KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE, WARANGAL-15

DEPARTMENT OF PS AND M&H

No. /PS/M&H/KITS/2024 Date: /9/2024

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 CSE section. ***1***

S. No.	Roll number of the student	Practicum topic allotted	Practicum under the course	Course faculty
1	B24CS001	Application of Linear transformation in classical encryption scheme	Differential Calculus and Ordinary Differential Equations (DCODE)	
2	B24CS002	Murder problem: Estimate the time of death of a murder victim using Newton's law cooling	DCODE	
3	B24CS003	Error Estimation in Numerical Methods using Lagrange's	DCODE	

		form of remainder		
4	B24CS004	Radius of convergence for power series (Exponential series and logarithmic series) using D' Alembert's ratio test	DCODE	
5	B24CS005	Radioactive Decay: A First-Order Differential Equation Approach	DCODE	
6	B24CS006	Fibonacci Sequence : Real life application in animal reproduction	DCODE	
7	B24CS007	Cauchy's Root Test in Economic and Financial Analysis: A Tool for Time Series Investigation	DCODE	
8	B24CS008	Optimizing algorithms in Machine Learning with Taylor Series	DCODE	
9	B24CS009	Differential Equations in Simple Harmonic Motion	DCODE	
10	B24CS010	Calculation of population growth using Geometric series	DCODE	
11	B24CS011	Cauchy's Root Test in Probability Theory: Analyzing Random Variable Convergence	DCODE	
12	B24CS012	Cheapest Digital Altimeter	Engineering Physics (EP)	
13	B24CS013	Automatic Water Dispenser	EP	
14	B24CS014	Make this Automatic LED Staircase light	EP	
15	B24CS015	Simple Clap Switch Circuit	EP	
16	B24CS016	LPG Gas Sensor Circuit	EP	
17	B24CS017	Police light Flasher Circuit	EP	
18	B24CS018	Real time water level indicator and alert system	EP	
19	B24CS019	Real time water level indicator and alert system	EP	
20	B24CS020	Make Your Own Nifty Night Lamp	EP	
21	B24CS021	Hybrid Solar Charger	EP	
22	B24CS022	Ultrasonic distance sensor - arduino	EP	
23	B24CS023	Binary to alphanumeric encoder/decoder generation model	Computer Organization &Architecture	
24	B24CS024	Digital logic circuit simulator	COA	
25	B24CS025	Truth table generator for logic	COA	

		gates		
26	B24CS026	Flip-flop simulator	COA	
27	B24CS027	Booth's algorithm simulation for multiplication	COA	
28	B24CS028	Memory addressing simulator	COA	
29	B24CS029	Memory hierarchy simulator	COA	
30	B24CS030	Performance evaluation of memory hierarchy	COA	
31	B24CS031	Multi process management simulator	COA	
32	B24CS032	Performance evaluation of computing device	COA	
33	B24CS033	Performance evaluation of Pipeline/Multi processing architecture	COA	
34	B24CS034	Student Assessment System Create an application that asks multiple-choice questions, tracks correct answers, and displays the final score.	Programming for Problem Solving with C (PPSC)	
35	B24CS035	Calendar Application Develop a calendar application that displays the calendar for any given month or year	PPSC	
36	B24CS036	Organization Payroll System This project is focused on creating a payroll management system that computes employee salaries based on hours worked, hourly rates, overtime, bonuses, and tax deductions. The system will allow the user to add new employees, update employee details, calculate salaries, and generate payslips.	PPSC	
37	B24CS037	Student Information System A system to manage student records (name, roll number, grades) with options to add, view, update, and delete records	PPSC	
38	B24CS038	Develop a menu driven C program for healthcare system:	PPSC	

		The healthcare system will be a console-based application that allows users to manage patient records, schedule appointments, and track basic health information. The system will utilize structures to store data, file handling for persistent storage, and basic functions for user interaction.		
39	B24CS039	Activity Management System in C language This project will develop a simple console-based event management application. The system allows users to create, view, and manage events such as workshops, seminars, or meetups. Users (organizers) can register an event by providing details.	PPSC	
40	B24CS040	Menu Driven C Program to implement Electricity Bill Define the function calculateBill that takes the number of units consumed as an argument and returns the bill amount. Calculate the bill amount by multiplying the units consumed by UNIT_RATE.	PPSC	
41	B24CS041	Expense Tracker in C The objective of this project is to create an application that allows users to manage their daily expenses. The user will enter the date, category (food, transport, etc.), amount, and description of each expense. The application will display a summary of expenses by category or date range and allow the user to sort or filter the data based on different criteria.	PPSC	
42	B24CS042	Given a string str containing only lowercase characters. The task is to print the	PPSC	

		characters along with their frequencies in the order of their occurrence in the given string. Examples: Input: str = "geeksforgeeks" Output: g2 e4 k2 s2 f1 o1 r1 Input: str = "helloworld" Output: h1 e1 l3 o2 w1 r1 d1 Approach: Traverse the given string character by character and store the frequencies of all the strings in a LinkedHashMap which maintains the order of the elements in which they are stored. Now, iterate over the elements of the LinkedhashMap and print the contents.		
43	B24CS043	Develop a menu driven C program to perform the functionality for given number and the Number System Conversion is mentioned below using pointers: Decimal to Binary Binary to Decimal Decimal to Octal Octal to Decimal Hexadecimal to Binary Binary to Hexadecimal	PPSC	
44	B24CS044	Alumni Application in C This system will enable alumni student to register, set up profiles, and search for other alumni by name, graduation year, or department. Users will also have the option to post announcements or messages, which will be saved to a file and displayed when searched.	PPSC	
45	B24CS045	Simulation of a given electrical circuit to determine the current, voltage and power at a given resistance using mesh analysis. Verify the same with	Basic Electrical Engineering (BEE)	

		nodal analysis.		
46	B24CS046	Simulation by applying superposition theorem for a given electrical network to determine the current, voltage and power.	BEE	
47	B24CS047	Verify whether maximum power is transferred to the load in a given circuit.	BEE	
48	B24CS048	Measurement of 3-phase power for a star or delta connected load.	BEE	
49	B24CS049	Determination of form factor and peak factor for half-wave and full-wave rectifier.	BEE	
50	B24CS050	LED blink test using Arduino	BEE	
51	B24CS051	Control of DC servo motor using Arduino	BEE	
52	B24CS052	Arduino based traffic signal control	BEE	
53	B24CS053	Light based street light controller using Arduino	BEE	
54	B24CS054	Light intensity controller for an auditorium	BEE	
55	B24CS055	Development of a Decision Support System for Sustainable Forest Management	BEE	
56	B24CS056	Investigating the Role of Microorganisms in Ecosystem Nutrient Cycling.	Environmental Studies (ES)	
57	B24CS057	Development of a Conservation Plan for a Threatened Species	ES	
58	B24CS058	Investigating the Effects of Pollution on Ecosystem Functioning	ES	
59	B24CS059	Assessing the Risks and Impacts of Hazardous Waste on Human Health and the Environment.	ES	
60	B24CS060	Investigating the Potential of Bioremediation for Hazardous Waste Clean up	ES	
61	B24CS061	Assessing the Levels of Heavy Metals in Soil Samples from [Contaminated Site].	ES	
62	B24CS062	Assessing the Impact of Vehicle Emissions on Air Quality in [Urban Area].	ES	

63	B24CS063	Assessing the Health Risks Associated with Electronic Waste Recycling	ES	
64	B24CS064	Optimization of Solar Panel Efficiency using Advanced Materials	ES	

(Signature of class teacher)
Dr. N.Maramu