
CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

FIRST YEAR EXAMINATION FOR THE AWARD OF CERTIFICATE IN COMPUTER SCIENCE

COSC 00103: INTRODUCTION TO PROGRAMMING AND ALGORITHMS

STREAMS: CERT. COMP SCI Y1S1

TIME: 2 HOURS

DAY/DATE: THURSDAY 8/08/2019

11.30 A.M - 1.30 P.M.

INSTRUCTIONS:

- Answer question **ONE** and **TWO** other questions
- Do not write anything on the question paper
- This is a **closed book exam**, no reference materials are allowed in the examination room
- There will be **NO** use of mobile phones or any other unauthorized materials
- Write your answers legibly and use your time wisely.

SECTION A

QUESTION ONE (30 MARKS)

a. Define the Following Terms

[6 Marks]

- Program
- Programming language
- computer language

i) b. Why are there so many programming languages?

[2

Marks]

ii) c. Write Syntax of a simple CProgramme outputting the result “Hello, World!”

[4 Marks]

iii) d. List TWO reserve words in C

[2

Marks]

iv) e. Differentiate an Interpreter from a Compiler

[3

Marks]

v)

vi) f. Explain the following types of program errors: [6
Marks]

vii) i. Syntax errors:

viii) ii. Semantic errors:

ix) iii. Logical errors:

x)

xi) g. Write a statement for variable declaration in C [3
Marks]

h. Draw a clearly labeled flowchart to calculate the average of two numbers [4 Marks]

SECTION B (ANSWER ANY TWO QUESTIONS ONLY!!)

QUESTION TWO (20 MARKS)

- a. Assume given marks are x for a student:
 If given marks are more than 95, then
 Student is brilliant
 If given marks are less than 30, then
 Student is poor
 If given marks are less than 95 and more than 30, then
 Student is average

Write a C program with the help of if conditional statements to convert the above given situation into a programming code [10 Marks]

b. Draw Flow chart for above Programme [5 Marks]

- c. What do the following Operators mean [5 Marks]
- i. &&
 - ii. ||

QUESTION THREE (20 MARKS)

a. Define data type [2 Marks]

b. Assign relevant keywords & value range for the following data types in C : [10 Marks]

Type	Keyword	Value range which can be represented by this data type
Character		

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Number		
Small Number		
Long Number		
Decimal Number		

- c. Explain the FOUR stages a Software Developer goes through in order to develop a successful and beneficial computer programme [8 Marks]

QUESTION FOUR (20 MARKS)

- a. Using functions, write a C program to prompt a user for two integers. Then the program should calculate their addition, subtraction, multiplication, division, and modulus. Your program should display the results on the screen. [20 Marks]

QUESTION FIVE (20 MARKS)

- a. Outline History Of Programming Languages Between 1945 & Today [10 Marks]
- b. List FIVE GENERAL Naming conventions for a good Programming Style [5 Marks]
- c. A student is interested in Learning C programming from Basics, Name Five resource tools you would recommend to him/her [5 Marks]

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