

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, 4TH APRIL 2024
TIME: 14:00 PM - 17:00 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) Differentiate between a program and programming. **[2 marks]**
- b) For what sort of application is logic programming useful? Briefly explain. **[2 marks]**
- c) Identify and explain three components of a programming environment? **[6 marks]**

SECTION B

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

Question 2:

- a) What is the function of a semicolon in a C program? **[1 mark]**
- b) Distinguish between a flow chart and an algorithm. **[2 marks]**
- c) Draw a flow chart for checking whether the entered number is prime or not. **[7 marks]**

Question 3:

- a) Write a C program that requests the user to enter the length of a side and prints the area of a square. **[5 marks]**
- b) Briefly comment each of the following lines of code: **[5 marks]**
 - i. `int x = 2;`
 - ii. `int*p;`
 - iii. `p = &x;`
 - iv. `*p = 4;`
 - v. `area = 3.142*radius*radius;`

Question 4

- a) Explain the following programming concepts: **[4 marks]**
 - i. Function

ii. Pointer

b) Define the term 'Operator' and explain three types of operators in programming.
[6 marks]

Question 5:

- a) What is the purpose of comments in a program? **[1 mark]**
- b) Distinguish between a program and a software. **[2 marks]**
- c) Describe the steps required to solve a problem on a computer. **[7 marks]**

Question 6:

- a) Name two examples of preprocessor commands in C programming. **[2 marks]**
- b) Distinguish between machine code and assembly language. **[2 marks]**
- c) Identify and correct errors in each of the following statements: **[6 marks]**
 - i. `Printf(Welcome);`
 - ii. `scanf("d", x);`
 - iii. `printf("Welcome")`

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