

**UGANDA MARTYRS UNIVERSITY  
NKOZI**

**UNIVERSITY EXAMINATIONS**

**FACULTY OF SCIENCE**

**DEPARTMENT OF COMPUTER SCIENCE & INFORMATION  
SYSTEMS**

**END OF SEMESTER I EXAMS**

**SECOND YEAR EXAMINATION FOR DIPLOMA COMPUTER SCIENCE  
AND Bsc. EDUCATION  
Principles of Programming**

DATE: 12/ DEC/ 2023    TIME: 9.30 TO 12.30 PM  
DURATION: 3HRS

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***Instructions:***

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1. *Carefully read through ALL the questions before attempting*
  2. *Answer ANY 10 Questions*
  3. *No names should be written anywhere on the examination book.*
  4. *Ensure that your Reg number is indicated on all pages of the examination answer booklet.*
  5. *Ensure your work is clear and readable. Untidy work shall be penalized*
  6. *Any type of examination Malpractice will lead to automatic disqualification*
  7. *Do not write anything on the question paper.*
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Qn1. a) Define programming

b) State any five programming languages. (10Mrks)

Qn2. a) Write briefly about the software programming evolution.

b) State any five characteristics of procedural programming. (10Mrks)

Qn3. a) Explain any five concepts or principles of object oriented programming.

b) State the rules programmers follow while coming up with variable names, class names and function names. (10Mrks)

Qn4. Write briefly about any five data types supported by the C++ programming Language. (10Mrks)

Qn5. Programs could be constructed using tokens such as key words, constants, identifiers and operators. With clear examples write about the above tokens. (10Mrks)

Qn6. Examine each of the following variable declaration and assignment: Give the reasons why they ok or not ok.

- a. `float math = 74;`
- b. `int price = 400.45;`
- c. `string Name = Moses;`
- d. `float first mark = 80;`
- e. `int 2ndinstallment = 5000;` (10Mrks)

Qn7. Write a C++ program which accepts the marks obtained by a student in test1 and test2 of Networking and then computes and displays the average mark obtained by the student. (10Mrks)

Qn8. To obtain a retake in English language and grammar, a student at Uganda Martyrs University must obtain marks which are less than 30 in the final exam. Write a C++ program which allows the user to enter the English and grammar marks obtained by the student and then determines whether the student has obtained a retake or Not (10Mrks)

✓ Qn9. Using a for loop write a program which prints "wrong username and password" 4 times on the screen (10Mrks)

Qn10. Given that  $A = l * w$ , and  $SI = (P * R * T) / 100$  where  $A$  = Area,  $l$  = length,  $w$  = width,  $SI$  = simple interest,  $P$  = principle amount,  $R$  = rate of interest and  $T$  = time. Using the switch statement, write a program which allows the user to either compute the Area of a rectangle or the simple interest to be paid by the bank customer. (10Marks).

✓ Qn11. Write a program with two functions one function computes and displays the sum of two numbers and the second function computes and displays the product of two numbers entered by the user. (10Mrks)

Qn12. Write a program with a class called students with two attributes studentname and Age. The class should have two functions getdata and display to capture and display the student data respectively. (10 marks)

3.45 ✓ Qn13. With the help of an array and a for loop, write a program which stores names of 5 supermarket items and displays the stored items on the screen (10 Marks)

```
// program that store ...  
#include <iostream>  
using namespace std;  
int main() {  
    int  
    for name(x) // declaration of name x  
    cout << for name(x=0, x=1, x=2, x=3, x=4, x=x++)  
    cin >> x(x=0, x=1, x=2, x=3, x=4, x++)  
    cout << for name(4)  
    return 0;  
}
```