



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

UNIVERSITY EXAMINATION FOR:

BACHELOR OF SCIENCE IN ELECTRICAL AND ELECTRONICS

ENGINEERING

SMA 2175: PROGRAMMING I

END OF SEMESTER EXAMINATION

SERIES: APRIL 2016

TIME: 2 HOURS

DATE: Pick Date Apr 2016

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of Choose No questions. Attempt Choose instruction.

Do not write on the question paper.

Question ONE

- a) Write a C program that converts a character from lowercase to uppercase (4 marks)
- b) Explain the if else control structure and write a C program to illustrate it (8 marks)
- c) Define the following terms (6 marks)
 - Arrays
 - Functions
 - Pointers
- d) Briefly explain how to compile a C program (4 marks)
- e) In details describe the permissible styles of comments in the C programming language (4 marks)
- f) By using functions in your C programs, you can practice structured programming, What is structured programming and what are its advantages (4marks)

Question TWO

- a) Using a program describe the format of a C program (4 marks)
- b) Define the following terms (6 marks)
- Arrays
 - Functions
 - Pointers
- c) Differentiate between void main () and int main() (4marks)
- d) Explain the guidelines one should you follow in creating names for variables and constants (6 marks)

Question THREE

- a) Write a C program to illustrate the use of each of the following operators (10 marks)
- The assignment operator
 - Mathematical operators
 - Relational operators
 - Logical operators

Describe the format of a C program
(8 marks)

Question FOUR

- a) What are the advantages of high level languages over machine language? (4 Marks)
- b) By using a flow diagram and a program, show how a while loop construction works. (10 marks)
- c) Define a Pseudocode and explain how is it used a problem solving tool (6 marks)

Question FIVE

- a) Using a program example explain the difference between While and Do-While loop statements (10 marks)
- b) What is the difference between puts() and printf () (4 marks)
- c) What's the difference between an integer variable and a floating-point variable (6 marks)