



**NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY**

**FACULTY OF COMPUTING AND INFORMATICS
DEPARTMENT OF COMPUTER SCIENCE**

QUALIFICATION: BACHELOR OF COMPUTER SCIENCE	
QUALIFICATION CODE: 07BACS	LEVEL: 7
COURSE NAME: DATABASE ADMINISTRATION	COURSE CODE: DBA721S
DATE: JUNE 2023	PAPER: THEORY
DURATION: 3 HOURS	MARKS: 100

FIRST OPPORTUNITY EXAMINATION PAPER	
EXAMINERS	MR. ERICKY IIPUMBU MS. ALBERTINA SHILONGO
MODERATOR	DR. AMER DHEEDAN

THIS QUESTION PAPER CONSISTS OF 6 PAGES (Including this front page)

INSTRUCTIONS

1. Answer ALL the questions on the answer scripts provided.
2. Write clearly and neatly.
3. Be guided by the number of marks allocated when answering the questions.
4. Show all your calculations.
5. Number your questions clearly.

Question 1: Write down the question number and the correct answer next to it. [20 Marks]

1. Which administrator is responsible for the following tasks?
 - Planning for backup and recovery of database information
 - Maintaining archived data on tape
 - Backing up and restoring the database
 - Contacting Oracle for technical support
 - a) Network Administrator
 - b) Application Administrators
 - c) Database Administrators
 - d) Security Officers

- 2) The _____ records all changes made to the data
 - a) Redo log
 - b) Archive log
 - c) Both and B
 - d) Data file

- 3) Which of the following is not a component of Oracle Manager Cloud Control
 - a) Oracle Management Repository (OMR):
 - b) Oracle Management Service (OMS)
 - c) Oracle Management Agent
 - d) Oracle Manager Database Express

- 4) Each database account has the following except _____
 - a) A unique username
 - b) An authentication method
 - c) A default tablespace
 - d) A unique nickname

- 5) Which of the following privileges manages data encryption operations?
 - a) SYSDBA
 - b) SYSOPR
 - c) SYSKM
 - d) SYSBACKUP

- 6) Which is the preferred way to recover a database after a transaction in progress terminates abnormally?
- a) Rollback
 - b) Roll forward
 - c) Switch to duplicate database
 - d) Reprocess transactions
- 7) When an Oracle database is created, which user/s is automatically created and granted the DBA role?
- a) SYS
 - b) SYSTEM
 - c) SGA
 - d) Both a and b
- 8) Identify which one for the following database object names are which is invalid. Give reasons for your choice of invalidity or validity.
- a) !Mathew
 - b) "WHERE"
 - c) Khomas_Tura
 - d) AS
- 9) Which Oracle edition was the first edition to extend databases to be transformed into datacentres and a shared pool of resources?
- a) Oracle Database 9i
 - b) Oracle Database 10g
 - c) Oracle database 8i
 - d) Oracle database 12C
- 10) To start listeners in Oracle, you use the following command:
- a) lsnrctl start
 - b) listeners start
 - c) Lis starts
 - d) None of the above
- 11) Which is not a valid Oracle Database server value for initialization parameters type:
- a) Boolean
 - b) Floating
 - c) Integer
 - d) Parameter File

- 12) When is an Oracle database created and given the role to ensure data availability?
- a) SYSTEM
 - b) SGA
 - c) Both a and b
- 13) Tablespace can be declared as which of the following
- a) Unusable
 - b) Temporary
 - c) Log file
 - d) Data file
- 14) Which of the following tasks is irrelevant when configuring an HTTP listener port for a database instance using Enterprise Manager Database Express in Oracle?
- a) Verify DISPATCHERS parameter
 - b) Use DBMS_XDB.setHTTPPort procedure
 - c) Use Oracle_xdb.setHTTPPort Procedure
 - d) Launch Enterprise Manager Database Express
- 15) Multiple sessions can be created concurrently for a single Oracle database user using the same username.
- a) True
 - b) False
- 16) Oracle database physical storage can be managed without affecting the logical structure.
- a) True
 - b) False
- 17) The instance consists of memory structures and background processes associated with that instance.
- a) True
 - b) False
- 18) SQL * provides a graphical user interface to the Oracle database, enabling you to perform management operations.
- a) True
 - b) False
- 19) SQL*Plus provides an interface to your database so that you can perform database management operations
- a) True
 - b) False

20) Without this file, the control file database cannot be mounted, and recovery or re-creation of the control file is required.

- a) True
- b) False

Question 2: Structured Questions

[40]

2.1 You were recently appointed as Junior Database Administration in an organisation. You were presented with a problem whereby the HR department needs to purchase an application that uses an Oracle database as the repository for application data. Your job is to recommend a suitable application and install and configure the Oracle Database 10g software on the server. As the DBA, how would you go about this? (6)

2.2 For a user to access the Oracle database, they need to have an account created and configured with various settings/parameters. Distinguish between the following terms when administering Oracle database account users and give an example of each. (4)

- Privilege:
- A role:

2.3 List and explain the two types of initialization parameter files in Oracle. (4)

2.4 List and explain 4 types of auditing in databases. (8)

2.5 Upon creating a user account, Maria, on Oracle, the DBA has not granted the session privilege to this user. However, she was still able to connect to the database. Explain why this is possible (2)

2.6 One of the key duties of a DBA is to protect the database from failure wherever possible. List and explain any four (4) categories of database failure. (8)

2.7 List and explain any 4 types of back-ups in databases. (8)

Question 3: Practical and Long Questions

[40]

3.1 The disk on which your redo log file is located is corrupted. As a result, you decide to relocate the redo log files to a different disk. After you shut down the database, what actions can you take to relocate the redo the log file, and what changes will you make to the database? (12)

3.2 Write SQL commands to create a **user called Kermit** and assign a password to the user, grant the user a profile called **HRCLERK**, and the user must be able to **create a session**. (Write the code using the correct syntax) (8)

3.3 Evaluate 5 challenges and opportunities presented by cloud computing in databases (10)

3.4 In detail, discuss any 5 opportunities/advantages NOSQL databases provide.

(10)

Total marks: 100

Paper ends