K.I.T.S.W.

No. SEM-II /PS/M&H/KITS/2025   Date: 27/01/2025

CIRCULAR

Sub:ILSemester-AllotmentofPracticumtopics–Reg.

Allotment of Practicum topics to students

Section : 2CSE1

S. No.	Roll number of the student	Practicum topic allotted	Practicum under the course	Course faculty
1	B24CS001	Analytical Challenges and Calibration Strategies for pH Measurement of Colored Solutions Using a pH Meter	**ENGINEERING CHEMISTRY(EC)**	Dr. D. PRAVEENA
2	B24CS002	Detection of Corrosion in Chemical and Electrochemical Environments	EC	Dr. D. PRAVEENA
3	B24CS003	Optimization and Analysis of the Sedimentation Process in Wastewater Treatment Using Alum	EC	Dr. D. PRAVEENA
4	B24CS004	Investigating Electrochemical Energy Storage Systems (Secondary Batteries) for Engineering Applications	EC	Dr. D. PRAVEENA
5	B24CS005	Exploration of the Equivalent Conductance of NaCl through Conductometric Titrations	EC	Dr. D. PRAVEENA
6	B24CS006	Investigation of Corrosion Prevention and Control Methods in Engineering Materials with a Focus on Galvanizing	EC	Dr. D. PRAVEENA
7	B24CS007	Examination of Conductance Variation with concentration for different Weak Acid Solutions	EC	Dr. D. PRAVEENA
8	B24CS008	Quantification of Tartaric Acid Concentration Using Potentiometric Titrations	EC	Dr. D. PRAVEENA
9	B24CS009	Establishment of an Electrochemical Cell with Electrochemical Sensors for Redox Reactions	EC	Dr. D. PRAVEENA
10	B24CS010	Assessment of Red wine Concentration Using Potentiometric	EC	Dr. D. PRAVEENA

		Titrations		
11	B24CS011	Exploration of the Equivalent Conductance of $MgCl_2$ through Conductometric Titrations	EC	Dr. D. PRAVEENA
12	B24CS012	Investigation of Water Quality Parameters: pH, Turbidity and Dissolved Oxygen (DO)	EC	Dr. D. PRAVEENA
13	B24CS013	Examination of Conductance Variation with Dilutionfor different Strong Acid Solutions	EC	Dr. D. PRAVEENA
14	B24CS014	Implementing a simple command-line interface (CLI) that can execute basic commands like ls, cd, pwd, and mkdir	**OPERATING SYSTEMS (OS)**	G. SRIDHAR
15	B24CS015	Implementing process creation, termination, and First-Come First-Served process scheduling algorithm	OS	G. SRIDHAR
16	B24CS016	Implementing first-fit memory allocation technique	OS	G. SRIDHAR
17	B24CS017	Implementing a flat file system	OS	G. SRIDHAR
18	B24CS018	Implementing a simple application using different IPC (Inter-process Communication) mechanisms (pipes, shared memory, message queues)	OS	G. SRIDHAR
19	B24CS019	Implementing a simple file system with basic operations like create, read, write, and delete files	OS	G. SRIDHAR
20	B24CS020	Implementing Process Synchronization	OS	G. SRIDHAR
21	B24CS021	Implementing an algorithm to detect and prevent deadlocks in a system of concurrent processes	OS	G. SRIDHAR
22	B24CS022	Implementing a simple page table or segmentation scheme	OS	G. SRIDHAR
23	B24CS023	Implementing a simple device driver or I/O scheduler	OS	G. SRIDHAR
24	B24CS024	Implementing a simple operating system kernel with basic functionalities like process management, memory management, and interrupt handling	OS	G. SRIDHAR
25	B24CS025	Implementing ext4 and NTFS file systems	OS	G. SRIDHAR
26	B24CS026	Implementing shortest job first and round robin process scheduling algorithms	OS	G. SRIDHAR

#		Title	Subject	Faculty
27	B24CS027	Browser History Simulation using Stacks in C Create a projectin C language that simulates a web browser's back and forward button functionality using two stacks. Features should include storing browsing history, navigation between pages, and an option to clear history. Students should design the program to handle a large number of URLs efficiently and provide meaningful outputs for possible edge cases (e.g., empty history).	**Data Structures through C (DS)**	Dr. P. Vijay Kumar
28	B24CS028	Circular Queue-based Task Scheduler in C Design a projectin C language that uses a circular queue to manage tasks in a simulated operating system. The program should include features like priority-based scheduling, time-slot management, and handling task addition/removal dynamically. A visualization of task processing order is encouraged.	DS	Dr. P. Vijay Kumar
29	B24CS029	C language based Real-Time Ticket Booking System using Queues Create a ticket booking system using queues to manage booking order and a waiting list. Include features like priority handling for VIP customers, bulk booking, and cancellations. Ensure proper queue management under all scenarios.	DS	Dr. P. Vijay Kumar
30	B24CS030	Priority Queue-based Emergency Room Management Develop a projectin C language to simulate an emergency room where patients are assigned priorities based on the severity of their condition. Use a priority queue to manage patient check-in and treatment.	DS	Dr. P. Vijay Kumar
31	B24CS031	Stack-based Undo-Redo Feature Create a text editor simulator with stack-based undo and redo functionality. Every action (like insert, delete, or replace) should be stored in an undo stack, with redo operations supported by a secondary stack.	DS	Dr. P. Vijay Kumar
32	B24CS032	Inventory Management System using Linked Lists and Sorting in C Develop an inventory management system in C language for a shop using a linked list. Include features	DS	Dr. P. Vijay Kumar

		to add, delete, update, and sort items based on price or quantity. Allow users to generate inventory reports and handle stock updates dynamically.			
33	B24CS033	Linked List -based Address Book in C language Develop an address book application using a linked list. The program should support operations such as adding, deleting, and searching for contacts by name, phone number, or email. Advanced features like sorting contacts alphabetically and exporting data to a file should be implemented. Error handling for duplicate entries and invalid inputs is required.	DS		Dr. P. Vijay Kumar
34	B24CS034	Train Reservation System using Singly Linked Lists Build a train reservation system that tracks available and booked seats using a singly linked list. The program should include booking, cancelling, displaying seat statuses, and finding specific seat details. Visualizing seat arrangements and ensuring efficient updates are critical aspects	DS		Dr. P. Vijay Kumar
35	B24CS035	Student Marks Management System using Hashing Design a system to store and retrieve student marks efficiently using a hash table. Provide options to search by student ID or name and generate reports of top-performing students. Collision resolution techniques should be applied to ensure reliability.	DS		Dr. P. Vijay Kumar
36	B24CS036	Sorting Visualizer Create a sorting visualizer in C that demonstrates Bubble Sort, Quick Sort, and Merge Sort. Use ASCII art or simple graphics to visually represent the sorting process step by step. Allow users to input arrays and choose sorting techniques.	DS		Dr. P. Vijay Kumar
37	B24CS037	Arithmetic Expression Converter and Evaluator using stacks in C language Develop a program that takes a fully parenthesized infix expression as input, converts it to both postfix and prefix formats, and evaluates all three expressions using stacks. The program should include error checking for unbalanced	DS		Dr. P. Vijay Kumar

		parentheses and invalid operators		
38	B24CS038	Multi-level Queue Simulation for Priority Management Design a program to simulate a multi-level queue system, such as in an operating system's process scheduling. Each level should have a separate queue with its own scheduling algorithm (e.g., FIFO, Round Robin, etc.).	DS	Dr. P. Vijay Kumar
39	B24CS039	Hash Table-based Dictionary Develop a program to implement a dictionary using hashing. The dictionary should store words and their meanings, supporting operations like add, delete, search, and update. Implement collision resolution techniques such as chaining or open addressing. The program should handle a large number of entries efficiently.	DS	Dr. P. Vijay Kumar
40	B24CS040	DEVELOPING CONVERSATION USING FOUR TYPES OF SENTENCES	**ENGLISH COMMUNICATION AND REPORT WRITING(ECRW)**	Dr.G.Manjulatha Devi
41	B24CS041	SIGTNIFICANCE OF FAMILY CONCERN IN BANUCHANDER'S FILM 'ANTHULENI KATHA'	ECRW	Dr.G.Manjulatha Devi
42	B24CS042	ACTIVE READING TECHNIQUES	ECRW	Dr.G.Manjulatha Devi
43	B24CS043	LANGUAGE ENHANCEMENT THROUGH CLASSROOM DISCUSSIONS	ECRW	Dr.G.Manjulatha Devi
44	B24CS044	A DEPICTION OF RELIGIOUS WAR BETWEEN ISRAEL AND PALESTINE-CONSEQUENCES	ECRW	Dr.G.Manjulatha Devi
45	B24CS045	DEVELOP CONVERSATIONS BETWEEN 1) INTERVIEWER AND INTERVIEWEE FOR THE POSITION OF A CANCIDATE TO WORK ON ORACLE PLATFORM 2) ENGAGED COUPLE AFTER THE BOY LOST HIS SIGHT IN AN ACCIDENT	ECRW	Dr.G.Manjulatha Devi

		3) PARENTS TO MAKE THEIR WAYWARD CHILD BUSY 4) A MONK AND A DRUG ADDICT 5) A TEACHER AND A STUDENT REGARDING GOAL SETTING		
46	B24CS046	WRITE A CHOREOGRAPHY SCRIPT FOR THE POEM 'NIGHT OF THE SCORPION'	ECRW	Dr.G.Manjulatha Devi Dr.G.Manjulatha Devi
47	B24CS047	TRANSLATION TECHNIQUES- AN ANALYSIS WITH REFERENCE TO PULI-KANKANAM-BATASARI. SAMAYASPURTHI, ATHYASHA	ECRW	Dr.G.Manjulatha Devi
48	B24CS048	EFFECT OF FEMINISM ON INDIAN TRADITIONAL SYSTEM	ECRW	Dr.G.Manjulatha Devi
49	B24CS049	POLITICAL CORRUPTION AND FAILURE OF BUREAUCRACY IN INDIA	ECRW	Dr.G.Manjulatha Devi
50	B24CS050	CAPTAIN COOL: THE M.S.DHONI STORY-BOOK REVIEW	ECRW	Dr.G.Manjulatha Devi
51	B24CS051	VENGENCE IN SHAKESPEARE'S HAMLET	ECRW	Dr.G.Manjulatha Devi
52	B24CS052	Advanced computational techniques in Linear system of equations.	**MATRIX THEORY AND VECTOR CALCULUS (MTVC)**	Dr.K.Sandhyarani
53	B24CS053	Applications in Limits, continuity and partial derivatives of multivariate functions.	MTVC	Dr.K.Sandhyarani
54	B24CS054	Differentiability and chain rule, its applications.	MTVC	Dr.K.Sandhyarani
55	B24CS055	Beta and gamma functions, its Applications..	MTVC	Dr.K.Sandhyarani
56	B24CS056	Introduction to optimization and its applications	MTVC	Dr.K.Sandhyarani

57	B24CS057	Rank of a matrix, and its properties, applications.	MTVC	Dr.K.Sandhyarani
58	B24CS058	Linear equations in two variable and equations reducible to simpler form and its applications.	MTVC	Dr.K.Sandhyarani
59	B24CS059	Sample Space, Events and Probability and its applications in everyday life.	MTVC	Dr.K.Sandhyarani
60	B24CS060	Introduction to Set theory and logic and its applications.	MTVC	Dr.K.Sandhyarani
61	B24CS061	Modeling with partial differential equations.	MTVC	Dr.K.Sandhyarani
62	B24CS062	Cayley Hamilton's theorem and its applications.	MTVC	Dr.K.Sandhyarani
63	B24CS063	Applications of Eigen value problems	MTVC	Dr.K.Sandhyarani
64	B24CS064	Solenoid fields in vectors and its applications.	MTVC	Dr.K.Sandhyarani

Note:

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.

3. The course faculty are advised to guide the allotted students for practicum during the semester course work.

Dr. K. Sandhyarani
(Signature of class teacher)

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