TECHNICAL UNIVERISTY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY
(DICT 14S – Y1 S1)

ECS 2103: PROGRAMMING METHODOLGY

END OF SEMESTER EXAMINATION
SERIES: DECEMBER 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 (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 computer programming terms:
   (i)   Source program
   (ii) Object code
   (iii) Translators
   (iv) Interpreter
   (v)   Compiler   **(10 marks)**

b) Explain the term computer programming.   **(2 marks)**

c) Explain the following programming generations:
   (i)   First generation languages   **(4 marks)**
   (ii) Second generation languages   **(4 marks)**

Question Two

a) (i) Explain the term pseudo code as used in program design tool. **(2 marks)**

    (ii) Outline the guidelines for designing a good pseudocode.   **(10 marks)**

b) Design a program flowchart that can be used to classify people according to age. If a person is more than 20 years, output "Adult" otherwise output "Young person"   **(8 marks)**

Question Three

a) Explain the THREE selection control structures – giving their format. **(12 marks)**

b) Explain any FOUR programming errors.   **(8 marks)**

Question Four

a) Explain the steps of program development life cycle.   **(12 marks)**

b) Develop a C program used to read the Name of a student and the score. The program should display FAIL or PASS depending on the following. If the score is greater than 40 THEN PASS otherwise FAIL.   **(8 marks)**

Question Five

a) Explain the rules of developing a variable in C programming.   **(4 marks)**

b) Explain the following commands in C programming.
   (i)   #include<stdio.h>
   (ii) printf()
   (iii) scanf ( )
   (iv) main ( )   **(8 marks)**
c) Develop a program to read 10 integer values then calculate sum and Average use a loop.
                                                                        (8 marks)