M S Ramaiah Institute of Technology
(Autonomous Institute, Affiliated to VTU)
Department of Computer Science and Engineering

Programme: B.E.
Term: December 2022– March 2023 **Course: Introduction to C++ Programming** **Course Code: PLC144**
CIE: Test 1 **Sem: I** **Date: 23/01/23**
Max Marks: 30 **Time: 1Hr** **Portions for Test: LP 1- 11**

Instructions to Candidates: First question is compulsory.
Answer any one full question from 2 or 3.

Sl#	Question	Marks	Bloom's Level	Course Outcomes
1) a	Distinguish between procedure oriented programming and object oriented programming?	(5)	L2	CO1
b	I) Evaluate the following expressions and write the results of x, y, and z. Consider x = 2 and y=4 and all the variable are integers. i) z = x++ *y ii) z = ++x*y iii) y %= x II) List the basic datatypes available in C++ with examples.	(3) + (2)	L3	CO1
c	Write a C++ program to search an element in a character array using linear search	(5)	L3	CO2
2)a	Explain the following i)Class and Object ii) Polymorphism	(5)	L2	CO1

b	I) Assume the following variables declaration
	int a = 0,b = 1,c = -1; float x = 2.5,y = 0.0;
	Evaluate the following expressions:
	a. a<=10 && x>=1 && b
	b. --a*(5+b)/2-c++ * b
	c. a*=b*c
	II) What is the output of this C++ code?
	`#include <iostream>`
	`using namespace std;`
	`int main( )`
	`{`
	`char suite = 3 ;`
	`switch ( suite )`
	`{`
	`case 1 :`
	`cout<< "\nDiamond";`
	`case 2 :`
	`cout<< "\nSpade";`
	`default :`
	`cout<< "\nHeart";`
	`}`
	`cout<< "\n Club" ;`
	`}`
		(3)
		+
		(2)
			L3	CO2

c	Write a C++ program to find the sum of all the natural numbers from 1 to n	(5)	L3	CO2
	(OR)			
3)a	Explain the following: i) Data Abstraction & Encapsulation ii) Inheritance	(5)	L2	CO1

b	I) Which of the following are invalid variable names and why?
	1. First_tag -
	2. char -
	3. average_number -
	4. group one -
	
	II) Find the output for the following:
	
	int main( )
	{
	int a=2,b=3,c=4;
	if(a=b<c)
	{
	c++;
	a--;
	}
	++b;
	cout<<"\n"<<a<<b<<c;
	return 0;
	}
	Answer: a= b= c=
		(2)
		
		+
		
		(3)
			L3	CO2

c	Write a C++ program to find whether the entered number is palindrome or not.	(5)	L3	CO2

CO1: Explain the characteristics of Object oriented programming approach.
CO2: Develop programs in C++ based on decision making statements and arrays.