

# School of Computing Science and Engineering

B.Tech CSE  
ETE - Jun 2023

Time : 3 Hours

Marks : 100

## Sem II - E1UA201C/B070202T - Object Oriented Programming Using C++

*Your answer should be specific to the question asked  
Draw neat labeled diagrams wherever necessary*

1. Explain various control statements used in C++. K2 CO2 (5)
2. Implement run time polymorphism with an example program in C++. K3 CO3 (5)
3. Define how data and functions are organized in an object-oriented program? K1 CO1 (5)
4. Explain the concept of overriding with example. How it differs from overloading? K2 CO2 (10)
- 5) Write a template function for adding three integers and double values. K4 CO4 (10)

### OR

- Write a C++ program to handle array out of bound exception. K4 CO5 (10)
6. Define the types of inheritance supported in C++ with figures. K1 CO1 (10)
  7. Differentiate how constructor and destructor are differ from a normal function in C++ using suitable example? K4 CO3 (10)
  8. Write a C++ program to upload multiplication (\*) operator for multiplying two integers. K3 CO3 (15)
  9. #include <iostream>  
using namespace std;

```
class construct
{
public:
    float area;

    construct()
    {
        area = 0;
    }

    construct(int a, int b)
    {
        area = a * b;
    }

    void disp()
    {
        cout<< area<< endl;
    }
};
```

- ```
int main()
{
    construct C;
    construct D( 10, 20);
    C.disp();
    D.disp();
    return 1;
}
```
- a. Write the output of the above program?
  - b. Explain the important concept used in this program.
- 10) Write a c++ program to find the average of given integer and float values using template concept K4 CO4 (15)  
Integer values: 1, 3, 5, 7, 9, 11  
Float values: 1.1, 2.1, 3.1, 4.1 ,5.1

### OR

What are the difference between template function and a normal function in C++. Explain it using K4 CO5 (15) appropriate example.