

## COMPUTER NETWORKS & IOT LAB PCC-ECE302-P

Course Credits: 1 Contact Hours: 2/week, (L-T-P: 0-0-2) Mode: Lab work Examination Duration: 3 hours	<b>Course Assessment(Internal: 30; External:70)</b>
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**Pre-requisites:** Basic knowledge of the inter-computer, internet connections and addressing.

Sr. No.	Course Outcomes At the end of the semester, students will be able:	RBT Level
<b>CO 1</b>	To understand the concept of internetworking of devices.	<b>L1</b>
<b>CO 2</b>	To describe application of IOT.	<b>L2</b>
<b>CO 3</b>	To make use of Devices, Gateways and Data Management in IOT.	<b>L3</b>
<b>CO 4</b>	To design the computer links among different networks to transfer the information.	<b>H1</b>
<b>CO 5</b>	To evaluate the Market perspective of IOT.	<b>H2</b>
<b>CO 6</b>	To design state of the art architecture in IOT.	<b>H3</b>

### List of Experiments

1. Configure a network topology using packet tracer software.
2. To establish a Web Server Connection Using the PC's Web Browser.
3. Viewing Device Tables and Resetting the Network.
4. To establish a full duplex network using routers.
5. Hands on experience on Node MCU board(installation, install ESP8266 board in Arduino IDE, flashing NodeMCU firmware on the ESP8266).
6. To control LED using IoT on Node MCU board.
7. To study PIR Motion Sensor using Node MCU board.
8. To study web server with Arduino IDE.
9. To publish Temperature Readings using ADC.
10. To study Weather Forecaster.
11. To study Door Status Monitor.
12. To study Servo motor control using Node MCU board.
13. To study RGB Color Picker using Color Sensor
14. Hands on experience on Raspberry Pi.

**NOTE:** Eight experiments are to be performed out of which at least Six experiments should be performed from above list. The remaining experiments may be performed from the above list or designed and set by concerned institution as per the scope of the syllabus.