



(Knowledge for Development)

KIBABII UNIVERSITY COLLEGE

**A CONSTITUENT COLLEGE OF
MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY**

UNIVERSITY EXAMINATIONS

2014/2015 ACADEMIC YEAR

SECOND YEAR SECOND SEMESTER

MAIN EXAMINATION

FOR THE DEGREE OF BSC COMPUTER SCIENCE

COURSE CODE: CSC 121 B

COURSE TITLE: PROCEDURAL PROGRAMMING

DATE: 27TH APRIL, 2015

TIME: 3.00PM - 5.00PM

INSTRUCTIONS TO CANDIDATES

Answer Question One in Section A and Any other **TWO** (2) Questions in Section B

TIME: 2 Hours

Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

This paper consists of FIVE Questions.

Answer Question ONE [30 Marks] and any other TWO Questions [20 Marks Each].

Write your college number on the answer sheet.

This paper consists of 3 printed pages

Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

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SECTION A

Question 1: [30 MARKS] Compulsory

- a)
- i. Define the following terms (4 marks)
 - A. Local Variable
 - B. Global Variable
 - C. Pre processor
 - D. Function
 - ii. Explain the TWO usages of Break statement. (3 marks)
 - iii. Outline all the FOUR parts of a function. (4 Marks)
 - iv. Explain any THREE inbuilt classes for file operation and the Purpose of each (6 marks)
- b)
- i. Outline EIGHT rules that apply to a switch statement. (8marks)
 - ii. Show using the appropriate syntax how you do the following file operations
 - a) Opening file for appending
 - b) Write to the file (5 marks)

SECTION B: Answer any Two Questions from this section

Question 2: [20 Marks]

- a) Write a program using a nested for loop to find the prime numbers from 2 to 100 (10 marks)
- b) Write a program in c++ that accepts input of two numbers and swaps Two numbers using a pointer function which is called in the main program to output the results (10 marks)

Question 3: [20 Marks]

- a) With the aid of a flowchart, write a program in C++ language that outputs a multiplication table of 7 by 7. (10 marks)
- b) With the aid of a diagram write a program in C++ Language that calculates the area of a circle, rectangle and triangle. The program should give an option Menu to enable the user calculate what he/she wants. (10 Marks)

Question 4: [20 Marks]

- i) Study the C++ code Shown below

```
#include <iostream.h>
void main(){
{ int x, product, count;
product=1;
While(count<10)
{
```

```

cin>>x;
product=product*x;
++count;
}
}

```

Rewrite the C++ loop above Using

a) For Loop

(5 Marks)

b) do while loop

(5Marks)

ii) write a c++ program to output the code below

(10 Marks)

```

1      1      1
2      2      2
3      3      3
4      4      4
5      5      5

```

Question 5: [20 Marks]

i) Write down the output of each of the following pieces of C++ codes

(15 Marks)

a) for(int=2;i<10;i+=3){
cout<<i<<" ";

b) for (int i=10; i>=2; i- -;)
{
cout<<(i*i)<<"\t";
}

c) int i=1;
while (++i<5){
cout<< i;
}

d) int m,n;
for (m=1;m<=5;m=m+1)
{
for (n=1;n<=3;n++)
{
cout<<m<<n<<"\t";
cout<<"\n";
}
}

e) int m,n;
for (m=1;m<=5;m++)
{
for (n=1;n<=3;n++)
{
cout<<m+n<<" + ";
cout<<"\n";
}
}

- ```
 }
```
- ii) Write a C++ code to input Array contents using a pointer. The user should determine the size of the array. (5 Marks)