

PAN AFRICA CHRISTIAN UNIVERSITY

CERTIFICATE IN INFORMATION AND COMMUNICATION TECHNOLOGY END OF SEMESTER EXAMINATION

DEPARTMENT: COMPUTING AND INFORMATION TECHNOLOGY
COURSE CODE: CICT 0113
COURSE TITLE: INTRODUCTION TO PROGRAMMING CONCEPTS
CAMPUS: ROYSAMBU
EXAM DATE: THURSDAY, 1ST AUGUST 2024
TIME: 14:30 PM - 17:30 PM

INSTRUCTIONS

- This exam script has **TWO (2)** sections.
- Read all questions carefully before attempting.
- Answer all questions in Section **A** and any other three questions in Section **B**.
- Write only your **student number** on the answer booklet provided.

SECTION A

(Answer ALL questions in this section)

Question 1:

- a) Explain two data types used in C programming. **[3 marks]**
- b) Write a C program that accepts three integers, determines the largest among them, and displays the result on the screen. **[5 marks]**
- c) Differentiate between statements `a=5` and `a==5` in C language **[2 marks]**

SECTION B

(Answer any THREE (3) questions in this section)

Question 2:

Write the structure of a C program and explain each part in detail. **[10 marks]**

Question 3:

- a) Differentiate between the following: **[6 Marks]**
 - i. Assembler and Compiler
 - ii. Procedural language and Object-Oriented language
 - iii. Source code and Object code
- b) Highlight four rules for naming identifiers in programming. **[4 mark]**

Question 4:

- a) Explain the term debugging as use in programming. **[1 mark]**
- b) Identify and correct errors in each of the following statements: **[3 marks]**
 - i. `printf("The value is %d\n", $number);`
 - ii. `scanf("%d %d", $number1, number2);`
 - iii. `if(C<7);{printf("C is less than 7\n");}`
- c) Discuss three types errors encountered in programming and in each case, give a scenario that can lead to the occurrence. **[6 marks]**

Question 5:

- a) Describe the uses of `#include` and `#define` directives. **[2 marks]**
- b) Explain the term conditional statement. **[2 mark]**

c) Write a program that demonstrates the difference between pre-increasing and post-increasing using the increment operator ++. **[6 marks]**

Question 6:

a) Describe what a function is and outline its key components. **[4 marks]**

b) A prime number is any natural number greater than 1 and divisible by itself. Write a C program that reads an integer and determines whether it is a prime number or not. **[6 marks]**

END