



TECHNICAL UNIVERISTY OF MOMBASA

# Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

CERTIFICATE IN INFORMATION COMMUNICATION TECHNOLOGY &  
MAINTENANCE  
(CICM 13S)

**ECS 1101: INTRODUCTION TO COMPUTER PROGRAMMING**

END OF SEMESTER EXAMINATION

**SERIES: APRIL 2014**

**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 **TWO** printed pages

### Question One (Compulsory)

- a) Explain the machine programming languages. **(5 marks)**
- b) Explain any FOUR disadvantages of machine programming languages. **(8 marks)**
- c) Draw a program flowchart to calculate the area of a triangle given. **(7 marks)**  
Area =  $\frac{1}{2}$  (Base x height)

### Question Two

- a) Explain the following terms:  
(i) Algorithm  
(ii) Pseudo code  
(iii) Flowchart  
(iv) Object code **(8 marks)**
- b) Write a visual basic program to calculate area and perimeter of a circle given the following: **(10 marks)**

$$A = \pi r^2$$

$$\text{Perimeter} = 2\pi r$$

- c) Explain the term variable as used in programming. **(2 marks)**

### Question Three

- a) Explain the rules of creating variables in Visual Basic Programming Language. **(8 marks)**
- b) Write a program pseudo code to read four integer values and calculate sum and average. **(8 marks)**
- c) Explain the following term:  
(i) Portability  
(ii) Module re-use **(4 marks)**

### Question Four

- a) Explain any FOUR arithmetic operators as used in Visual Basic Programming Language. **(8 marks)**
- b) Write a Visual Basic (VB) program to read three integer values, compare them and display the largest. **(10 marks)**
- c) State any TWO data types in Visual Basic Programming Language. **(2 marks)**

### Question Five

- a) Explain any FIVE logical/comparison operators. **(10 marks)**
- b) Explain the program development life cycle. **(10 marks)**