UGANDA MARTYRS UNIVERSITY
NKOZI

FACULTY OF SCIENCE

UNIVERSITY EXAMINATIONS
END OF SEMESTER FINAL EXAMINATION
SEMESTER II, 2015/2016

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION SYSTEMS

FIRST YEAR EXAMINATION FOR BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY, SCIENCE GENERAL, FINANCIAL MATHEMATICS & EDUCATION

Programming Methodology I
CSC1201

DATE: WED 4th May 2016

TIME: 9:30 - 12:30 Pm

DURATION: 3HRS

Instructions:

1. *Carefully read through ALL the questions before attempting*
2. ***Answer ALL Questions from Section A and Any 8 questions from section B.***
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.*

SECTION A

Answer all the questions in this section by recording the correct option for each multi choice question. Each question is 2 Marks

1. Which of the following header files enables C++ programmers to use endl in a program?

   a) **iostream.h** b) **conio.h c) iomanip.h** d) **cstring.h**

2. Which of the following is an object oriented programming language?
   a) c b) small talk c) basic d) Pascal e) Cobol

3. A single line comment explaining the code or a program is preceded with following symbols
   a) /* b) // c) *// d) */

4. Which of the following allows a section of a program to execute a number of times? a) do loop b) switch c) nested if d) cout

5. A variable which is to store a single symbol from the key board should be declared using
   a) String b) int c) float d) char e) double

6. All variable names in C++ must begin with digits.
   a) True b) false

7. Which of the following allows a top to bottom approach towards program design?
a) Object oriented programming b) procedural programming c) assembly language

8. A program that uses the **sqrt( )** in built function must contain the ---------- directive

   a) #include<conio.h> b) #include<squareroot.h> c) #include<math.h>
   d) #include<iomanip.h>

9. Which value is printed on the screen if the following code fragment is executed?

```
int a=1;
while (a<=5)
{
 a=a+1;
cout<<a;
}
```

a)1,2,3,4,5 b)2,3,4,5,6 c)2,3,4,5 d) none of these

10. Which value is printed on the screen if the following code fragment is executed?

```
int a=8;
cout << a++;
a++;
```

a) 8 b)7 c)9 d) non of these

SECTION B

All questions in this section carry equal Marks
Answer any 8 Questions from this section

Qn1. a) Define programming and state 3 examples of object oriented programming languages (5Mks)

b) Write short notes about the software programming evolution. (5Mks)

Qn2. a) Give any five differences between Procedural programming and object oriented Programming (5 Mks)

b) Explain any five concepts or principles associated with object oriented Programming (5 Marks)

Qn3. a) State the rules for coming up with identifiers (5 Mks).

b) State any five relational operators supported by C++ (5Mks)

Qn4. a) Write short notes on the three types of logic used while writing C++ Programs. (9 Mks)

b) State the two allowable data types used while declaring a switching variable of the switch statement (1 Mrk)

Qn5.a) State any five data types supported by C++. (5 Mrks)

b) Write a program which computes the area of a rectangle after accepting the length and width from the user. (5Mrks)

Qn6.
a) Given that a student passes a Math test if he/she scores 50 and above, Write a program which accepts the marks obtained by the student in the test and determines whether a student has passed or failed.(5 Mrks)

b) Write a program which accepts the kilometers traveled by the university bus from the user and then converts the kilometers into meters. Given that 1 kilometer is equal to 1000 meters. (5Mrks)

Qn7. Using a switch statement write a program which allows the user to either compute the average of three numbers or the sum of three numbers. (10 Mrks)

Qn8.Using a for loop write a program which displays counting numbers between 4 and 21. (10Mks)

Qn9. With the help of the while loop or a do loop Write a program which allows the user to keep on computing and printing the sum of 2 integers on the screen until the user gets tired.
(10 Mks)

Qn10. Write a program with a function which computes and displays simple interest after accepting the principle amount, rate of interest and time from a user.
Given that **SI = (p*r*t)/100** (10Mks)

Qn11. Write a program with a simple class **employee** with two attributes **name** and **age** and two member functions **capturedata** and display**data**. (10Mrks).

END