TASK 11: Backing up and recovery in databases   CO4, K3

Perform following backup and recovery scenarios.
a) Recovering a NOARCHIVELOG Database with Incremental Backups
b) Restoring the Server Parameter File
c) Performing Recovery with a Backup Control File

Scenario 1: Recovering a NOARCHIVELOG Database with Incremental Backups

-- Step 1: Backup Database
BACKUP DATABASE [database_name] TO DISK = 'backup_file.bak' WITH
NOFORMAT, NOINIT, NAME = 'Full Database Backup', SKIP, REWIND,
NOUNLOAD, STATS = 10

-- Step 2: Create Incremental Backup
BACKUP DATABASE [database_name] TO DISK = 'incremental_backup.bak'
WITH DIFFERENTIAL, NOFORMAT, NOINIT, NAME = 'Incremental
Database Backup', SKIP, REWIND, NOUNLOAD, STATS = 10

-- Step 3: Simulate Data Loss
-- Intentionally delete or modify data.

-- Step 4: Restore Database
RESTORE DATABASE [database_name] FROM DISK = 'backup_file.bak' WITH
REPLACE

-- Step 5: Apply Incremental Backup
RESTORE DATABASE [database_name] FROM DISK =
'incremental_backup.bak' WITH REPLACE

-- Step 6: Recover Database
RECOVER DATABASE [database_name]

-- Step 7: Open Database
ALTER DATABASE [database_name] SET ONLINE

Scenario 2: Restoring the Server Parameter File (SPFILE)
-- Step 1: Backup SPFILE
BACKUP SERVER PARAMETER FILE TO FILE = 'spfile.bak';

-- Step 2: Simulate SPFILE Loss
-- Delete or modify SPFILE.

-- Step 3: Restore SPFILE
STARTUP MOUNT
RESTORE SERVER PARAMETER FILE FROM FILE = 'spfile.bak';
SHUTDOWN
STARTUP

Scenario 3: Performing Recovery with a Backup Control File

-- Step 1: Backup Control File
BACKUP CONTROLFILE TO FILE = 'controlfile.bak';

-- Step 2: Simulate Control File Loss
-- Delete or modify control file.

-- Step 3: Restore Control File
STARTUP MOUNT
RESTORE CONTROLFILE FROM FILE = 'controlfile.bak';
ALTER CONTROLFILE REUSE;

-- Step 4: Recover Database
RECOVER DATABASE USING BACKUP CONTROLFILE;

-- Step 5: Open Database
ALTER DATABASE OPEN RESETLOGS;

SQL Server Commands:
- BACKUP DATABASE
- RESTORE DATABASE
- RECOVER DATABASE
- ALTER DATABASE
- BACKUP SERVER PARAMETER FILE
- RESTORE SERVER PARAMETER FILE
- BACKUP CONTROLFILE
- RESTORE CONTROLFILE

Result: