

Level 5 Diploma in Database Administration (990) 171 Credits



Unit: Database Administration	Guided Learning Hours: 280
Exam Paper No.: 3	Number of Credits: 28
Prerequisites: Basic knowledge of relational databases; for example, Microsoft Access.	Corequisites: A pass or higher at Diploma level

Aim: Learners will learn relational database theory as well as how to use relational database management systems (RDBMS). The unit covers the architecture, design, configuration, installation, and maintenance of an Oracle relational database management system. Learner will gain the knowledge and skills needed to administer an Oracle client/server database in an enterprise network environment. Learners will learn to query the data dictionary in order to determine the structure of the database; create and manage locally managed tablespaces including adding free space, monitoring free/used space and using the OMF feature to locate and name the underlying datafiles. Techniques and guidelines for managing storage for objects and controlling control concurrency will be demonstrated. Recovery Manager will be used to perform backup and recovery operations in order to resolve issues with lost or corrupted datafiles.

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Required Materials: Recommended Learning	Supplementary Materials: Lecture notes and			
Resources.	tutor extra reading recommendations.			
Special Requirements: The unit requires a combination of lectures, demonstrations, discussions, and				
hands-on labs.				
Intended Learning Outcomes:	Assessment Criteria:			
1 Oracle architecture processes in a Oracle	1.1 Explain the ORACLASS database			
database system and the different configurations	1.2 Demonstrate how to use the Oracle			
available for an Oracle system	Universal Installer			
	1.3 Examine the use OFA (Optimal Flexible			
· ·	Architecture)			
	1.4 Explain differences between Oracle			
	client and server installation options			
	1.5 Describe key Oracle software			
	components			
	1.6 Describe physical components, memory			
	components, processes, and logical			
	structures			
The main DBA tools in the Oracle	2.1 Demonstrate how configure Oracle Net			
software suite and mechanisms for managing the	to connect to the database			
system.	2.2 Describe and list the memory and			
	background process components of the database instance			
	2.3 Demonstrate how starting and using the			
	Enterprise Manager			
	2.4 Explain the steps and the processes of			
	creating an Oracle database and the			
	prerequisites for creating a database.			
	2.5 Demonstrate how configuring initial			
	settings for database creation			
	2.6 Describe how to create, start, and stop a			
	database instance			
3 The principal components of the data	3.1 Examine and list useful dynamic			
dictionary and using the data dictionary	performance views			
components and views.	3.2 Demonstrate how to manage and			
•	multiplex control files;			
	3.3 Demonstrate using OMF to manage			

3.4 Describe how to create new control files and Describe how to view control file data and Describe how to view control file data as Describe how to view control file data as Describe how to view control file data as Configure and manage the redo log on a standard single-instance Oracle Database. 3.7 Demonstrate managing redo log groups and members 3.8 Describe and configure diagnostic files Describe the Redo Log? 3.10 Outline how Oracle Database Writes to the Redo Log? 4.1 Demonstrate creating many types of tablespaces and datafiles structures. 4.2 Demonstrate how to configure and view storage for tablespaces and datafiles Demonstrate using undo data Explain the physical Database Structures Describe the logical Database Structures Describe tow to create tables Describe creating object and partitioned tables Describe reading object and partitioned tables Describe the tasks involved in table management of the			
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the requirements defined. examples of creating, modifying, and	<u> </u>	0.4	-
dropping constraints	and requirements defined.		
8.3 Explain query database dictionary views		8.3	
to monitor constraints			
8.4 Describe how an implicit-parameter type constraint differs from other type class		8.4	constraint differs from other type class
constraints		0.5	
8.5 Describe how constraints apply specific rules to data		8.5	== : =
Tuies to data		0.6	
8.6 Demonstrate the implementation of	ı	8.6	Demonstrate the implementation of

9 How to create, manage user accounts and	9.1	Demonstrate how to manage passwords
how user privileges provide basic levels of	9.2	Describe how view information about
database security.		users, profiles, passwords, and resources
	9.3	Demonstrate how to create user
		Accounts
	9.4	Describe user Privileges and Roles
	9.5	Describe administrative Accounts and Privileges
	9.6	Explain administering of Roles
	9.7	Describe the administering of Database
	7.7	User Accounts
	9.8	Outline how to set up the Database
		Password Policy
	9.9	Demonstrate when and how to create,
		use, and drop profiles
10 Using privileges and roles to control	10.1	Demonstrate granting and revoking
access to schema objects and to control the ability		privileges to users
to execute system operations.	10.2	Define and describe auditing capabilities
	10.3	Demonstrate practicing using auditing commands
	10.4	Describe user Privileges and Roles
	10.5	Outline how to manage User Roles
	10.6	Describe how to grant User Privileges
		and Roles
	10.7	Demonstrate how to revoke User
		Privileges and Roles
	10.8	Describe granting to and Revoking from
	4	the User Group PUBLIC
	10.9	Describe when do Grants and Revokes
,		Take Effect
	10.10	Demonstrate granting Roles Using the
70. 1		Operating System or Network
	10.11	Describe how to view Privilege and Role
		Information

Methods of Evaluation: A 2½-hour written examination paper with five essay questions, each carrying 20 marks. Candidates are required to answer all questions. Candidates also undertake project/coursework in Oracle Administration with a weighting of 100%.

Recommended Learning Resources: Oracle Administration

Text Books	 Expert Oracle Database Administration by Sam R. Alapati. ISBN-10: 1590590228 Oracle Advanced Tuning and Administration (Oracle Press Series) by Kevin Loney, Eyal Aronoff & Noorali Sonawalla. ISBN-10: 0078825342 Oracle Administration and Management by Michael R. Ault. ISBN-10:
	0471192341
Study Manuals	BCE produced study packs
CD ROM	Power-point slides
Software	Oracle