



**PARVATHANENI BRAHMAYYA
SIDDHARTHA COLLEGE OF ARTS & SCIENCE**
Autonomous
Siddhartha Nagar, Vijayawada-520010
Re-accredited at 'A+' by the NAAC

Lab – 2: C – PROGRAMMING AND MICROPROCESSOR

Offered to: M.Sc.(PHYSICS)	Course Code: 22PH2L2
Course Type: Core (P)	Course: C – Programming and Microprocessor
Year of Introduction: 2022	Year of offering: 2022
Year of Revision: XXXX	Percentage of Revision: Nil
Semester: II	Credits: 4

Course Description: In this course, students execute different programs on computer system and some microprocessor programs on 8085 microprocessor kit.

Course Objectives:

1. To learn fundamental computational concepts underlying most programming languages
2. To make the students develop logics which will help them to create programs, applications in C
3. To teach a range of problem solving techniques using computer
4. To develop the basic computational concepts and elementary data structure
5. To make the students learn C language and apply it to solve problems in Physics

Course Outcomes: At the end of this course, students should be able to:

CO1: Solve problems through programming.

CO2: Identify situations where computational methods and computers are useful.

CO3: Write a program on a computer, edit, compile, debug, correct, recompile and run it.

CO4: Understand the architecture of 8085 microprocessor and learn its instruction set.

CO5: Develop assembly language programming skills and performs arithmetic and logical operations on a 8085 microprocessor kit.

CO - PO MATRIX								
	CO-PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
22PH2L2	CO1		H	M	M		L	M
	CO2		H	M	M		L	M
	CO3				H		L	M
	CO4		H	H	M		L	M
	CO5			H	H		L	M

Syllabus

C – PROGRAMMING AND MICROPROCESSOR

(Minimum 10 experiments are to be done)

1. Program for the addition of two 8 bit numbers by using Microprocessor 8085
2. Program for subtraction of two 8 bit numbers by using Microprocessor 8085
3. Program for multiplication of two 8 bit numbers by using Microprocessor 8085
4. Program for division of two 8 bit numbers by using Microprocessor 8085
5. Microprocessor 8085 program for conversion of value
6. C Program to find number of odd and even numbers in given list of numbers
7. Write a C program for the multiplication of two matrices using arrays
8. Write a C program for the Newton-Raphson method with necessary algorithm.
9. Write a C Program for Trapezoidal Rule
10. C programs for Simpsons 1/3Rule.
11. C programs for Euler's Method
12. C programs for Solution of first order differential equations using the Runge - Kutta method
13. C programs for Numerical integration using the Simpson's method
14. C programs for Bisection Method
15. Any two online virtual lab experiments with in the syllabus have to be carried out (usingMHRD web resource).

Reference Books:

1. Advanced practical physics Vol – I Dr. S. P. Singh
2. Advanced practical physics Vol II : DR. S.P. Singh
3. Practical Physics : Gupta, Kumar, Sharma
4. Practical Physics: P. R. Sasi Kumar
5. University Practical physics by D. C. Tayal
6. Viva – Voce in advanced physics : Gupta , Kumar, Sharma
7. Op-amps and Linear Integrated Circuits by RamakanthGayakwad