NATIONAL FORENSIC SCIENCES UNIVERSITY, DELHI CAMPUS
B.Tech. - M.Tech Computer Science & Engineering (Cyber Security) - Semester –2 - April-2022
Term Assessment – 1

SubjectCode:CTBTCSE SII P3 **Date: 19 – 04 -2022**

Subject Name: Object oriented programming with C++

Time:45 minutes **Total Marks:25**

Instructions:
1. Write down each question on separate page.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		Marks
Q. 1	Identify the scope resolution operator.	01
	(a) :	
	(b) ::	
	(c) //	
	(d) ?/	
Q. 2	Identify the arithmetic operator.	01
	(a) Sum	
	(b) +	
	(c) Add	
	(d) ++	
Q. 3	Identify the logical operator.	01
	(a) +	
	(b) &&	
	(c) –	
	(d) ?:	
Q. 4	Identify the Relational operator.	01
	(a) >	
	(b) ||	
	(c) *	
	(d) ::	
Q. 5	Identify the Assignment operator.	01
	(a) +	
	(b) ^	
	(c) Sum	
	(d) : No The given auns	
Q. 6	What is Object Oriented Programming? Differentiate procedure oriented and object oriented programming language.	10
Q. 7	What is C++? Explain Structure of C++ Program with Example	10

*** Best of Luck ***

NATIONAL FORENSIC SCIENCES UNIVERSITY

B.Tech. - M.Tech Computer Science & Engineering (Cyber Security) - Semester – II

SubjectCode: CTBTCSE-SII-P3
Subject Name: Object Oriented Programming using C++

Time: 90 Min   **Total Marks: 50**

Instructions:

1. Write down each question on separate page.
2. Attempt any five questions.
3. Make suitable assumptions wherever necessary.
4. Figures to the right indicate full marks.

		Marks
Q. 1	What is Object Oriented Programming? Differentiate procedure oriented and object oriented programming language.	10
Q. 2	List out benefits and application of OOP.	10
Q. 3	Explain Following terms.	10
	1. Object	
	2. Class	
	3. Data Abstraction.	
	4. Encapsulation	
	5. Inheritance	
Q. 4	Explain implicit and explicit type conversion.	10
Q. 5	Explain Call by Value and Call by Reference with appropriate example.	10
Q. 6	Explain function overloading with example.	10

Seat No.: _____   Enrolment No._____

NATIONAL FORENSIC SCIENCES UNIVERSITY
B.Tech-MTech Computer Science and Engineering (Cyber Security)
Block Examination, July 22

Subject Code: CTBTCSE S2 P3   Date:05/07/2
Subject Name: Object Oriented Programming with C++
Duration: 1hr 30 min   Total Marks

Instructions:
1. Write down each answer on separate page.
2. Attempt all questions.
3. Make suitable assumptions wherever necessary.
4. Figures to the right indicate full marks.

Q1 Answer any 5 questions   Marks: 10*5 =

1. Write a note on OOP.
2. Explain if, if-else, and switch statements in C++
3. Differentiate between for and while loops with examples.
4. What are variables? Discuss different data types.
5. Write a note on user defined functions. Explain with an example.
6. Discuss arrays in detail. Write suitable examples.
7. C++ is also known as "C with Classes". Justify.

END OF PAPER

Seat No.████

NATIONAL FORENSIC SCIENCES UNIVERSITY
B.Tech + M. Tech (Cyber Security) - Semester - II - August - 2022

Subject Code: CTBTCSE SII P3
Subject Name: Object Oriented Programming with C++
Time: 11:00 AM to 2:00 PM

Date: 03/08/2022

Total Marks: 100

Instructions:
1. Write down each question on a separate page.
2. Attempt all questions.
3. Make suitable assumptions wherever necessary.
4. Figures to the right indicate full marks.

		Marks

Q.1 **(a)** Define the term (any 5) — **05**
1. malloc()
2. Inline function
3. manipulator
4. EOF
5. free()
6. const

(b) What are the unique advantages of object oriented paradigm? Enlist application of the object oriented approach. — **05**

(c) Differentiate following: — **07**
1. Inheritance and Polymorphism ,
2. Operator overloading and Operator overriding

OR — **07**

What do you mean by dynamic initialization of a variable? Explain with suitable example.

Q.2 **(a)** What is class? How it achieves data hiding? — **05**
(b) Describe friend function with its rules for definition. — **05**
(c) Write a note on constructor and its types with example. — **07**

OR

How operator overloading works for unary operator? Explain with example. — **07**

Q.3 **(a)** Write a C++ program to manage the stock of book shop using the concepts of array of objects, constructor and destructor. — **08**
(b) Explain type conversion with its three types for a sample program. — **08**

Q.4 **(a)** Define inheritance with multiple inheritance in detail. — **05**
(b) When do you make a class virtual? Explain in detail. — **05**
(c) Describe the stream class of C++ with suitable diagram. — **07**

OR

When the function will become pure virtual function? What are the implications of making a function pure virtual?

07

Q.5 (a) What does this pointer points to? Describe with example. 05

(b) How opening a file with constructor is different from open()? Explain with the sample code. 05

(c) What is a file mode? Explain different file mode options available. 07

OR

Write a C++ program which read a file and write contents of a file without white spaces into another file. 07

Q.6 (a) Write a note on standard template library. 08

OR

Explain exception handling with suitable example. 08

(b) Write a menu driven program that can perform the following functions on strings. (Use overloaded operators where possible). 08

Compare two strings for equality (== operator)
Check whether first string is smaller than the second (<= operator)
Concatenate two strings (+ operator)

END OF PAPER

NATIONAL FORENSIC SCIENCES UNIVERSITY
B.Tech. - M.Tech. Computer Science & Engineering (Cyber Security)- Semester – II
(ATKT) - Dec 2022

Subject Code: CTBTCSE SII P3   **Date: 21/12/2022**
Subject Name: Object Oriented Programming with C++
Time: 11:00 to 2:00   **Total Marks: 100**

Instructions:
1. Write down each question on separate page.
2. Attempt all questions.
3. Make suitable assumptions wherever necessary.
4. Figures to the right indicate full marks.

			Marks
Q.1	(a)	What is object-oriented language and its features?	05
	(b)	Explain with suitable example, syntax of for loop in C++.	05
	(c)	Explain use of friend function with the help of suitable example.	07

OR

Differentiate abstraction and encapsulation with suitable example.

Q.2	(a)	Explain the rule of operator overloading.	05
	(b)	Define the Concept of Virtual base class with example.	05
	(c)	Demonstrate hybrid inheritance with the help of suitable example.	07

OR

Write a C++ program to add time (hour and minute) using a class and friend function.

Q.3	(a)	Differentiate between nested if-else and switch statement	08
	(b)	Compare and contrast for, while and do-while looping statements.	08

Q.4	(a)	Differentiate between break and continue statement.	05
	(b)	How overriding is different from the overloading?	05
	(c)	What is the need of array? Discuss different types of arrays	07

OR

Write a note on file operations with example.

Q.5	(a)	Write a C++ program demonstrating use of the pure virtual function with the use of base and derived classes.	05
	(b)	Discuss the benefits of returning objects from functions.	05
	(c)	What is a user defined exception? Write down the scenario where we require user defined exceptions.	07

OR

Explain virtual base class with suitable example.

Q.6	(a)	Explain the concept of polymorphism by an example in C++.	08
	(b)	Write a C++ program using function template to find the product of two integer or floating-point type of data	08