TECHNICAL UNIVERSITY OF MOMBASA

INSTITUTE OF COMPUTING AND INFORMATICS

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

UNIVERSITY EXAMINATION FOR:

DICT JAN 2016

ECS 2103: PROGRAMMING METHODOLOGY

END OF SEMESTER EXAMINATION

SERIES: APRIL2016

TIME: 2HOURS

DATE: Pick DateSelect MonthPick Year

Instructions to Candidates

You should have the following for this examination
-Answer Booklet, examination pass and student ID
This paper consists of **FIVE** questions. Attemptany THREE questions.
Do not write on the question paper.

Q1(a) Explain the following terms as used in computer programming.

i) Programming language
ii) Debugging
iii) Compiler
iv) Interpreter (8 marks)

b) Explain the following levels of programming languages giving advantages and disadvantages.

i) Machine programming language (6 marks)

ii) High level programming language (6 marks)

Q2(a) Explain the following program design tools.

i) Flowchart
ii) Pseudocode
iii) Hierarchy charts (6 marks)

b) Draw a program flowchart to read the names and scores for ten students. It should calculate and report the grade average.

(6 marks)

c).) Explain the three control structures. (8 marks)

Q3 (a)(i) Explain the structured features of C programming language. (10 marks)

ii) Explain the five data types in C programming language. (10 marks)

Q4 (a) Develop a C program to read three integer values, compare them and display the smallest.

(10 marks)

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

Q5(a)) Explain the term Data structure (2 marks)

(b)i. Explain the two types data structures (2 marks)

ii. Explain any five operations of data structures (10 marks)

c) Explain the following as used in data structures.

i. Queue

ii. Records

iii. Array (6 marks)