



TECHNICAL UNIVERISTY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

CERTIFICATE IN INFORMATION COMMUNICATION TECHNOLOGY & MAINTENANCE
(CICM 14S)

ECS 1101: INTRODUCTION TO COMPUTER PROGRMMING

END OF SEMESTER EXAMINATION

SERIES: APRIL 2015

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 (Compulsory)** 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 following as used in computer programming:
- (i) Computer programming
 - (ii) Object code
 - (iii) Debugging
 - (iv) Programming portability
 - (v) Compiler
- (10 marks)**
- b) Explain any FIVE features of machine programming language **(10 marks)**

Question Two

- a) Explain the following components of INTEGRATED DEVELOPMENT ENVIRONMENT (IDE):-
- (i) List box
 - (ii) Frame
 - (iii) Command button
 - (iv) Text box
- (8 marks)**
- b) (i) Develop a program pseudo code to read the name of a STUDENT. It should also read the score acquired in a subject. The program should report as follows:
- If grade > 40 then
 - "PASS"
 - Otherwise
 - "FAIL"
- (6 marks)**
- (ii) Implement the above question 2 (bi) using Visual Basic Programming Language **(6 marks)**

Question Three

- a) Explain any FIVE data types in Visual Basic Programming Language **(10 marks)**
- b) Write a Visual Basic Program to calculate the Area of a Trapezium given:
- $$Area = \frac{1}{2}(a + b) \times h$$
- (10 mark)**

Question Four

- a) Explain the objectives of drawing program flow charts **(10 marks)**
- b) State the FIVE program development lifecycle steps **(5 marks)**
- c) Explain the term SELECTION CONTROL STRUCTURE giving examples **(5 marks)**

Question Five

- a) Explain the rules of creating variables in Visual Basic Programming Language **(6 marks)**
- b) Explain the features of FOURTH GENERATION LANGUAGES giving TWO examples **(8 marks)**
- c) Explain the following programming methodologies:
- (i) Modular programming

- (ii) Structured programming
- (iii) Object-oriented programming

(6 marks)