

JK LAKSHMIPAT UNIVERSITY, JAIPUR

INSTITUTE OF ENGINEERING AND TECHNOLOGY

End Term Examination (Backlog), November 2018
B. Tech. (All Branches) , Semester I/II

Roll No.....

CSE202: Object Oriented Programming

Time: 3 hours

Max. Marks: 100

Instructions to students:

1. Do not write anything other than your roll number on question paper.
 2. Assume suitable data wherever required and mention it clearly.
 3. Writing appropriate units, nomenclature, and drawing neat sketches/schematics/ flow chart wherever, required are an integral part of the answer.
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Q.1A Attempt all questions (10 questions @ 1 mark)

10

- i. Which of the following correctly declares an array?
(a) int array[10]; (b) int array; (c) array{10}; (d) array array[10];
- ii.

```
#include<iostream.h>
void main()
{
cout<<"Hello";
return;
cout<<"Dear";
}
```


(a) Dear (b) Hello (c) Hello Dear (d) Nothing.
- iii. What is this operator called ::
(a) conditional (b) relational (c) scope resolution (d) none of the mentioned
- iv. When a subclass inherits from a class which itself has inherited from another class, it is known as:
(a) Multilevel Inheritance (b) Single Inheritance (c) Multiple Inheritance (d) Hierarchical Inheritance.
- v. A constructor having a reference to an instance of its own class as an argument is known as
(a) parameterized constructor (b) default constructor (c) copy constructor (d) none of these
- vi. Every C++ programs begins execution at the function.....
- vii. Which term denotes the process of wrapping up data and associated functions into one single unit?
(a) Abstraction (b) Encapsulation (c) Data-hiding (d) Polymorphism

- viii. Static member variable is initialized to_____ when the first object of its class is created.
(a) 0 (b) 1 (c) garbage (d) -1.
- ix. Where should you initialize a static data member?
(a) In main()
(b) Inside class
(c) In member function
(d) After class definition
- x. A virtual base class is used when:
(a) different functions in a base and derived class have the same name
(b) the base class has a virtual function that needs to be overridden in the derived class
(c) the identification of a function in a base class is ambiguous due to multiple inheritance.
(d) a base class is used with no body.
- Q.2 Short answer type questions (4 questions @ 2.5 marks) 10
- What is object-oriented programming? How is it different from the procedure oriented programming?
 - What is C++? List a few areas of application of C++.
 - What are the difference between array and structure?
 - Define static data and members functions. Why are they needed?
- Q.3A What is the different between a while and do while loop? WAP to find sum and average of ten different numbers using do-while. 05
- Q.3B Write a program to declare a class 'employee', consisting of data members emp_no, and emp_name. Write the member functions accept() to accept and display() to display the data for n employees. 05
- Q.4A How objects of the class can be define using array? WAP to enter student records and display using array of objects. 05
- Q.4B Write a program to find highest of two numbers using the nesting of member function. 05
- Q.5A What is the use of pointers with classes? Discuss two method by which class members can be accessed using pointers 05
- Q.5B What is inheritance? Explain different forms of inheritance with example. 05
- Q.6A Give a detailed description of the concepts of exception handling with specific reference to the concepts of throwing an exception, exception specification etc. 05
- Q.6B What does polymorphism mean in C++ language? What is early binding and late binding and why is late binding preferred? 05
- OR
- Q.6B What is operator overloading? How many arguments are required to overload unary and binary operators, respectively? 05

Q.7A What are the differences between inheriting a class with public and private visibility mode? WAP to read the first number in the base class and then read the second number in the derived class and then find their sum in the derived class. 10

OR

Q.7A What is a constructor? What are the characteristics of a constructor? Whether constructors could be overload? Justify your answer through an example. 10

Q.8A Define the basic concepts of object oriented programming: 10

- Object
- Class
- Data abstraction and encapsulation
- Message Passing
- Manipulator

Q.9A Write a program to simulate saving account processing in a bank using constructors also use destructor at the end of the program. 10

Q.9B Write a program to find the sum of two entered complex numbers from two different classes and display the sum using a common friend function to two classes. 10

OR

Q.9B Write a program in which a class has three data members: name, roll no, marks of 5 subjects and member function to assign stream on the basis of table given below: 10

Average marks	Stream
96% or More	Computers
91% - 95%	Electronics
86% - 90%	Mechanical
81% - 85%	Electrical
76% - 80%	Chemical
71% - 75%	Civil