Lesson Plan

Name of faculty   :   Dr. Surender Kumar, Sh. Deepak Rohilla

Discipline   :   Computer Engg., Mech. Engg., Inst & Control

Semester   :   1st year

Subject   :   Internet of Things and Artificial Intelligence

Lesson Plan Duration   :   30 Weeks (From 16 November 2020 to 30 June 2021))

Work Load (Lecture/ Practical) per week (in hours): Lectures-00   Practical- 02

Week	Theory		Practical	
	Lecture day	Topic (including assignment / test)	Practical day	Practical
1st			1st	Unit - 1 Introduction to Internet of Things (IoT) Applications
2nd			2nd	Architecture
3rd			3rd	Protocols
4th			4th	Characteristics of IoT
5th			5th	Physical Design/Logical Design of IoT
6th			6th	Functional blocks of IoT, Communication Models
7th			7th	Functional blocks of IoT, Communication Models
8th			8th	Unit - 2 Understating basics of Arduino IDE

9th				Revision
10th				Variables, Data Type
11th				Loops, Control Statement
12th				Function
13th				Unit - 3 Interfacing Light Emitting Diode(LED)-Blinking LED
14th				Interfacing Button and LED – LED blinking when button is pressed
15th				Interfacing Light Dependent Resistor (LDR) and LED, displaying automatic night lamp
16th				Interfacing Temperature Sensor(LM35) and/or humidity sensor (e.g. DHT11)
17th				Interfacing Liquid Crystal Display(LCD) – display data generated

18th				Interfacing Air Quality Sensor-pollution (e.g. MQ135) - display data on LCD , switch on LED when data sensed is higher than specified value
19th				Revision
20th				Interfacing Bluetooth module (e.g. HC05)- receiving data from mobile phone on Arduino and display on LCD
21st				Interfacing Bluetooth module (e.g. HC05)- receiving data from mobile phone on Arduino and display on LCD
22nd				Interfacing Relay module to demonstrate Bluetooth based home automation application. (Using Bluetooth and relay).
23rd				Unit - 4 Introduction to Artificial Intelligence (AI), Machine Learning (ML), Deep Learning (DL)
24th				Role of AI in IoT and its applications
25th				Managing and Analyzing data generated by IoT devices – Big Data
26th				Machine learning (ML) Techniques e.g. classification, linear regression, etc.
27th				Numerical based on above techniques.

28th				Understanding excel for analyzing data
29th				Revision
30th				Revision