



Department of Electrical & Electronics Engineering

Course with Code: Arduino & Raspberry Pi based Projects Faculty: Mr.Shreeshayana R Semester & Section: IV Date Class No. Date of Class TLP **Remarks if anv** planned **TLP Planned Topics to be covered Topics Covered** Conduction No. Executed deviation (DD/MM) (DD/MM) ICT **Orientation Session** Session-1 1 1 i) To interface LED/Buzzer with Chalk and Talk + ICT Arduino/Raspberry Pi and write a program to 'turn ON' LED for 1 sec after every 2 seconds. ii) To interface Push button/Digital 2 Session-2 2 (IR/LDR) with sensor Arduino/Raspberry Pi and write a program to 'turn ON' LED when push button is pressed or at sensor detection. i) To interface DHT11 sensor with Chalk and Talk + ICT Arduino/Raspberry Pi and write a program to print temperature and humidity readings. 3 Session-3 3 ii) To interface OLED with Arduino/Raspberry Pi and write a program to print temperature and humidity readings on it. interface Bluetooth with Chalk and То Arduino/Raspberry Pi and write a Talk + ICT 4 Session-4 4 program to send sensor data to Smartphone using Bluetooth

Lesson Plan & Work-done Diary for AY:2024-25, Even Semester

| 6 Session-5 IA-1 - 6 6 7 Session-7 To interface motor using relay with Arduino/Raspberry Pi and write a program to 'turn ON' motor when push button is pressed Chalk and Talk + ICT 7 8 Session-7 Write a program on Arduino/Raspberry Pi to upload temperature and humidity data to thing speak cloud Chalk and Talk + ICT 8 9 Session-9 Arduino/Raspberry Pi to publish temperature data to MQTT broker Chalk and Talk + ICT 9 10 Session-11 Write a program on Arduino/Raspberry Pi to publish temperature data to MQTT broker Chalk and Talk + ICT 10 11 Session-12 Write a program on Arduino/Raspberry Pi and respond with humidity data to UDP client when requested Chalk and Talk + ICT 11 12 Session-12 Write a program to create TCP client when requested. Chalk and Talk + ICT 12 13 Session-13 Write a program on Arduino/Raspberry Pi and respond with humidity data to TCP client when requested. Chalk and Talk + ICT 13 14 Session-14 IA-II 14 14 | 5 | Session-5 | To interface Bluetooth with Arduino/Raspberry Pi and write a program to turn LED ON/OFF when '1'/'0' is received from Smartphone using Bluetooth. | Chalk and Talk + ICT | 5 | | | |
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| 7 Session-7 Arduino/Raspberry Pi and write a program to 'turn ON' motor when push button is pressed Talk + ICT 7 8 Session-8 Write a program on Arduino/Raspberry Pi to upload temperature and humidity data to thing speak cloud Chalk and Talk + ICT 8 9 Session-9 Arduino/Raspberry Pi to retrive Talk + ICT 9 10 Session-10 Arduino/Raspberry Pi to retrive Talk + ICT 9 11 Session-10 Arduino/Raspberry Pi to retrive Talk + ICT 10 11 Session-11 Write a program to create UDP ethy temperature data to MQTT broker Chalk and Talk + ICT 11 Session-12 Write a program to create TCP collegation to create UDP ethy temperature data to UDP ethy tata to TCP collegation the merguested. Chalk and Talk + ICT 12 Session-12 Write a program to create TCP collegation to create TCP collegation to create TCP collegation to create TCP collegation the merguested. Chalk and Talk + ICT 11 13 Session-13 Write a program on to Create TCP ethy temperature data and print it. Chalk and Talk + ICT 13 | 6 | Session-6 | IA-1 | - | 6 | | | |
| 8 Session-8 Arduino/Raspberry Pi to upload temperature and humidity data to timing speak cloud Talk + ICT 8 9 Session-9 Write a program on Arduino/Raspberry Pi to retrive temperature data to MQTT broker Chalk and Talk + ICT 9 10 Session-10 Arduino/Raspberry Pi to publish temperature data to MQTT broker Chalk and Talk + ICT 10 11 Session-10 Arduino/Raspberry Pi and respond with humidity data to UDP client when requested Chalk and Talk + ICT 11 12 Session-12 Write a program to create TCP server on Arduino/Raspberry Pi and respond with humidity data to TCP client when requested. Chalk and Talk + ICT 12 13 Session-13 Write a program on Arduino/Raspberry Pi to subscribe tata and print it. Chalk and Talk + ICT 13 | 7 | Session-7 | Arduino/Raspberry Pi and write a program to 'turn ON' motor when | | 7 | | | |
| 9 Session-9 Arduino/Raspberry Pi to retrive temperature data to MQTT broker Talk + ICT 9 10 Session-10 Write a program on Arduino/Raspberry Pi to publish Talk + ICT 10 10 11 Session-11 Write a program to create UDP server on Arduino/Raspberry Pi and respond with humidity data to UDP client when requested Chalk and Talk + ICT 11 12 Session-12 Write a program to create TCP client when requested Chalk and Talk + ICT 12 13 Session-13 Write a program on Arduino/Raspberry Pi to subscribe to MQTT broker for temperature data and print it. Chalk and Talk + ICT 13 | 8 | Session-8 | Arduino/Raspberry Pi to upload temperature and humidity data to | | 8 | | | |
| 10 Session-10 Arduino/Raspberry Pi to publish temperature data to MQTT broker Talk + ICT 10 11 Session-11 Write a program to create UDP server on Arduino/Raspberry Pi and respond with humidity data to UDP client when requested Chalk and Talk + ICT 11 12 Session-12 Write a program to create TCP client when requested. Chalk and Talk + ICT 12 13 Session-13 Write a program on Arduino/Raspberry Pi to subscribe to MQTT broker for temperature data and print it. Chalk and Talk + ICT 13 | 9 | Session-9 | Arduino/Raspberry Pi to retrive | Talk + ICT | 9 | | | |
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| 12Session-12server on Arduino/Raspberry Pi and respond with humidity data to TCP client when requested.Talk + ICT1213Session-13Write a program on Arduino/Raspberry Pi to subscribe to MQTT broker for temperature data and print it.Chalk and Talk + ICT13 | 11 | Session-11 | server on Arduino/Raspberry Pi and respond with humidity data to UDP | | 11 | | | |
| 13 Session-13 Write a program on Arduino/Raspberry Pi to subscribe to MQTT broker for temperature data and print it. Chalk and Talk + ICT 13 | 12 | Session-12 | server on Arduino/Raspberry Pi and respond with humidity data to TCP | | 12 | | | |
| 14 Session-14 IA-II 14 | 13 | Session-13 | Write a program on Arduino/Raspberry Pi to subscribe to MQTT broker for temperature | | 13 | | | |
| | 14 | Session-14 | IA-II | - | 14 | | | |

| | Activity | Planned | Actual | Remarks | | |
|-----------|--|---------|--------------------|---------|--|--|
| 1 | Theory Classes | 14 | | | | |
| 2 | Assignments/Quizzes/ Self study | - | | | | |
| 3 | Tutorials/ Extra classes | - | | | | |
| 4 | Internal Assessments | 2 | | | | |
| 5 | ICT based Teaching (% of usage in Curriculum) 11/14= 78.57% | | | | | |
| | Planning | | Execution | | | |
| Faculty S | ignature: | | Faculty Signature: | | | |
| HoD Sign | ature: | | HoD Signature: | | | |