

CIRCULAR*Sub: I Semester -Allotment of Practicum topics- Reg.*

INSTRUCTIONS**Students:**

1. The students should meet immediately the allotted course faculty for practicum and start working on the practicum with the guidance of course faculty.
2. To complete the Practicum, the student shall work in laboratories under supervision of allotted course faculty, in the allotted hours in the classwork timetable and also outside the class work hours during weekdays.

Practicum/Course Faculty:

1. The course faculty are advised to guide the allotted students for practicum during the semester course work.
2. In case of any clash in respect of practicum slot and practicum-faculty classwork, the practicum faculty should allot 4.00 p.m. to 6.00 p.m. slot to their practicum students on any full day. The same shall be informed to the class teacher, for record

Following are the practicum topics allotted to the I semester students of 1CSE2 Section.

Section : 1CSE2

S.No.	Roll number of the student	Practicum topic allotted	Practicum under the course	Course faculty
1.	B24CS065	Calculation of population growth using Geometric series	Differential Calculus and ordinary Differential Equations	Dr. S. Vishwa Prasad Rao
2.	B24CS066	Stability Analysis in Signal Processing: Applying Cauchy's Root Test	Differential Calculus and ordinary Differential Equations	Dr. S. Vishwa Prasad Rao
3.	B24CS067	Cauchy's Root Test in Economic and Financial Analysis: A Tool for	Differential	Dr. S.

		Time Series Investigation	Calculus and ordinary Differential Equations	Vishwa Prasad Rao
4.	B24CS068	Optimizing Traffic Signal Timings with Rolle's Theorem	Differential Calculus and ordinary Differential Equations	Dr. S. Vishwa Prasad Rao
5.	B24CS069	Analyzing Simple Harmonic Motion with Differential Equation Techniques	Differential Calculus and ordinary Differential Equations	Dr. S. Vishwa Prasad Rao
6.	B24CS070	Lagrange Multiplier Method application in economics to solve problems that involve constrained optimization	Differential Calculus and ordinary Differential Equations	Dr. S. Vishwa Prasad Rao
7.	B24CS071	Radioactive Decay and Carbon Dating: A First-Order Differential Equation Approach	Differential Calculus and ordinary Differential Equations	Dr. S. Vishwa Prasad Rao
8.	B24CS072	First-Order Differential Equations in Economic Modeling and Finance.	Differential Calculus and ordinary Differential Equations	Dr. S. Vishwa Prasad Rao
9.	B24CS073	Solving the Pursuit Problem: A First-Order Differential Equation Perspective	Differential Calculus and ordinary Differential Equations	Dr. S. Vishwa Prasad Rao
10.	B24CS074	Taylor Series application in Signal Processing Analysis	Differential Calculus and ordinary Differential Equations	Dr. S. Vishwa Prasad Rao
11.	B24CS075	Oscillations and Damping: Second-Order Differential Equations in Spring-Mass Systems with Critical Damping	Differential Calculus and ordinary Differential Equations	Dr. S. Vishwa Prasad Rao
12.	B24CS076	Smart Dustbin with Ultrasonic Sensor	Engineering Physics	Dr. K. Rajendra Prasad
13.	B24CS077	Fire Detection and Alarm System	Engineering Physics	Dr. K. Rajendra Prasad
14.	B24CS078	Temperature Sensor using Thermistor	Engineering	Dr. K.

			Physics	Rajendra Prasad
15.	B24CS079	Basic Calculator using software tool	Engineering Physics	Dr. K. Rajendra Prasad
16.	B24CS080	Clap Switch	Engineering Physics	Dr. K. Rajendra Prasad
17.	B24CS081	Investigate the properties of permanent magnets and their applications	Engineering Physics	Dr. K. Rajendra Prasad
18.	B24CS082	Automatic Streetlight Control Using LDR and LED	Engineering Physics	Dr. K. Rajendra Prasad
19.	B24CS083	Simulation of Projectile Motion with software tool	Engineering Physics	Dr. K. Rajendra Prasad
20.	B24CS084	Build a simple electric circuit and measure the voltage and current	Engineering Physics	Dr. K. Rajendra Prasad
21.	B24CS085	Investigate the properties of semiconductors and analyze their applications in electronic devices	Engineering Physics	Dr. K. Rajendra Prasad
22.	B24CS086	Investigate the physics of laser technology and study the properties and applications of different types of lasers	Engineering Physics	Dr. K. Rajendra Prasad
23.	B24CS087	Minimizing Logical Circuits Using Karnaugh Maps: A Study in Digital Logic Simplification	Computer Organization and Architecture	M. Preethi
24.	B24CS088	Exploring Number Systems: Techniques for Converting Between Binary, Octal, Decimal, and Hexadecimal	Computer Organization and Architecture	M. Preethi
25.	B24CS089	Optimizing Multiplication: Implementation and Analysis of Booth's Algorithm	Computer Organization and Architecture	M. Preethi
26.	B24CS090	Efficient Division in Processors: Design and Evaluation of Division Algorithms	Computer Organization and Architecture	M. Preethi
27.	B24CS091	Building a Simple ALU (Arithmetic Logic Unit) Using Logic Gates	Computer Organization and Architecture	M. Preethi
28.	B24CS092	Design and Implementation of an Instruction Set with Direct Addressing Modes	Computer Organization and Architecture	M. Preethi

29.	B24CS093	Branching Instruction Simulator	Computer Organization and Architecture	M. Preethi
30.	B24CS094	Design and Implementation of an Instruction Set with Indirect Addressing Modes	Computer Organization and Architecture	M. Preethi
31.	B24CS095	Simulation of Basic Flip-Flops: SR, JK, D, and T	Computer Organization and Architecture	M. Preethi
32.	B24CS096	Basic Pipeline Simulation: A Simplified CPU Pipeline Model	Computer Organization and Architecture	M. Preethi
33.	B24CS097	Design and Implementation of a 3-Stage Arithmetic Pipeline for Integer Operations	Computer Organization and Architecture	M. Preethi
34.	B24CS098	Alumni Networking Console Application in C	Programming for Problem Solving with C	Dr. Vijay Kumar Polepally
35.	B24CS099	Console application for Counselling Appointment System in C	Programming for Problem Solving with C	Dr. Vijay Kumar Polepally
36.	B24CS0100	Lottery Management System in C	Programming for Problem Solving with C	Dr. Vijay Kumar Polepally
37.	B24CS0101	Employee Payroll System	Programming for Problem Solving with C	Dr. Vijay Kumar Polepally
38.	B24CS0102	Console application for Voting System in C language	Programming for Problem Solving with C	Dr. Vijay Kumar Polepally
39.	B24CS0103	Student Management System in C	Programming for Problem Solving with C	Dr. Vijay Kumar Polepally
40.	B24CS104	C console application for Library Management System with basic operations	Programming for Problem Solving with C	Dr. Vijay Kumar Polepally
41.	B24CS105	Banking System Simulation in C language	Programming for Problem Solving with C	Dr. Vijay Kumar Polepally
42.	B24CS106	Weather Forecast console Application in C	Programming for Problem Solving with C	Dr. Vijay Kumar Polepally
43.	B24CS107	Household Expense Tracker in C	Programming for Problem Solving with C	Dr. Vijay Kumar Polepally

44.	B24CS108	Event Management System in C language	Programming for Problem Solving with C	Dr. Vijay Kumar Polepally
45.	B24CS109	Simulation of a given electrical circuit to determine the current, voltage and power at a given resistance using mesh analysis. Verify the same with nodal analysis.	Basic Electrical Engineering	M. Narasimha Rao
46.	B24CS110	Simulation by applying superposition theorem for a given electrical network to determine the current, voltage and power.	Basic Electrical Engineering	M. Narasimha Rao
47.	B24CS111	By using simulation verify the Thevenin's theorem and determine the voltage and current across the load.	Basic Electrical Engineering	M. Narasimha Rao
48.	B24CS112	Verify whether maximum power is transferred to the load in a given circuit.	Basic Electrical Engineering	M. Narasimha Rao
49.	B24CS113	Measurement of 3-phase power for a star or delta connected load.	Basic Electrical Engineering	M. Narasimha Rao
50.	B24CS114	LED blink test using Arduino	Basic Electrical Engineering	M. Narasimha Rao
51.	B24CS115	Control of DC servo motor using Arduino	Basic Electrical Engineering	M. Narasimha Rao
52.	B24CS116	Arduino based traffic signal control	Basic Electrical Engineering	M. Narasimha Rao
53.	B24CS117	Light based street light controller using Arduino	Basic Electrical Engineering	M. Narasimha Rao
54.	B24CS118	Light intensity controller for an auditorium	Basic Electrical Engineering	M. Narasimha Rao
55.	B24CS119	Comparative Study of Dam Construction in Different Regions: Advantages and Disadvantages	Environmental Studies	Dr. H. Ramesh Babu
56.	B24CS120	Deforestation: Ecological Impact of	Environmental	Dr. H.

		Deforestation and solutions	Studies	Ramesh Babu
57.	B24CS121	Sustainable Agriculture Practices: Investigation and Implementation	Environmental Studies	Dr. H. Ramesh Babu
58.	B24CS122	Development of a Sustainable Forest Management Plan for Timber Harvesting	Environmental Studies	Dr. H. Ramesh Babu
59.	B24CS123	Assessing the Impact of Agricultural Runoff on Water Quality in a Watershed	Environmental Studies	Dr. H. Ramesh Babu
60.	B24CS124	Social Impact of Dam Construction on Local Communities and Indigenous Peoples	Environmental Studies	Dr. H. Ramesh Babu
61.	B24CS125	Effective Forest Management: Sustainable Conservation Strategies	Environmental Studies	Dr. H. Ramesh Babu
62.	B24CS126	Investigation of Edge Effects on Biodiversity in Fragmented Habitats	Environmental Studies	Dr. H. Ramesh Babu
63.	B24CS127	Evaluation of Ecotourism Impacts on Biodiversity and Local Communities	Environmental Studies	Dr. H. Ramesh Babu
64.	B24CS128	Performance Evaluation of a Wastewater Treatment Plant: A Case Study	Environmental Studies	Dr. H. Ramesh Babu

Dr. S. Vishwa Prasad Rao
(Signature of class teacher)