KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE, WARANGAL-15

DEPARTMENT OF PS AND M&H

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

CIRCULAR

Sub: II Semester -Allotment of Practicum topics– Reg.

Allotment of Practicum topics to students

Section : 2CSD1

S.No.	Roll number of the student	Practicum topic allotted	Practicum under the course	Course faculty
1	B24DS001	NE555 Simple Servo Motor Controller Circuit	U24PY202B [EP]	Dr. Ch Sathish Chendra
2	B24DS002	Water Tank Full Alarm Circuit	U24PY202B [EP]	Dr. Ch Sathish Chendra
3	B24DS003	Police light Flasher Circuit	U24PY202B [EP]	Dr. Ch Sathish Chendra
4	B24DS004	LPG Gas Sensor Circuit	U24PY202B [EP]	Dr. Ch Sathish Chendra
5	B24DS005	Transistor Amplification of Photodiode Signals for Light Sensing Applications	U24PY202B [EP]	Dr. Ch Sathish Chendra
6	B24DS006	Using Infrared LEDs for Remote Control Transmission	U24PY202B [EP]	Dr. Ch Sathish Chendra
7	B24DS007	Experimenting with LED Arrays for Indicator Panels	U24PY202B [EP]	Dr. Ch Sathish Chendra
8	B24DS008	Designing an LED Chaser Circuit Using Transistors and ICs	U24PY202B [EP]	Dr. Ch Sathish Chendra
9	B24DS009	Simple Touch free Automatic hand wash/sanitizer dispensing machine.	U24PY202B [EP]	Dr. Ch Sathish Chendra
10	B24DS010	Battery Level Indicator Circuit	U24PY202B [EP]	Dr. Ch Sathish Chendra
11	B24DS011	Automatic Darkness Sensor Circuit	U24PY202B [EP]	Dr. Ch Sathish Chendra
12	B24DS012	Implementation of HALF ADDER, FULL ADDER using basic logic gates.	U24DS203 [CAO]	K. Venkateshwar Rao

13	B24DS013	Implementing Binary -to -Gray, Gray -to - Binary code conversions.	U24DS203 [CAO]	K. Venkateshwar Rao
14	B24DS014	Implementing 3-8 line DECODER.	U24DS203 [CAO]	K. Venkateshwar Rao
15	B24DS015	Design the 8- bit arithmetic logic unit	U24DS203 [CAO]	K. Venkateshwar Rao
16	B24DS016	Booth's algorithm simulation for multiplication	U24DS203 [CAO]	K. Venkateshwar Rao
17	B24DS017	Memory addressing simulator	U24DS203 [CAO]	K. Venkateshwar Rao
18	B24DS018	Design the control unit of a computer using either hardwiring or microprogramming based on its register transfer language description.	U24DS203 [CAO]	K. Venkateshwar Rao
19	B24DS019	Performance evaluation of memory hierarchy	U24DS203 [CAO]	K. Venkateshwar Rao
20	B24DS020	Implement a simple instruction set computer with a control unit and a data path.	U24DS203 [CAO]	K. Venkateshwar Rao
21	B24DS021	Performance evaluation of computing device	U24DS203 [CAO]	K. Venkateshwar Rao
22	B24DS022	Performance evaluation of Pipeline/Multi processing architecture	U24DS203 [CAO]	K. Venkateshwar Rao
23	B24DS023	To-Do List Application	U24DS204 [DSC]	B. Ramji

24	B24DS024	Phonebook Application	U24DS204 [DSC]	Ramji
25	B24DS025	Simple Calculator	U24DS204 [DSC]	Ramji
26	B24DS026	Graph-Based Sudoku Solver	U24DS204 [DSC]	Ramji
27	B24DS027	Travelling Salesman Problem Solver	U24DS204 [DSC]	Ramji
28	B24DS028	Online Voting System	U24DS204 [DSC]	Ramji
29	B24DS029	Students Grade Checker	U24DS204 [DSC]	Ramji
30	B24DS030	Recent Chat List (LRU Cache)	U24DS204 [DSC]	Ramji
31	B24DS031	Recent Chat List (LRU Cache)	U24DS204 [DSC]	Ramji
32	B24DS032	Job Scheduling Algorithm	U24DS204 [DSC]	Ramji
33	B24DS033	Movie Recommendation System Using Collaborative Filtering	U24DS204 [DSC]	Ramji
34	B24DS034	Verification of nodal analysis using MATLAB	U24EE205B [BEE]	Prof. V. Ramaiah
35	B24DS035	Verification of Superposition theorem using MATLAB	U24EE205B [BEE]	Prof. V. Ramaiah

36	B24DS036	Verification of Maximum Power Transfer theorem using MATLAB	U24EE205B [BEE]	Prof. V. Ramaiah
37	B24DS037	Measurement of 3-phase power for a star or delta connected load	U24EE205B [BEE]	Prof. V. Ramaiah
38	B24DS038	Analysis of half-wave and full-wave rectifier	U24EE205B [BEE]	Prof. V. Ramaiah
39	B24DS039	LED blink test using Arduino	U24EE205B [BEE]	Prof. V. Ramaiah
40	B24DS040	Control of DC servo motor using Arduino	U24EE205B [BEE]	Prof. V. Ramaiah
41	B24DS041	Arduino based traffic signal control	U24EE205B [BEE]	Prof. V. Ramaiah
42	B24DS042	Light based street light controller using Arduino	U24EE205B [BEE]	Prof. V. Ramaiah
43	B24DS043	Light intensity controller for an auditorium	U24EE205B [BEE]	Prof. V. Ramaiah
44	B24DS044	Efficiency calculation of a transformer	U24EE205B [BEE]	Prof. V. Ramaiah
45	B24DS045	Analyzing the Impact of Urbanization on Mental Health and Wellbeing	U24CY206 [ES]	Dr. G. Sridhar
46	B24DS046	Investigation of the Impact of Floods on Agricultural Productivity in India	U24CY206 [ES]	Dr. G. Sridhar
47	B24DS047	Climate Change and the Disruption of Aquatic Food Webs	U24CY206	Dr. G. Sridhar

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48	B24DS048	Analyzing the economic and social impacts of disasters in India	U24CY206 [ES]	Dr. G. Sridhar
49	B24DS049	Investigation of the Socio-Economic Benefits of Water Conservation in Agricultural Landscapes	U24CY206 [ES]	Dr. G. Sridhar
50	B24DS050	Assessing the Impact of Climate Change on forest ecosystem	U24CY206 [ES]	Dr. G. Sridhar
51	B24DS051	Conservation of Endangered Species in Fragmented Landscapes	U24CY206 [ES]	Dr. G. Sridhar
52	B24DS052	Socio-Economic Impacts of Mining on tribal Communities	U24CY206 [ES]	Dr. G. Sridhar
53	B24DS053	Assessment of Hydrological Restoration Techniques in Degraded Wetlands	U24CY206 [ES]	Dr. G. Sridhar
54	B24DS054	Develop a program in a language of your choice to solve the tridiagonal system, Test your program by solving it directly. Also develop some applications of tridiagonal system.	U24MH201 [MTVC]	Dr. N. Raji Reddy
55	B24DS055	Write a user-defined MATLAB function that determines the smallest eigenvalue of an (n x n) matrix by using the power method. Test your program by solving it directly.	U24MH201 [MTVC]	Dr. N. Raji Reddy
56	B24DS056	Develop a program in a language of your choice to determine normal vector, Unit normal vector, Maximum directional derivative of a scalar point function. Test your program by solving it directly.	U24MH201 [MTVC]	Dr. N. Raji Reddy
57	B24DS057	Develop a program in a language of your choice to determine ILL-CONDITIONED SYSTEMS	U24MH201 [MTVC]	Dr. N. Raji Reddy
58	B24DS058	Other Forms of Green's Theorem in the Plane and its importance.	U24MH201 [MTVC]	Dr. N. Raji Reddy

59	B24DS059	Develop a concept on Divergence Theorem and Potential Theory. The importance of the divergence theorem in potential theory.	U24MH201 [MTVC]	Dr. N. Raji Reddy
60	B24DS060	Develop a program in a language of your choice to determine inverse of a matrix using Singular value decomposition method and use of Singular value decomposition method in several image processing applications.	U24MH201 [MTVC]	Dr. N. Raji Reddy
61	B24DS061	Develop a program in a language of your choice to reduce a matrix A of order 3 & 4 to the tridiagonal form by Householder's method. Test your program by solving it directly.	U24MH201 [MTVC]	Dr. N. Raji Reddy
62	B24DS062	Develop a program in a language of your choice to decompose a matrix A of order 3 & 4 into the form LU using partial pivoting. Include the possibility of computing the inverse also. Test your program by solving it directly.	U24MH201 [MTVC]	Dr. N. Raji Reddy
63	B24DS063	Develop a program in a language of your choice to solve the system of equations by finding the inverse of a matrix by (i) elementary row transformations , (ii) Cromer's rule and (iii) applications of system of non-homogeneous equation.	U24MH201 [MTVC]	Dr. N. Raji Reddy
64	B24DS064	Develop a program in a language of your choice to calculate (i) the 1-norm of any matrix, (ii) the condition number of an (n x n) matrix,. Test your program by solving it directly.	U24MH201 [MTVC]	Dr. N. Raji Reddy

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.

(Signature of class teacher)

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