PR-2 IoT LAB

Practical	**4 Periods per week**	**Term Work**	**50 Marks**
Total Periods	**60 Periods**	**Term End Exam**	**50 Marks**
Examination	**3 Hours**	**TOTAL MARKS**	**100 Marks**

CONTENTS

1. Basics of C language using Arduino IDE
   - Understating basics of Arduino IDE
   - Variables, datatype, loops, control statement, function

2. Practical using Arduino-interfacing sensors
   - Interfacing Light Emitting Diode(LED)- Blinking LED
   - Interfacing Button and LED – LED blinking when button is pressed
   - Interfacing Light Dependent Resistor (LDR) and LED, displaying automatic night lamp
   - Interfacing Temperature Sensor(LM35) and/or humidity sensor (e.g.DHT11)
   - Interfacing Liquid Crystal Display(LCD) – display data generated by sensor on LCD
   - Interfacing Air Quality Sensor-pollution (e.g. MQ135) – display data on LCD , switch on LED when data sensed is higher than specified value.
   - Interfacing Bluetooth module (e.g. HC05)- receiving data from mobile phone on Arduino and display on LCD
   - Interfacing Relay module to demonstrate Bluetooth based home automation application. (using Bluetooth and relay).

Books Recommended:

Sl.No.	Name of the Author	Title of the Book	Name of the Publisher
1	Vijay Madisetti, ArshdeepBahga,	Vijay Madisetti, ArshdeepBahga,	UniversityPress
2	YashavantKanetkar, ShrirangKorde,	“21 Internet Of Things (IOT) xperiments”	
3	Neerparaj Rai	“Arduino Projects For Engineers”	