



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of JKUAT)

Faculty of Engineering & Technology

DEPARTMENT COMPUTER SCIENCE & INFORMATION TECHNOLOGY

CERTIFICATE IN INFORMATION TECHNOLOGY – CIT 2K 11M

EIT 1133: ELEMENTARY PROGRAMMING PRINCIPLES

END OF SEMESTER EXAMINATIONS

SERIES: DECEMBER 2011

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*

This paper consist of **FIVE** questions in **TWO** sections **A & B**

Answer question **ONE (COMPULSORY)** and any other **TWO** questions

Maximum marks for each part of a question are as shown

This paper consists of **TWO** printed pages

SECTION A (COMPULSORY)

Question one 30 marks

a) Explain the following terms

- (i) Computer Program
- (ii) Pseudocode
- (iii) Flowchart
- (iv) Computer programming language (8 marks)

b) Draw a flowchart to calculate area and perimeter of a rectangle given the following:-

$$\text{Area} = \text{width} * \text{length}$$

$$\text{Perimeter} = 2(\text{width} + \text{length}) \quad (10 \text{ marks})$$

c) Explain any **SIX** data types in Visual Basic Programming language (12 marks)

SECTION B (ANSWER ANY TWO QUESTIONS)

Question two 15 marks

Explain the **five** categories of programming languages. (15 marks)

Question three 15 marks

a) Explain the following terms

- (i) Compiler
- (ii) Interpreter
- (iii) Translator
- (iv) Source code (8 marks)

b) Write a program pseudo code to read three integer values and calculate sum and average.

(7 marks)

Question four 15 marks

a) Explain the following high level languages

- (i) Basic
- (ii) Cobol
- (iii) Fortran (6 marks)

b) Write a Visual Basic (VB) program to calculate the area of a rectangle. (9 marks)

Question five 15 marks

a) Explain any **five** arithmetic operators (5 marks)

b) Explain the program development life cycle (10 marks)