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**CS 131303 NR**

Roll No. of candidate

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20/2/22 2021

SRINIVASARAO ENGINEERING COLLEGE  
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**B.Tech. 3<sup>rd</sup> Semester End-Term Examination**

**ECE / EEE & CSE**

**Computer Science**

**OBJECT ORIENTED PROGRAMMING IN C++**

**(New Regulation)**

Full Marks - 70

Time - Three hours

The figures in the margin indicate full marks  
for the questions.

Answer question No. 1 and any *four* from the rest.

1. Answer the following (MCQ/Fill in the blanks): (10 × 1 = 10)
- (i) Which is not a feature of OOP in general definitions?
- (a) Efficient Code (b) Code reusability
- (c) Modularity (d) Duplicate/Redundant data
- (ii) Which feature of OOP indicates code reusability?
- (a) Abstraction (b) Polymorphism
- (c) Encapsulation (d) Inheritance
- (iii) Which among the following doesn't come under OOP concept?
- (a) Data hiding (b) Message passing
- (c) Platform independent (d) Data binding
- (iv) Compile time polymorphism in C++ language are
- (a) Operator overloading (b) Function overloading
- (c) Function overriding (d) (a) and (b) Only

[Turn over

- (v) C++ abstract class can contain
- (a) Pure virtual function
  - (b) Non-virtual function
  - (c) Only pure virtual function
  - (d) Both pure virtual and non-virtual function
- (vi) False statements about function overloading is
- (a) Defining multiple functions with same name in a class is called function overloading
  - (b) Overloaded function must differ in their order and types of arguments.
  - (c) Overloaded functions should be preceded with virtual keyword
  - (d) No statement is false
- (vii) True statement about Class and structure in C++ is
- (a) Default access specifier is private in class and public in structure
  - (b) Way of creating objects of class and structure are different
  - (c) Way of inheriting class and structure are different
  - (d) None
- (viii) Which is Abstract Data Type in C++
- (a) Class
  - (b) Int
  - (c) Float
  - (d) Array
- (ix) Which operator is used to allocate an object dynamically of a class in C++?
- (a) Scope resolution operator
  - (b) Conditional operator
  - (c) New operator
  - (d) Membership access
- (x) When you create an object of a class A like A obj ; then which one will be called automatically?
- (a) Constructor
  - (b) Destructor
  - (c) Copy constructor
  - (d) Assignment operator

2. (a) What do you mean by constructor and destructor? Show their uses with example. (4 + 3)
- (b) Write a program to overload the '+' operator to carry out the addition of two complex numbers. (8)
3. (a) Can we access private data members of a class without using a member or a friend function? Explain with example. (7)
- (b) What do you mean by static member of a class? Explain the features of static data member. (3 + 5)
4. (a) What is virtual function? Why do we need virtual function? (3 + 4)
- (b) What is file handling in C++? What are different modes available while opening a file. (3 + 5)
5. (a) Explain different types of inheritance with examples. (7)
- (b) Write a program to add members of two different classes using friend function. (8)
6. (a) Write difference between static binding and late binding. (7)
- (b) What do you mean by pure virtual function? Write a program to implement pure virtual function. (8)
7. (a) Write short notes on :  
(i) Functional programming  
(ii) Object oriented programming. (7)
- (b) What is class template? How it is differ from function template? Explain with example. (8)

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