

061006T4ICT

ICT TECHNICIAN LEVEL 6

IT/OS/ICT/CR/10/6

DEVELOP COMPUTER PROGRAM

JULY/AUGUST 2023



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

WRITTEN ASSESSMENT

TIME: 3 HOURS

INSTRUCTIONS TO CANDIDATE

1. This paper has two sections **A and B**. Attempt questions in each section as per instructions given in the section.
2. You are provided with a separate answer booklet.
3. Marks for each question are indicated in the brackets.
4. Do not write on the question paper

SECTION A: (40 MARKS)

Attempt ALL questions in this section.

1. Distinguish between imperative programming and object programming languages, giving TWO examples in each (6 Marks)
2. Identify TWO_valid reasons for a software developer to use each of the following approaches in a project.
 - a) Waterfall Model (2 Marks)
 - b) Agile Methodology (2 Marks)
 - c) Spiral Model (2 Marks)
3. Using C language examples, explain ONE program control structure for:
 - a) Decision/Branching (4 Marks)
 - b) Looping (4 Marks)
4. Define the following program development phases (7 Marks)
 - a) Planning
 - b) Analysis
 - c) Design
 - d) Implementation
 - e) Testing
 - f) Deployment
 - g) Maintenance
5. Explain THREE program design tools. (6 Marks)
6. Describe FOUR building blocks of object-oriented programming (OOP) (4 Marks)
7. Using Java language, illustrate ONE example of the following error types.
 - a) Syntax error (1 Mark)
 - b) Run time error (1 Mark)
 - c) Logic error (1 Mark)