



TECHNICAL UNIVERISTRY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

UNIVERSITY EXAMINATION FOR DEGREE IN:
BACHELOR OF MATHEMATICS & COMPTUER SCIENCE
(BMCS)

EIT 2123: STRUCTURED PROGRAMMING

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) Briefly explain the following terms as used in structured programming:
(i) Computer program
(ii) Data type **(4 marks)**
- b) Explain the following concepts as sued in programming:
(i) Structured programming
(ii) Modular programming **(6 marks)**
- c) Briefly state the TWO forms of putting comments in C programming **(4 marks)**
- d) Write a short statement in C to distinguish the following concepts as used in C programming:
(i) Declaration
(ii) Initialization
(iii) Assignment **(6 marks)**
- e) Distinguish between the following types of operators as used in C programming:
(i) Arithmetic and increment/decrement operators
(ii) Logical and relational operators **(4 marks)**

f) State any THREE advantages of structured programming. (6 marks)

Question Two

- a) Design and write a program that:
- (i) Has three integer variable (a, b, c)
 - (ii) Initializes them to 10, 20 and 30 respectively
 - (iii) Finds the average of the 3 numbers
 - (iv) Stores the average in the first variable (a)
- (10 marks)
- b) Briefly explain the meaning of the following in C:
- (i) Scan f ()
 - (ii) Print f ()
 - (iii) Main ()
 - (iv) Include
 - (v) Return
- (10 marks)

Question Three

- a) Write the output of the following statements:
- (i) Printf (“Hellow world again”),
 - (ii) Printf (“Hellow world agaian\n\n”);
 - (iii) Printf ("%d""%s""% f, a, b, c);
 - (iv)Printf (“*\n**\n***\n***\n*****\n”);
- (10 marks)
- b) Design and write a C program that inputs three different integers and does the following:
- (i) Displays the 3 integers
 - (ii) Displays the sum
 - (iii) Displays the average
 - (iv) Displays the product
- (10 marks)

Question Four

- a) Write the meaning of the following symbols in C:
- (i) Alt
 - (ii) ||
 - (iii) ++
 - (iv) = -
 - (v) = =
- (10 marks)
- b) Write a C program that:
- (i) Accepts a number between 1 and 12 as input
 - (ii) Display the name of the month corresponding to the number
- (10 marks)

Question Five

Design and write a C program that:

- a) Accepts height and width of a rectangle as input
 - b) Has a function called rectangle that takes in width and height of rectangle and returns the area
 - c) Display the area of the rectangle
- (20 marks)