

LAIKIPIA EAST TECHNICAL AND VOCATIONAL COLLEGE

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Along Nyeri-Nyahururu Highway

P.O Box 14-10129, Mugunda.

FORMATIVE ASSESSMENT TOOL			
UNIT OF COMPETENCY	DEVELOP COMPUTER PROGRAM	UNIT CODE	IT/OS/ICT/CR/10/6
QUALIFICATIONS: ICT TECHNICIAN LEVEL 6			
QUALIFICATION CODE: 061006T4ICT			

ASSESSORS INSTRUCTIONS

This assessment requires the candidates to demonstrate competence against unit of competency; develop computer program

In this assessment, the candidate will be required to respond to written questions

- I. Allocate **2 minutes** to each candidate to prepare for the assessment
- II. Guide each candidate to fill the assessment tool with personal information, including the venue, Date and signature
- III. Allocate **3 HOURS** for each candidate to respond to all written questions for every assessable Element
- IV. **(Section A: 40 marks Short-answer questions, Section B: 60 marks Extended answer questions)**

NB/ A candidate should choose 3 questions from section B

Candidate's name &Registration No.	
Assessor's name & Reg. code	
Unit (s) of competency	DEVELOP COMPUTER PROGRAM
Venue of assessment	
Date of assessment	

SECTION A (40 MARKS)

Answer all questions in this section

1. Explain the meaning of the following terms as used in structured programming. (4 Marks)
 - i. Interpreter
 - ii. Compiler
 - iii. Source code
 - iv. Object code
2. Identify **FOUR** levels of testing a computer program. (4 Marks)
3. Explain TWO program design tools. (4 Marks)
4. Identify **FOUR** valid reasons for a software developer to use each of the Agile Methodology approach in a project. (4 Marks)
5. Draw a flowchart that can be used to prompt the user to enter two numbers, calculate the sum and average of the two numbers and then display the output on the screen. (4 marks)
6. Explain the two levels of programming languages. (4 marks)
7. Give the features/characteristics of high-level programming languages. (4 marks)
8. List 4 factors that need to be considered when selecting a programming language (4 marks)
9. Show the difference between Machine language and Assembly language. (4 marks)
10. List four examples of high-level programming languages.

SECTION B: (60 MARKS)

Attempt any THREE (3) questions in this section

QUESTION ONE

- a. Design a program to calculate and output the area and perimeter of a rectangular football field using:
 - a) Pseudocode (6 Marks)
 - b) A Flowchart (9 Marks)
- b. Explain why machine language programming is so error-prone.

QUESTION TWO

- a) Explain 4 categories of High-Level Languages (4 marks).
- b) List and explain any 3 attributes of a good algorithm. (6 Marks)
- c) Differentiate between a flowchart and pseudocode (5 Marks)
- d) Give two advantages & three disadvantages of Machine language programming. (5 Marks)

QUESTION THREE

a) Consider this simple problem. Meru National Park is offering discount tickets to anyone who is under 18 years.

- i. find out how old the person is
- ii. if the person is younger than 18 then say “You are eligible for a discount ticket.”
- iii. otherwise, say “You are not eligible for a discount ticket.”

In the pseudocode above, write an algorithm (7 marks)

- b) Draw a flow chart for the above pseudocode (8 marks)
- c) Explain the 3 advantages and 2 disadvantages of using a High-level programming language for writing a program. (5 marks)

QUESTION FOUR

- a) Explain the process or stages of system development (15marks)
- b) Explain what is meant by program portability? (5marks)