

061306T4CSC

COMPUTER SCIENCE LEVEL 6

ICT/OS/CS/CR/05/6/A

DEMONSTRATE DATABASE MANAGEMENT SKILLS

NOV/DEC 2023



**TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION COUNCIL
(TVET CDACC)**

WRITTEN ASSESSMENT

TIME: 3 Hours

INSTRUCTIONS TO CANDIDATE

1. *The paper consists of **two** sections: **A** and **B***
2. *Answer **ALL** questions in Section **A** and any **Three** from section **B***
3. *Marks for each question are indicated in the brackets*
4. *A separate answer booklet will be provided*
5. *Do not write on the question paper*

Candidates should answer the questions in English

This paper consists of **FOUR (4)** printed pages

***Candidates should check the question paper to ascertain that all pages are
printed as indicated and that no questions are missing***

SECTION A: (40 Marks)

(Answer ALL the questions in this section)

1. Define each of the following terms as used in database: (4 Marks)
 - a) Database Management System (DBMS)
 - b) Record
 - c) Field
 - d) Relational Model
2. The Milk Cooperative society has contracted you to create a modern application. Outline FOUR reasons for incorporating a database within an application (4 Marks)
3. Write an SQL statement to create a table named “Students” with three columns configured to disallow null values (3 Marks)
4. Explain the difference in functionality between foreign key and primary key (4 Marks)
5. During the process of database creation, explain any TWO requirements for collecting the information about the database. (4 Marks)
6. The properties of a table collectively define the structure of a relation in a database. List THREE properties of a table. (3 Marks)
7. Explain TWO reasons why the relational model is more popular than the other database models. (2 Marks)
8. Outline FOUR advantages of implementing OODBMS over the RDBMS. (4 Marks)
9. Explain the function of the following terms in a database management system:
 - a) Data manipulation language (2 Marks)
 - b) Data definition language (2 Marks)
10. Write an SQL query to retrieve data from an "employees" database and display the results to the database user. (4 Marks)
11. Explain FOUR data manipulation query statements in Microsoft SQL Server and their respective uses. (4 Marks)