Seat No. : _____

MM-109

March-2019

B.C.A., Sem.-VI

CC-308 : Database Administration

Time : 2:30 Hours]   [Max. Marks : 70

1.   (A)   Answer the following :

     (i)   Explain in detail: Oracle Database Structure.   **7**

     (ii)   Explain: Client-server Architecture and Multi-tier Architecture.   **7**

<div align="center">OR</div>

     (i)   Discuss : The different types of oracle users. Also discuss the responsibilities of database administrator.

     (ii)   What is a tablespace ? Explain the different types of tablespaces in detail.

   (B)   Answer any **four** :   **4**

     (1)   _____ installs and upgrades Oracle database server and front-end applications.

        (a)   Security Consultants   (b)   Database Administrator

        (c)   Application Developer   (d)   Security administrator

     (2)   _____ is a system privilege for database administrator.

        (a)   SYSTEM   (b)   SYS

        (c)   SYSDBA   (d)   All of above.

     (3)   Which of the operations can be performed by SYSOPER system privilege ?

        (a)   STARTUP   (b)   SHUTDOWN

        (c)   CREATE SPFILE   (d)   All of above

     (4)   _____ is defined as virtual table that derives data from one or more tables.

        (a)   Table   (b)   Indexes

        (c)   Views   (d)   All of above

     (5)   _____ is defined as a shared memory that contains the data and controls information about a single Oracle instance.

        (a)   SGA   (b)   PGA

        (c)   Both (a) and (b)   (d)   None

(6) The _____ process is responsible for copying the online redo log files to storage device when Redo log files become full.

(a) ARCH (b) DBWR

(c) LGWR (d) CKPT

2. (A) Answer the following :

(i) What are control files ? Discuss the considerations for managing the control files. **7**

(ii) Write a detailed note on Data files. **7**

OR

(i) What is Profile in Oracle ? Explain creating and dropping of Profile.

(ii) What are database roles ? What are the different types of database roles that oracle supports ? Also discuss the system level roles.

(B) Answer any **four** : **4**

(1) _____ are the right that enables database users to run the SQL statements.

(a) Profiles (b) Roles

(c) Privileges (d) Users

(2) A _____, in Oracle, is a database user who can access and work with oracle databases.

(a) Profile (b) Role

(c) Privilege (d) User

(3) The _____ statement is used to grant system privilege or role to database users.

(a) PRIVATE (b) REVOKE

(c) PUBLIC (d) GRANT

(4) Oracle records all the changes for a database in the _____ files.

(a) Redo Log (b) Control

(c) Data (d) None of above

(5) The ___ files are generated automatically when the database is created.

(a) Redo Log (b) Control

(c) Data (d) None of above

(6) Each database has at least one tablespace namely _____.

(a) SYS (b) Both (a) and (c)

(c) SYSTEM (d) None of above

3. (A) Answer the following :
   (i) Explain :
      (1) B-Tree index
      (2) Bitmap index
      (3) Function-based index.   7
   (ii) Explain Clusters in detail.   7

   OR

   (i) What is partitioning ? How does partitioning increase manageability ?
   (ii) What is meant by rebuilding indexes ? Also explain the importance of index validation.

   (B) Answer any **three** :   3
   (1) _____ is a method to free leaf blocks for reuse.
      (a) Rebuilding   (b) Coalescing
      (c) Partitioning   (d) None of above

   (2) _____ refers to performing a check to confirm that every entry in the index points to the correct row of the associated table.
      (a) Index Rebuilding   (b) Index Validation
      (c) Index Monitoring   (d) Index Coalescing

   (3) A _____ is a group of tables that share the same data block.
      (a) Index   (b) Non-unique index
      (c) Cluster   (d) None of above

   (4) _____ indexes are indexes that can be created on multiple columns of a table.
      (a) Composite   (b) Unique
      (c) Bitmap   (d) Reverse

   (5) _____ indexes are B-Tree indexes in which the key column value is reversed while keeping the column order.
      (a) Composite   (b) Unique
      (c) Bitmap   (d) Reverse

4. (A) Answer the following :
   (i) What is optimizer ? State and explain the two types of Optimizers.   7
   (ii) What is tuning ? How can you tune memory usage ?   7

   OR

   (i) What do you mean by data backup ? Also explain physical and logical backups.
   (ii) What is meant by data recovery ? Explain the different types of recovery methods.

(B) Answer any **three** : 3

    (1)   Which are the different data structures provided by Oracle, to recover the data ?

        (a)   Online Redo logs

        (b)   Roll-back and undo segments

        (c)   Control Files

        (d)   All of above

    (2)   _____ reads the content of the export dump file and executes the SQL commands stored in the export file.

        (a)   Import utility   (b)   Export utility

        (c)   tablespace   (d)   None of above

    (3)   The _____ plan is an algorithm for retrieving data from the database.

        (a)   execution   (b)   explain

        (c)   optimal   (d)   tuning

    (4)   _____ refers to all the tasks that are performed to improve the performance of the database.

        (a)   Optimizers   (b)   Tuning

        (c)   Data Recovery   (d)   Data backup

    (5)   Tuning the _____ involves grouping the database objects on the basis of their space usage.

        (a)   Physical Storage   (b)   Memory usage

        (c)   Logical Storage   (d)   None of above

_____