BCA

(SEM. III) EXAMINATION, NOV./DEC., 2018

BCA-301 (N) : OBJECT ORIENTED PROGRAMMING

USING C++

Time : Three Hours **Maximum Marks : 75**

Note : Attempt questions from all Sections as directed.

Inst. : The candidates are required to answer only in serial order. If there are any parts of a question, answer them in continuation.

SECTION - A

(Short Answer Type Questions)

Note: All questions are compulsory. Each question carries 3 marks.

1. (A) How does a main ( ) function in C++ differ from main( ) in C?

(B) What is the use of scope resolution operator?

(C) How are constructor and destructor executed in multilevel inheritance?

(D) What do you understand by Data Abstraction?

(E) What is this pointer? Explain with example.

(F) What are inline functions? Discuss its advantages and disadvantages.

(G) How are static functions and friend functions invoked?

(H) Explain the need of template.

(I) Find the output of the following program segment :

```
#include<iostream.h>
#include<conio.h>
int a = 20;
void demo (int & x, int y, int z)
{
        a + = x;
        y* = a;
        z = a + y;
        cout<<x<<y<<z«<enl;
}
void main( )
{
        clrscr( )
        int a = 15, b = 5;
```

```
demo (::a, a, b)
cout<<::a<<a<<b<<b<<enl;
}
```

SECTION - B

(Long Answer Type Questions)

Note : Attempt any two questions. Each question carries 12 marks.

2. What is Operator Overloading? Write a C++ program to add two complex numbers using operator overloading.

3. What is friend function? Write a program to declare friend function in two classes. Calculate the sum of, integer of both the classes using friend sum ( ) function.

4. What do you mean by overloading of constructor? Write a program with multiple constructor for the single class.

5. What is object-oriented programming? How is it different from the procedure oriented programming?

SECTION -C

(Long Answer Type Questions)

Note : Attempt any two questions. Each question carries 12 marks.

6. What is polymorphism? Write a program to declare a function show ( ) in base and derived class. Display message through the function to know name of the class whose member function is executed. Use late binding concept using virtual keyword.

7. What are the different types of file opening modes? List their names with meaning

8. What are templates? Explain function template and class templates with suitable example.

9. (a) Describe the role of keyword try, catch and throw in exception handling.

(b) Describe the use of public, private and protected access specifier.