B. Sc (Information Technology)	Semester – I
Course Name: Imperative Programming Practical	Course Code: USIT1P2
Periods per week (1 Period is 50 minutes)	3
Credits	2

		Hours	Marks
Evaluation System	Practical Examination	2½	50
	Internal	--	--

List of Practical: (Can be done in any imperative language)	
1.	**Basic Programs:**
a.	Write a program to display the message HELLO WORLD.
b.	Write a program to declare some variables of type int, float and double. Assign some values to these variables and display these values.
c.	Write a program to find the addition, subtraction, multiplication and division of two numbers.
2.	**Programs on variables:**
a.	Write a program to swap two numbers without using third variable.
b.	Write a program to find the area of rectangle, square and circle.
c.	Write a program to find the volume of a cube, sphere, and cylinder.
3.	**Conditional statements and loops(basic)**
a.	Write a program to enter a number from the user and display the month name. If number >13 then display invalid input using switch case.
b.	Write a program to check whether the number is even or odd.
c.	Write a program to check whether the number is positive, negative or zero.
d.	Write a program to find the factorial of a number.
e.	Write a program to check whether the entered number is prime or not.
f.	Write a program to find the largest of three numbers.
4.	**Conditional statements and loops(advanced)**
a.	Write a program to find the sum of squares of digits of a number.
b.	Write a program to reverse the digits of an integer.
c.	Write a program to find the sum of numbers from 1 to 100.
d.	Write a programs to print the Fibonacci series.
e.	Write a program to find the reverse of a number.
f.	Write a program to find whether a given number is palindrome or not.
g.	Write a program that solve the quadratic equation $$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$
h.	Write a program to check whether the entered number is Armstrong or not.
i.	Write a program to count the digit in a number
5.	**Programs on patterns:**
a.	Programs on different patterns.

6.	**Functions:**	
a.	Programs on Functions.	
7.	**Recursive functions**	
a.	Write a program to find the factorial of a number using recursive function.	
b.	Write a program to find the sum of natural number using recursive function.	
8.	**Arrays**	
a.	Write a program to find the largest value that is stored in the array.	
b.	Write a program using pointers to compute the sum of all elements stored in an array.	
c.	Write a program to arrange the 'n' numbers stored in the array in ascending and descending order.	
d.	Write a program that performs addition and subtraction of matrices.	
e.	Write a program that performs multiplication of matrices.	
9.	**Pointers**	
a.	Write a program to demonstrate the use of pointers.	
b.	Write a program to perform addition and subtraction of two pointer variables.	
10.	**Structures and Unions**	
a.	Programs on structures.	
b.	Programs on unions.	