

- c. Constructors have a return type, but member functions do not.
- d. Member functions are called automatically when an object is created.

8. Consider the following code snippet. What is the output of this program? 1M
- a. Compilation error: Invalid constructor syntax
 - b. Output: "Value of x: 5" followed by "Value of x: 0"
 - c. Output: "Value of x: 0" followed by "Value of x: 5"
 - d. Output: "Value of x: 5" followed by "Value of x: 5"

C/C++

```
#include <iostream>
```

```
class MyClass {  
public:  
    int x;
```

```
    MyClass(int val) {  
        x = val;
```

```
    }  
    MyClass() {  
        x = 0;  
    }  
    void display() {  
        std::cout << "Value of x: " << x << std::endl;  
    }  
};
```

```
int main() {  
    MyClass obj1(5);  
    MyClass obj2;  
    obj1.display();  
    obj2.display();  
    return 0;  
}
```

9. Which function is called when `add(3.0, 4)` is invoked? 1M

C/C++

```
int add(int a, int b) {  
    return a + b;  
}
```

```
double add(double a, double b) {  
    return a + b;  
}
```

- a. The int version of add.
- b. The double version of add.
- c. Both functions are called.
- d. It results in a compilation error due to ambiguity.

Indian Institute of Information Technology, Sri City
Object Oriented Programming
Term - I

Duration: 90 Mins

Maximum Marks: 20

Instructions

1. Please carefully read all questions and answer appropriately
 2. All questions are compulsory.
 3. Figures to the right indicate full marks.
 4. Preferably, write the answers in sequential order.
-

1. Briefly discuss the following terms: 6M
 - a. Object and Class
 - b. Data Abstraction and Data Encapsulation
 - c. Inheritance and Polymorphism
2. Briefly discuss the application of the scope resolution operator (::) with an example? 3M
3. Briefly discuss the function overloading with a C++ program. 3M
4. How do we invoke a constructor in the class? List some of the special properties of the constructor. 3M
5. Which constructor is called when an object is passed by value as a function argument? 1M
 - a. Default constructor
 - b. Parameterized constructor
 - c. Copy constructor
 - d. Destructor
6. In C++, what is the order of destruction when dealing with multiple objects in an array of a user-defined class type? 1M
 - a. From the last element to the first element
 - b. From the first element to the last element
 - c. In a random order
 - d. In the order of object creation
7. In C++, what is the difference between a constructor and a member function? 1M
 - a. Constructors cannot have parameters, but member functions can.
 - b. Constructors are used to create objects, while member functions perform operations on objects.

[P.T.O.]