

GUJARAT UNIVERSITY
B.E. Sem. VII (C.E.) Examination
Client Server Technology (E.P.-III)

Thursday, 3rd January, 2008}

[Time : 3 Hours
Max. Marks : 100

- Instructions :** (1) Attempt all questions.
 (2) Answer to the two sections must be written in separate answer books.
 (3) Assume suitable data if required.
 (4) Figures to the right indicate full marks.

SECTION I

- 1 (a) Choose the correct option** **4**
1. You are attempting to locate your control files on an Oracle database. In which of the following files you might find the information?
 (a) init.ora (b) catalog.sql (c) pwdORCL.ora (d) control.ctl
 2. Which background process writes the contents of Redo Log Files to archived copies in database running in ARCHIVELOG mode?
 (a) DBW0 (b) LGWR (c) CKPT (d) ARC0
 3. Which of the following choices describes an event that takes place during a checkpoint?
 (a) CKPT writes redo information to disk
 (b) LGWR write new log sequence information to datafile headers
 (c) DBW0 writes dirty buffers to disk
 (d) ARC0 copies archived redo to alternate location
 4. Which of the following physical database components maps to the tablespace logical component of Oracle?
 (a) Extent (b) Datafile (c) Segment (d) Block
- (b) What are the advantages of creating a tablespace? Write complete SQL command to create a new tablespace called INDX. **4**
- (c) Define Data Dictionary and state the importance of SYSTEM tablespace. **4**
- (d) List the different types of Segments **2**
- (e) As an Oracle database administrator, before creating a new database what planning you would do? **2**
- (f) What is the need of creating a new tablespace? **2**
- 2 (a) Explain the working of Database Writer (DBWR) and Log Writer (LGWR) background processes.** **4**
- (b) What is the role of Dispatcher and Listener in Oracle Multithreaded Server? Write SQL command to increase the number of shared server processes to 10. **4**
- (c) Define Instance. How do you create a new Oracle Instance? **2**
- (d) What is Role? The _____ and _____ roles must be granted to a new user to allow him to start a session and create tables and views. **2**
- (e) Explain Segment and Extent. When is a segment and extent created / allocated? **2**
- (f) State the difference between Row Chaining and Row Migration. **2**
- OR**
- 2 (a) Explain Oracle Multithreaded Server. How do you configure Oracle Multithreaded Server?** **6**
- (b) Draw and explain the structure of Oracle Data Block. **4**
- (c) Justify the statement "It is not appropriate to set a new users default tablespace as SYSTEM tablespace". **2**
- (d) How do you ensure that user 'SCOTT' should not have more than 2 MB of data on USERS tablespace? **2**
- (e) 1. Write SQL command to add two data files 'a.dbf' and 'b.dbf' of size 10 MB to USERS tablespace. **2**

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2. Write SQL query to display the total number of users connected to Oracle server.
- 3 (a) What is dynamic SQL? Explain DBMS_PIPE.
(b) Define the term LOG SWITCH. When is the CHECKPOINT process initiated?
(c) The data of a table may span across multiple data files. State whether the statement is true or false. Justify your answer.
(d) How do you determine the performance of a query using EXPLAIN PLAN command? What is the use of ANALYZE TABLE... command?

OR

- 3 (a) Explain the logical architecture of Oracle Server.
(b) Explain (1) PCTINCREASE (2) PCTFREE (3) PCTUSED (4) INITIAL
(c) What is the function of Rollback Segment? State the difference between Public and Private Rollback Segment.
(d) How redo log files are used to recover data?

SECTION - II

- 4 (a) Compare the process of accessing data by applications from MS ACCESS database in File Server architecture and Oracle database in Client Server Architecture.
(b) Explain the term "Business Logic" with respect to Library Management System.
(c) Compare In-Process and Out-of-Process Server Components.
(d) Explain Distributed Component Object Model.
(e) Explain the terms UUID and Marshalling.
- 5 (a) What are ACTIVEX Controls? List the steps that occur when a user created ACTIVEX Control is used in a program.
(b) Explain the Single-Threaded and Apartment Model In-Process Threading Models.
(c) Write code in Visual Basic Language for implementing Stack operations (Push and Pop operations) using object oriented features.

OR

- 5 (a) Define COM. Explain IUnknown, IDispatch and IPersist Interfaces
(b) Explain Out-of-Process Server Threading Models
(c) Explain the various Compatibility options for an ActiveX DLL component.
- 6 Attempt any four
(a) Explain the responsibilities of Transaction Server
(b) Explain Get and Let Properties with an example
(c) What are the disadvantages of using ActiveX component? How do you compile and register ActiveX DLL component?
(d) Stored Procedures and COM components can be used to embed business logic. Compare both the methods.
(e) Explain the various Instantiating properties of Visual Basic Class Module
(f) Explain with figure Physical deployment of application using a Transaction Server and Distributed Components