



THE TECHNICAL UNIVERISTY OF MOMBASA

# Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

HIGHER DIPLOMA IN BUILDING & CIVIL ENGINEERING

**EIT 3101: COMPUTER PROGRAMMING**

SPECIAL/SUPPLEMENTARY EXAMINATION

**SERIES: JULY 2013**

**TIME: 2 HOURS**

**Instructions to Candidates:**

You should have the following for this examination

- *Answer Booklet*

This paper consists of **FIVE** questions. Attempt question **ONE** and any other **TWO** questions  
Maximum marks for each part of a question are as shown

This paper consists of **THREE** printed pages

**Question One (Compulsory)**

- a) Define the term selection in relation to program control structures. **(2 marks)**
- b) State **THREE** types of control structures used in programming. **(3 marks)**
- c) Differentiate between looping and selection. **(4 marks)**
- d) List any selection controls used in writing a program. **(1 mark)**

**Question Two**

- a) (i) Define the term computer program. **(1 mark)**  
(ii) Define programming? **(1 mark)**
- b) (i) State the factors to consider when drawing a flowchart. **(2 marks)**  
(ii) Discuss any **TWO** program development stages. **(8 marks)**

**Question Three**

- a) Design a flowchart for a program that can be used to classify people according to their age limit. If a person is more than 20 years output “Adult” otherwise. Output “Young person” **(10 marks)**
- b) Using illustrations, explain at least **FIVE** symbols used in flowchart design. **(5 marks)**

**Question Four**

- a) Name **THREE** control structures. **(3 marks)**
- b) Draw the flowchart of the following Pseudo code segment. **(12 marks)**

IF position = 1 THEN

    Medal = “Gold”

ELSE

IF position = 2 THEN

    Medal = “Silver”

ELSE

IF position = 3 THEN

    Medal = “bronze”

ELSE

    Medal = “nil”

    END IF

END IF

END IF

Hint: Anested IF flowchart.

**Question Five**

- a) (i) Outline the **SIX** stages of program development in their respective order. **(6 marks)**
- (ii) Why did early computers work well with interpreters? **(2 marks)**
- b) (i) Explain the importance of a program before implementing it. **(2 marks)**
- (ii) List **THREE** disadvantages and **TWO** advantages of high level language. **(5 marks)**