

**H. N. G. University , Patan**  
**M.C.A – Semester - II**  
**MCA-25 : Advance Database Architecture**

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<b>Unit: 1</b>	<b>[25%]</b>
<b>The Oracle Instance Architecture</b>	
Introduction	
Defining the Instance	
Creating the Instance	
<b>The Oracle Database Architecture</b>	
Defining the Database	
The SYS and SYSTEM Schemas	
Understanding the Components of the Database	
Understanding Database Segments	
Oracle Data Dictionary	
Other Database Objects	
<b>Exploring the oracle Environment</b>	
Creating the Oracle Environment	
Designing an Optimal Flexible Architecture	
Creating Your First Database	
<b>Unit: 2</b>	<b>[25%]</b>
<b>SQL Plus for Administrators</b>	
Administering SQL Plus	
Using the SQL Plus COPY Command	
Using SQL to Create SQL	
Tracing SQL Statements	
<b>Oracle Enterprise Manager</b>	
Understanding the Enterprise Manager Architecture	
Using the Database Administration Tools	
<b>PL/SQL</b>	
Index, View, Sequence, Trigger, Procedure, Function, Package, Cursor, Exception Handling	
<b>Unit: 3</b>	<b>[25%]</b>
<b>IMPORT/EXPORT</b>	
Understanding Import/Export	
Controlling & Configuring Import/Export	
Walkthrough of Import/Export Sessions	
Using SHOW & INDEXFILE Options	
<b>SQL*Loader</b>	
Components of SQL Loader	
Looking at SQL Loader Examples	
Conventional and Direct Path Loading	
<b>Unit: 4</b>	<b>[25%]</b>
<b>Managing Database Storage</b>	
Administering Database Objects	
Understanding Database Fragmentation	
Managing Rollback Segments	
Identifying Storage Problems	
Administering Growing Database	
<b>Integrity Management</b>	
Introduction	
Implementing Locks	
Analyzing v\$lck	
Monitoring Locks on the System	
Avoiding Locks: Possible Solutions	
Implementing Locks with Latches	
<b>BackUp and Recovery</b>	
Types of Backup	
Database Backup in offline and online mode	
Database recovery	

**Performance Tuning fundamentals**

Understanding Why You Tune

Knowing the Tuning Principles

Tuning Goals

Using the Return on Investment Strategy

**Text Books:**

1. William Page & Nathan Hughes : Using Oracle8/8i Special Edition, Prentice Hall India.

**Reference Books:**

1. Oracle Unleashed,
2. Oracle10g Complete Reference, Kevin Loney , Tata McGraw-Hill,2004.
3. Oracle Bible,
4. Oracle Architecture, Oracle Press.
5. Oracle Database 10g DBA Handbook, Kevin Loney & Bob Bryla , Tata McGraw-Hill,2005