

061306T4CPM

COMPUTER PROGRAMMING LEVEL 6

IT/OS/CP/CR/04/6/A

DEMONSTRATE DATABASE DESIGN AND DEVELOPMENT

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 6 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 questions in this section)

- 1) List TWO advantages of using database systems (2 Marks)
- 2) Explain TWO components of a relational database (4 Marks)
- 3) Differentiate between COUNT DISTINCT and COUNT (*) as used in Structured Query language (2 Marks)
- 4) List FOUR characteristics of a primary key in a database (4 Marks)
- 5) Explain each of the following approaches used in the design of a database
 - (i) Top Down
 - (ii) Bottom Up (4 Marks)
- 6) Differentiate between TRUNCATE and DROP commands as used in SQL (4 Marks)
- 7) List FOUR functions of views as used in Structured Query Language (4 Marks)
- 8) State FOUR anomalies eliminated by normalization (4 Marks)
- 9) Explain a relational database management system (2 Marks)
- 10) Distinguish between CASCADE and RESTRICT commands as used in database view (4 Marks)
- 11) The following are SQL statements. Use them to identify the errors in the statements (6 Marks)

```
Create Table (Staffno varchar (5), lname (varchar (15), salary
decimal ((7,2);
INSERT TO STAFF('ST678','Lenny','15700");
SELECT staffno, lastname, salary
From staff
Where salary > 10000;
```