UGANDA BUSINESS AND TECHNICAL EXAMINATIONS BOARD

Business and Humanities Certificate Examinations

MAY-JUNE SERIES

PROGRAMME

PROFESSIONAL CERTIFICATE IN SOFTWARE ENGINEERING (PCSE)

PAPER NAME

ELEMENTARY PROGRAMMING IN C

(THEORY)

PAPER CODE

PCSE112/1

YEAR I, SEMESTER 1

3 HOURS

10TH MAY 2021

INSTRUCTIONS TO CANDIDATES

1. This paper consists of **two** sections **A** and **B**.

2. Section **A** is compulsory and carries **20** Marks.

3. Section **B** consists of **six** questions, answer only **four** questions to carry **80** Marks.

4. All answers to each question should begin on a fresh page.

5. All questions carry equal marks.

6. **Do not** write on this question paper.

7. **All answers and rough work should be done in the official answer booklet provided.**

8. Read other instructions on the answer booklet.

SECTION A – (20 MARKS)

Answer all questions in this section

Question One

(a) What is a NULL pointer? (2marks)

(b) Who designed C programming language? (2marks)

(c) What is the full form of ANSI? (2marks)

(d) What is an infinite loop? (2marks)

(e) What is a string length? (2marks)

(f) What is a constant? (2marks)

(g) Define a structure? (2marks)

(h) What is a pointer on pointer? (2marks)

(i) What is a dangling pointer? (2marks)

(j) What is a nested structure? (2marks)

SECTION B – (80 MARKS)

Answer only four questions in this section

Question Two

(a) What are the key features in the C programming language and give a brief explanation? (10marks)

(b) Give and explain any five basic data types associated with C? (10marks)

Question Three

Explain the following words:-

(a) for loop(4marks)

(b) while loop(4marks)

(c) do...while loop(4marks)

(d) return(4marks)

(e) break statement (4marks)

Question Four

(a) Describe the header file and its usage in C programming? (2marks)

(b) What is a nested loop? (2marks)

(c) What are the modifiers available in C programming language? Give five. (5marks)

(d) What is a dangling pointer?

(e) Give six types of pointers.(6marks)

(f) What is a nested structure?(2marks)

(g) Explain the following functions in teams of file handling.   (3marks)

Question Five

(a) Write a C program to print your name, date of birth and mobile number.(8marks)

(b) Write a C program to compute the perimeter and area of a

with a height of 7 inches and width of 5 inches rectangle.(8marks)

(c) Write a C program that accepts two integers from the user and calculate the sum of the two integers. (8marks)

(d) Write a C program to check whether a given number is even or odd. (8marks)

(e) Write a C program to find the sum of N number.(8marks)

Question Six

(a) What is a pointer on pointer? (2marks)

(b) What is a NULL pointer? (2marks)

(c) Who designed C programming language? (2marks)

(d) What is the full form of ANSI? (1mark)

(e) What is an infinite loop? (2marks)

(f) What is the default value of local and global variables? (2marks)

(h) What is a string length? (2marks)

(i) What is the built-in function to append one string to another? (1mark)

(j) Define a structure. (2marks)

(k) What is a constant? (2marks)

(l) Explain the use of comma operator (,). (2marks)

Question Seven

(a) What are functions in C programming? (2marks)

(b) What is a function prototype? (2marks)

(c) Explain what function declarations are? Give four(4marks)

(d) Explain the three types of variable below?

i) Local Variables

ii) Formal Parameters

iii) Global Variables

(d) What do we understand by the following terms?

 i) Call by value(2marks)

ii) Call by reference(2marks)

iii) External(1mark)

iv) Static(1mark)

END