Internet of Things Lab

Course Code	20ES1452	Year	II	Semester	II
Course Category	ES Lab	Branch	CSE	Course Type	Practical
Credits	1.5	L-T-P	0-0-3	Prerequisites	Programming for Problem Solving
Continuous Internal Evaluation :	15	Semester End Evaluation:	35	Total Marks:	50

Course Outcomes		
Upon successful completion of the course, the student will be able to		
CO1	Develop various sensor interfacing using Arduino IDE	L3
CO2	Evaluate Wireless Control of Remote Devices	L4
CO3	Design and develop Mobile Application which can interact with Sensors and Actuators.	L5
CO4	Make an effective report based on experiments.	L3

Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations (3:Substantial, 2: Moderate, 1:Slight)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	2				2									2
CO2		2			2									2
CO3			2		2									2
CO4	2								2	2				2

EXP No.	Contents	Mapped CO
Syllabus		
1	Digital I/O Interface – Blynk LED, Multicolour LED.	**CO1, CO4**
2	Digital I/O Interface - IR Sensor, Slot Sensor	**CO1, CO4**
3	Analog Read and Write - Potentiometer, Led Brightness Control.	**CO1, CO4**
4	Analog Read and Write -Temperature Sensor	**CO1, CO4**
5	Dc Motor Control - Dc Motor Speed and Direction Control.	**CO1, CO4**
6	Serial Communication - Device Control.	**CO1, CO4**
7	Fabrication and direction control of wheeled robot using Arduino	**CO1, CO4**
8	Wireless Module Interface -Wifi.	**CO1, CO2,CO4**
9	Basic Android App Development using MIT App Inventor.	**CO1,CO3, CO4**
10	Smart Home Android App Development using App Inventor and Arduino.	**CO1,CO3, CO4**

Learning Resources

Text Books

1. Sylvia Libow Martinez, Gary S Stager, ‒Invent To Learn: Making, Tinkering, and Engineering in the Classroom‖, Constructing Modern Knowledge Press, 2016.

References

1. Michael Margolis, ―Arduino Cookbook‖, Oreilly, 2011.