PAPER CODE- 54005

University Institute of Engineering & Technology

(Recognised Under Section 2(f) and 12B of UGC)

Kurukshetra University, Kurukshetra

Roll No. -

THEORY EXAMINATION – MAY 2019	
B.TECH - CSE	SEMESTER - IV

TIME – 3 Hrs.

M.M. - 75

COURSE NO. - CSE-202

COURSE TITLE - OBJECT ORIENTED PROGRAMMING

Note: All questions in Part-A and Part-B are compulsory. Attempt any four questions from Part-C selecting at least one from each unit.

PART-A (15 Marks)

Q. No. – 1 Answer the following questions. **15x1=15**

(i)	What is the use of scope resolution operator in C++ language.
(ii)	The binding of data and function together in to a single unit is called _____.
(iii)	When we declare a member of a class static.
(iv)	How does a C++ structure differ from a C++ class.
(v)	Can we use the same function name for a member function of a class and an outside function in the same program file. If yes, how are they distinguished. If no give reasons.
(vi)	Describe the new and delete operator.
(vii)	What is difference between "error" and "exception."
(viii)	What is the purpose of defining a destructor function.
(ix)	Define an abstract class.
(x)	List out some important stream manipulator.
(xi)	What is the use of this keyword.
(xii)	How many file objects would you need to create to process four files sequentially.
(xiii)	List the keywords that can-not be overloaded.
(xiv)	What should be placed inside a catch block.
(xv)	A class template is known as a parameterized class. Comment.

PART-B (20 Marks)

	UNIT-I	
2	Declare a class "bank-account" to represent a bank account. Include the following members: **Data members:** name of depositor, account number, type of account and balance amount. **Member functions:** to assign initial values, to deposit an amount, to withdraw an amount, to display name, account number and balance. Define the member functions. Use these member functions in the main program.	5
	UNIT-II	
3	Define constructors. What is their utility. Describe their special characteristics.	5
	UNIT-III	
4	What do you understand by operator overloading. How it differ from operator overriding. What are rules for overloading operator.	5
	UNIT-IV	
5	With the help of suitable example, Show how to access records randomly in a file in C++.	5

PART-C (40 Marks)

	UNIT-I	
6: i)	Describe the features of C++ language which makes it different from C language.	5
ii)	What are the pre-processor directives. Explain any three by giving example.	5
7: i)	Define class. How does it accomplish data hiding. What is relationship between an object and a class. Write a program which shows how to define a class, how to access member functions and how to create and access objects in C++.	7
ii)	What is difference between public, private and protected access specifiers.	3
	UNIT-II	
8	Define friend function. What is the need of friend function. Explain how it differ from inline function. Illustrate it by giving suitable example. What are the merits and demerits of using friend function.	10
9	Define inheritance. What is the benefit of using the concept of inheritance. What are the types of inheritance in C++. Describe the general syntax of multiple inheritance. When dowe use multiple inheritance. Illustrate it by giving a suitable example.	10
	UNIT-III	
10	Create a class vector that contains an integer array as a data member. Overload >> and << operators to perform input and output operations for the objects of this class. (exampleif v is an object of class vector then statements like cin>>v and cout<<v should work.)	10
11:i)	When do we make a virtual function pure. What are the implications of making a function a pure virtual function. Explain.	3
ii)	Differentiate static and dynamic binding. Illustrate these two types of binding by giving Example.	7
	UNIT-IV	
12:i)	What are the advantages of using template functions. How are they differ from macros.	5
ii)	Distinguish between overloaded function and function templates. Write a function template for finding the minimum value contained in an array.	5
13	What is an exception. Why it is necessary to handle an exception. List the advantages of exception handling over conventional means of error processing. Also write and explain any program that illustrate rethrowingof an exception.	10