SELF TEST

The following questions will help you measure your understanding of the material presented in this chapter. Read all the choices carefully because there might be more than one correct answer. Choose all correct answers for each question.

Identify the Benefits of the Multitenant Container Database (Objective 2.01)

1. Which of the following are key benefits of a multitenant container database?
   A. Failover capabilities
   B. Zero-downtime upgrade of the database
   C. Lower costs
   D. Easier database manageability

2. Which of the following are legitimate configurations in Oracle Database 12c?
   A. One or more PDBs with no CDB
   B. A CDB with no PDBs
   C. A CDB with one or more PDBs
   D. A non-CDB

3. Which of the following statements is true?
   A. You can share an instance between a CDB and a non-CDB database.
   B. You can share an instance between two CDBs.
   C. You can't share an instance between a CDB and a non-CDB database.
   D. You can plug a CDB into a non-CDB database.

4. You can store application data in:
   A. The seed database
   B. The root database
   C. The PDBs
   D. The PDBs and the CDB

5. You can convert an Oracle 11g database into:
   A. A CDB
   B. A PDB
   C. A CDB or a PDB
   D. A CDB and a PDB
Explain Root and Multitenant Architecture (Objective 2.02)

6. Which of the following containers are mandatory in a multitenant database?
   A. The root container and the user container
   B. The root container and the seed container
   C. The seed container and the user container
   D. Only the root container

7. A permanent tablespace in multitenant database architecture:
   A. Is shared among all the PDBs in the same CDB
   B. Is associated with only a single PDB
   C. Is shared among all the PDBs in all the CDBs in your environment
   D. Can be associated only with the root container

8. Which of the following statements is true?
   A. You can open the seed PDB for some special operations.
   B. A PDB can have the same name in different CDBs.
   C. Oracle metadata is stored in the root container only.
   D. Oracle metadata is stored in the root container as well as in the PDBs.

9. Which of the following is true of a seed pluggable database?
   A. You must manually copy the seed data files.
   B. You must specify the clause `SEED_FILE_NAME_CONVERT` in the `CREATE DATABASE` command.
   C. You aren’t required to have a seed pluggable database.
   D. The seed pluggable database is empty—it doesn’t have any data files.

10. Which of the following statements are true?
    A. There is only one SYSTEM and SYSAUX tablespace in each CDB.
    B. There is only one instance per CDB.
    C. There is a separate set of redo log files for each PDB.
    D. There is a single undo tablespace for the entire CDB.

11. Where can you create common users?
    A. Both CDB and PDB. This is mandatory.
    B. Only in a CDB.
    C. Only in a PDB.
    D. In either a CDB or a PDB.
Chapter 2: Multitenant Databases—Architecture and Configuration

12. What are the two types of links that help the PDBs access shared objects stored in the CDB?
   A. DB links
   B. Metadata links
   C. Container links
   D. Object links

Create and Configure CDBs and PDBs (Objective 2.03)

13. Which of the following parameters or clauses is mandatory when creating a CDB?
   A. SEED_FILE_NAME_CONVERT
   B. PDB_FILE_NAME_CONVERT
   C. DB_CREATE_FILE_DEST
   D. ENABLE PLUGGABLE DATABASE

14. Which of the following statements are true?
   A. You can drop a PDB only if you first close the PDB.
   B. You can drop the seed PDB, but you won't be able to create any other PDBs in that CDB afterward.
   C. You can drop a PDB but retain its data files for use by another PDB.
   D. When you drop a PDB, the instance automatically removes the PDB's redo log files and data files.

15. Which of the following statements is true in a multitenant container database environment?
   A. There are mandatory services for the CDB and the seed.
   B. There is a separate service for each PDB.
   C. There is a common service for all PDBs.
   D. You must configure each PDB service yourself.

16. Which of the following statements are true about cloning a PDB into the same PDB?
   A. You can't clone a PDB into another CDB.
   B. You can use the source files copy method to copy the target PDB files.
   C. Cloning a PDB can use the clause NOCOPY if the target PDB files will use the source files.
   D. You can clone only one PDB into the same CDB.

17. Which of the following is not a valid method for creating a pluggable database?
   A. Create a pluggable database from the root container
   B. Create a pluggable database from the seed container
   C. Clone a PDB in the same CDB from another PDB
   D. Plug a non-CDB into the CDB
18. You need to specify an XML file:
   A. Only when plugging in a PDB
   B. Only when unplugging a PDB
   C. When plugging or unplugging a PDB
   D. When cloning or plugging a PDB

19. Which of the following are valid methods to plug a non-CDB into a CDB?
   A. RMAN full database backups
   B. Transportable tablespaces
   C. DBMS_PDB.CHECK_PLUG_COMPATIBILITY function
   D. DBMS_PDB package

20. The keyword _SEED_ in the CDB creation statement does what?
   A. It lets you configure the same storage attributes as those for the root for the seed database’s tablespaces.
   B. It lets you determine if a seed database is created or not.
   C. It lets you configure different storage attributes for the seed database’s tablespaces.
   D. It lets you create a pluggable database from the seed database.

**Migrate a Non-CDB to a PDB Database (Objective 2.04)**

21. You use the DBMS_PDB.DESCRIBE procedure:
   A. After you convert a non-CDB into a PDB
   B. Before plugging a non-CDB into a CDB
   C. During the conversion of a non-CDB to a PDB
   D. Before converting a PDB into a non-CDB

22. Which of the following techniques can you use to plug a non-CDB into a CDB?
   A. Transportable tablespaces
   B. Transportable database
   C. Expdp and impdp
   D. Remote file copy

23. When using Oracle Golden Gate to replicate data from a non-CDB (for converting the database to a PDB), you must:
   A. Configure unidirectional replication
   B. Configure bidirectional replication
   C. Use TTS or TDB to export data
   D. Fail over to the new PDB
SELF TEST ANSWERS

Identify the Benefits of the Multitenant Container Database (Objective 2.01)

1. ☑ C and D. Lower costs and easier management are among the key benefits offered by the multitenant container database option.
   ✗ A and B are incorrect. Neither is a capability offered by the multitenant container database option.

2. ☑ B, C, and D. Answers B and C are correct because you can configure a CDB with none, one, or more PDBs. D is correct because you can have a non-CDB in Oracle Database 12c.
   ✗ A is incorrect. You can’t have PDBs without a CDB.

3. ☑ C. You can’t share an instance between two databases. Each CDB has an exclusive instance, just like a non-CDB does.
   ✗ A, B, and D are incorrect. A and B are incorrect because you can’t share instances between multiple databases. D is incorrect because you can’t plug a CDB. You can plug only PDBs.

4. ☑ C. You can store application data in a PDB.
   ✗ A, B, and D are incorrect. You can only store application data in a PDB.

5. ☑ B. You can plug in a non-CDB as a PDB.
   ✗ A, C, and D are incorrect. You can’t convert an Oracle 11g (or any other release) database into a CDB.

Explain Root and Multitenant Architecture (Objective 2.02)

6. ☑ B is correct. Both root and seed are mandatory containers.
   ✗ A, C, and D are incorrect. A and C are incorrect because a user container (PDB) isn’t mandatory. D is incorrect because the root container is mandatory.

7. ☑ B. A permanent tablespace is associated with only a single PDB.
   ✗ A, C, and D are incorrect. A and C are incorrect because a permanent tablespace isn’t shared by PDBs. D is incorrect because a permanent tablespace can be associated with PDBs as well, in addition to the root container.

8. ☑ C. Oracle metadata is stored only in the root.
   ✗ A, B, and D are incorrect. A is incorrect because you can’t open the seed PDB. B is incorrect because a PDB can’t have the same name in multiple CDBs. D is incorrect because Oracle metadata isn’t stored in the PDBs.
9. ☑ D. The seed database doesn’t have any data files.
   ☒ A, B, and C are incorrect. A and B are incorrect because you aren’t required to do either of these. C is incorrect because a seed database is mandatory.

10. ☑ B and D. Answer B is correct because there’s only a single instance per CDB. D is correct because there’s a single undo tablespace for the entire CDB.
    ☒ A and C are incorrect. A is incorrect because there’s a SYSTEM and SYSAUX tablespace in both the seed container and the PDBs, in addition to the SYSTEM and SYSAUX tablespaces in the root container. C is incorrect because there’s only one set of redo log files, at the CDB level. Individual PDBs don’t have any redo logs of their own.

11. ☑ B. You can create common users only in the root container (CDB).
    ☒ A, C, and D are incorrect. You can’t create a common user in a PDB.

12. ☑ B and D. Object links and metadata links help PDBs access and use shared objects stored in the root.
    ☒ A and C are incorrect. These aren’t the correct links.

Create and Configure CDBs and PDBs (Objective 2.03)

13. ☑ D. The parameter is mandatory for creating a CDB.
    ☒ A, B, and C are incorrect. None of these is mandatory. You can specify any one of these parameters to specify the storage for creating the CDB files.

14. ☑ A and C. Answer A is correct because you must first close a PDB before you can drop it. C is correct because you can drop a PDB while retaining its data files. In fact, this is the default behavior when you drop a PDB.
    ☒ B and D are incorrect. B is incorrect because you can’t drop the seed database. D is incorrect because a PDB’s data files aren’t automatically removed. Furthermore, a PDB doesn’t have its own redo log files.

15. ☑ B. Each PDB in a CDB has its own service.
    ☒ A, C, and D are incorrect. A is incorrect because there is no service for a seed database. C is incorrect because each PDB has a separate service. D is incorrect because you don’t have to configure the PDB services yourself, although you can configure them.

16. ☑ A and B. Answer A is correct because you can clone a PDB only into the same CDB. B is correct because during cloning the PDB can use the source file copy method to copy the target PDB files.
    ☒ C and D are incorrect. C is incorrect because you don’t need to specify the NOCOPY clause if the target files will use the source files. D is incorrect because you can clone multiple PDBs into the same CDB.
Chapter 2: Multitenant Databases—Architecture and Configuration

17. ☑ A. You can’t create a pluggable database from the root container.
   ☑ B, C, and D are incorrect. All of these methods are valid ways to create a pluggable database.

18. ☑ C. You need to specify the XML file during the plugging and unplugging of a PDB.
    ☑ A, B, and D are incorrect. A and B are incorrect because the XML file must be specified during both plugging and unplugging of a PDB. D is incorrect because you don’t need an XML file to clone a PDB.

19. ☑ B and D. These two alternatives point to valid methods to plug a non-CDB into a CDB.
    ☑ A and C are incorrect. A is incorrect because you can’t use RMAN backups to plug a non-CDB into a CDB. C is incorrect because it refers to a nonexistent function.

20. ☑ C. The keyword SEED in a CDB creation statement lets you configure different storage settings for the seed database’s tablespaces from those of the root container.
    ☑ A, B, and D are incorrect. A is incorrect because the keyword SEED does the opposite—it lets you configure different storage settings for the seed container. B is incorrect because the seed database is mandatory. D is incorrect because the keyword SEED isn’t used in the creation of a pluggable database.

Migrate a Non-CDB to a PDB Database (Objective 2.04)

21. ☑ B. You execute the DBMS_PDB.DESCRIBE procedure before you plug a non-CDB into a CDB, in order to produce the XML file that contains the metadata for the non-CDB.
    ☑ A, C, and D are incorrect. You don’t execute the procedure at any of these stages.

22. ☑ A, B, and C. You can use TTS, TDB, or an old-fashioned Data Pump export to migrate data and import it into the new PDB.
    ☑ D is incorrect. You can’t move data with the remote file copy for converting a non-CDB into a PDB.

23. ☑ A and D. A is correct because you must configure unidirectional replication to replicate data from the source database to the new PDB. D is correct because you must fail over to the new PDB once that database catches up with the source non-PDB.
    ☑ B and C are incorrect. B is incorrect because you’re not required to configure bidirectional replication. C is incorrect because you don’t need to use TTS/TDB during a replication process.