Problem Solving and Programming Lab

Course Code	19ES1152	Year	I	Semester	I
Course Category	Engineering Sciences	Branch	ME	Course Type	Lab
Credits	1.5	L-T-P	0-0-3	Prerequisites	Nil
Continuous Internal Evaluation:	25	Semester End Evaluation:	50	Total Marks:	75

Course Outcomes	
Upon successful completion of the course, the student will be able to	
CO1	Build algorithm and flowchart for simple problems.
CO2	Use suitable control structures to solve problems.
CO3	Use suitable iterative statements and arrays to solve the problems.
CO4	Implement Programs using functions and pointers.
CO5	Develop code for complex applications using structures, unions and file handling features.

Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations (H:High, M: Medium, L:Low)													
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	M	M										L	L	M
CO2	M	M	M		M							L	L	L
CO3	M	M	M		M							L	L	L
CO4	M	M	M		M							L		M
CO5	M	M	M		L							L		M

Syllabus		
Expt. No.	Contents	Mapped CO
I	Draw flowcharts for fundamental algorithms.	CO1
II	C Programs to demonstrate C-tokens.	CO2
III	C Programs on usage of operators.	
IV	C Programs to demonstrate Decision making and branching (Selection)	
V	C programs to demonstrate different loops.	CO3
VI	C programs to demonstrate 1-D arrays.	
VII	C programs to demonstrate multi-dimensional arrays.	
VIII	C programs to perform operations on strings with String handling functions and without String handling functions.	
IX	C programs to demonstrate functions.	CO4
X	C programs on pointers.	
XI	C programs on structures and unions.	CO5
XII	C programs to demonstrate files.	

Learning Resources
Text Books
1. R.G. Dromey, How to Solve it by Computer, 1/e, Pearson Education, 2006.
2. Reema Thareja , Programming in C, Oxford University Press, AICTE Edition, 2018.
Reference Books
1. B. A. Forouzan and R. F. Gilberg, Computer Science: A Structured Programming Approach Using C, 3/e, Cengage Learning, 2007.
2. Pradip Dey, Manas Ghosh, Programming in C, Oxford University Press, AICTE Edition,
3. B. Gottfried, Programming with C, 3/e, Schaum's outlines, McGraw Hill (India), 2017.
4. Jeri R. Hanly, Ellot B. Koffman, Problem Solving and Program Design in C, 5/e,   Pearson.
e- Resources & other digital material
1. http://cprogramminglanguage.net/
2. https://www.geeksforgeeks.org/c-programming-language/
3. https://nptel.ac.in/courses/106105085/4