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RNLKWC/U.G.-CBCS/IIIS/SEC-01/21

2021

**Mathematics**

**[HONOURS]**

**(CBCS)**

**(B.Sc. Third End Semester Examinations-2021)**

**SEC-301**

***Full Marks: 40***

***Time: 02 Hrs***

*The figures in the right hand margin indicate marks  
Candidates are required to give their answers in their own words as  
far as practicable*

*Illustrate the answers wherever necessary*

***[Object Oriented Programming in C++]***

**1. Answer any FIVE questions:**

**10x2=20**

- a) What are static variables and function.
- b) Differentiate between Calloc() and malloc().
- c) How can we store a negative integer ?
- d) What is a C token ?
- e) What happened if we forget to write main() in a C program?
- f) Why is C called the mother of all languages ?
- g) What is the code in a while loop that returns the output of the given code :

(2)

```
include<studio.h>
intmain()
{ int a;
  for (a=1; a<=100; a++)
    Printf ("%d\n",a*a);
}
```

2. Answer any FOUR questions

4x5=20

- a) Write a loop statement that will show the following output  
1  
12  
123  
1234  
12345
- b) Write a simple example of a structure in C language
- c) Write a programme to generate random number in C language.
- d) Write a program to swap two numbers without using the third variable.
- e) What are the limitations of scanf() and how can it be avoided ?  
? INT = 10, 10; is the statement valid ?                      2+2
- f) What are header files and what are its uses in C programming? What is syntax error ?                      3+2

(3)

3. Answer any ONE question

10x1=10

- a) Write a program in C to multiply of complex numbers using structure.
- b) Defining a union and how to accessing union members. State the difference between structure and union.

[The End]