



Sub Committee for Curriculum Development

Course Name: Database Administration - I

(UG/PG): PG

Number of Credits: 3

Level: 4

Learning Objective(s): Install and Configure the database, Manage Instance and Database Storage Structure
Perform Backup and Recovery of Database, Monitor and Troubleshoot Database
Configure Net Service, Move Data between Database and Files

Pedagogy:

Case Studies for Creation of Database
Case studies for Backup and Recovery

Pre-requisites:

Must have the knowledge of SQL Queries, Data Dictionary, Database Objects and Relational Operators

Course Outline:

Sr.No.	Topic	Hours
1.	Exploring the Database Architecture Database Architecture Overview Storage Management Architecture Overview Process Architecture Memory structures Logical and physical storage structures	5
2	Creating an Database Planning the Database Manual Database Creation Password Management	7
3	Managing the Database Instance Start and stop the database and components Access a database with SQLPlus Modify database installation parameters Describe the stages of database startup Describe database shutdown options View the alert log Access dynamic performance views	6

4	Manage the Storage Instance Set up initialization parameter files for storage instance Start up and shut down storage instances Administer storage disk groups	4
5	Configuring the Network Environment Use Enterprise Manager to create and configure the Listener Enable listener Use tnsping to test database net connectivity Identify when to use shared servers and when to use dedicated servers	3
6	Managing Database Storage Structures Storage Structures How Table Data Is Stored Anatomy of a Database Block Space Management in Tablespaces Tablespaces in the Preconfigured Database Actions with Tablespaces	3
7	Backup and Recovery Concepts Statement Failure User Error Understanding Instance Recovery Phases of Instance Recovery Using the Advisor Media Failure Archive Log Files	4
8	Performing Database Backups Backup Solutions: Overview Secure Backup User-Managed Backup Terminology Recovery Manager (RMAN) Configuring Backup Settings Backing Up the Control File to a Trace File Monitoring the Flash Recovery Area	8
9	Performing Database Recovery Opening a Database Data Recovery Advisor Loss of a Control File Loss of a Redo Log File Data Recovery Advisor Data Failures Listing Data Failures Data Recovery Advisor Views	5
	Total	45

Books Recommended:

1. Oracle Database Architecture Documentations

Research Papers/Articles recommended for reading:

Suggested Evaluation Methods:

- Presentation
- Test
- Assignment
- Quiz

Parallel/Similar courses the existing curriculum:

S.No.	Name of the course	Institute where it was offered
1	Advance Database Administration (M.Sc. III rd SEM)	SICSR

Name of Member	Tejaswini Apte	Samaya Pillai	Harshad Gune		
Designation	Asst. Professor	Asst. Professor	Asso Professor		
Org. / Inst.	SICSR	SICSR	SICSR		
Signature					

Name of the Expert:

Signature:

Date: