwords, locking/unlocking accounts, and deleting accounts.

User Management Components:

1. Users: Entities that connect to the database.

2. Roles: Collections of privileges that can be granted to users.

3. Privileges: Specific rights to perform actions on database objects.

4. Profiles: Collections of settings that define resource limits and password policies.

Best Practices:

1. Use strong passwords: Enforce password policies to ensure secure passwords.

2. Grant least privilege: Grant only necessary privileges to users.

3. Use roles: Use roles to simplify privilege management.

4. Regularly review user accounts: Periodically review user accounts to ensure they are still necessary and have the correct privileges.

1.b. create user jhon identified by 123 default tablespace users temporary tablespace temp quota 15m on users;

1.c. grant create session to jhon;

grant create table to jhon;

grant create view to jhon;

1.d. GRANT SELECT, INSERT ON John.Emp TO another_user;

1.e. CREATE USER AdminUser IDENTIFIED BY Admin123;

GRANT DBA TO AdminUser;

2.a+b. CREATE TABLE Department (dept_id NUMBER PRIMARY KEY, dept_name VARCHAR2(50));

```
CREATE TABLE Emp (
 id NUMBER PRIMARY KEY,
 name VARCHAR2(50),
address VARCHAR2(100),
 salary NUMBER,
city VARCHAR2(50),
 dept_id NUMBER,
 CONSTRAINT fk_dept FOREIGN KEY (dept_id) REFERENCES Department(dept_id) );
```

2.c. CREATE TABLESPACE emp_dept_ts

```
DATAFILE 'emp_dept_ts.dbf'
SIZE 500M
 AUTOEXTEND ON
 NEXT 50M MAXSIZE 1G;

ALTER USER John DEFAULT TABLESPACE emp_dept_ts QUOTA 100M ON emp_dept_ts;
```

Q3: Dictionary views of spfile and pfile

1. View dictionary views related to SPFILE:

```sql
SELECT * FROM V$SPPARAMETER;
```

2. Convert SPFILE to PFILE:

```sql
CREATE PFILE FROM SPFILE;
```

3. Recover database in Non-Archive log mode using RMAN:

```sql
RMAN TARGET /
SHUTDOWN IMMEDIATE;
STARTUP MOUNT;
RESTORE DATABASE;
RECOVER DATABASE;
ALTER DATABASE OPEN;
```

Q4: Take full and incremental backup of datafiles and control file using RMAN

1. **Configure RMAN and connect to SQL Plus:**

```bash
rman target /
```

2. **Take full database backup:**

```sql
BACKUP DATABASE;
```

3. **Take incremental backup:**

```sql
BACKUP INCREMENTAL LEVEL 1 DATABASE;
```

4. **Backup control file and redo logs:**

```sql
BACKUP CURRENT CONTROLFILE;
BACKUP ARCHIVELOG ALL;
```

Ask anything