**BLACK DIAMOND SCHOOL OF ENGINEERING,JHARSUGUDA**

# LESSON PLAN

## Session (2022 -2023)

| **Discipline:** Computer Science & Engineering | **Semester:** 6th<br><br>Summer /2023 | **Name of the faculty:** Bijaya Patel<br>**Email Id:** bijaypatel2@gmail.com |
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| **Subject:** Internet of Things Lab (Pr.2) | **No. of Days/week:** 02<br>(2 periods / Day) | **Start Date:** 13/02//2023<br>**End Date:** 23/05/2023 |

| Week | Class Day | Practical Topics |
|---|---|---|
| 1st | 1st | Introduction to Arduino, Arduino - Board Description |
| | 2nd | Arduino- Installation |
| 2nd | 1st | Understating basics of Arduino IDE |
| | 2nd | Revision/Assessment class |
| 3rd | 1st | Basics of C language using Arduino IDE, Variables, Datatypes |
| | 2nd | Control statements |
| 4th | 1st | Loops statements |
| | 2nd | Functions |
| 5th | 1st | Revision/Assessment |
| | 2nd | Practical using Arduino-interfacing sensors |
| 6th | 1st | Interfacing Light Emitting Diode (LED)- Blinking LED |
| | 2nd | Revision/Assessment |
| 7th | 1st | Interfacing Button and LED – LED blinking when button is pressed |
| | 2nd | Revision/Assessment |
| 8th | 1st | Interfacing Temperature Sensor (LM35) |

| | 2nd | Revision/Assessment |
|---|---|---|
| 9th | 1st | Interfacing Temperature and Humidity Sensor (DHT11) |
| | 2nd | Revision/Assessment |
| 10th | 1st | Interfacing Light Dependent Resistor (LDR) and LED, displaying automatic night lamp |
| | 2nd | Revision/Assessment |
| 11th | 1st | Interfacing Liquid Crystal Display (LCD) – display data generated by sensor on LCD |
| | 2nd | Revision/Assessment |
| 12th | 1st | Interfacing Air Quality Sensor-pollution (e.g., MQ135) – display data on LCD, switch on LED when data sensed is higher than specified value. |
| | 2nd | Revision/Assessment |
| 13th | 1st | Interfacing Bluetooth module (e.g., HC05)- receiving data from mobile phone on Arduino and display on LCD |
| | 2nd | Revision/Assessment |
| 14th | 1st | Interfacing Relay module to demonstrate Bluetooth based home automation application. (Using Bluetooth and relay). |
| | 2nd | Interfacing Relay module to demonstrate Bluetooth based home automation application using Bluetooth and relay (Cont..). |
| 15th | 1st | Revision/Assessment |
| | 2nd | Revision/Assessment |