PANIPAT INSTITUTE OF ENGINEERING & TECHNOLOGY
Department of Electronics & Communication Engineering

LESSON PLAN

Subject Name: - Internet of Things **Subject Code: - ECP-22A**

Year: - 4th **Semester: - 8th**

Lecture No.	Unit No.	Topic	COs Covered
L 1	UNIT-I	Introduction to IoT: Defining IoT	CO1
L 2			
L 3		Characteristics of IoT, Functional blocks of IoT	
L 4		Physical and logical design of IoT	
L 5		Smart cities and IoT revolution	
L 6		Difference between IoT and M2M	
L 7		M2M and peer networking concepts Ipv4 and IPV6	
L 8			
L 9		Software Defined Networks SDN	
L 10		Revisions	
L 11	UNIT-II	Developing IoTs: IoT design methodology	CO1, CO2
L 12		Case study on IoT system for weather monitoring	
L 13		IoT system Management	
L 14		Developing IoT applications through embedded system platform: Introduction to sensors	
L 15		IoT physical devices and endpoints, Introduction of Raspberry pi	
L 16		Raspberry pi interfaces	
L 17		Introduction of Arduino	
L 18		Arduino interfaces	
L 19		Revisions	
L 20	UNIT-III	Protocols for IoT: Messaging protocols	CO3
L 21		Transport protocols	
L 22		Ipv4, Ipv6	
L 23		URI	
L 24		Cloud for IoT: IoT with cloud, challenges	
L 25		Introduction to fog computing	
L 26		Cloud computing	

L 27		Challenges in IoT: Design challenges, Development challenges	
L 28		Security and legal considerations	
L 29		Logic design using Python: Introduction to python	
L 30		Data types, data structures	
L 31		Control flow, functions	
L 32		Modules, file handling and classes	
L 33	UNIT-IV	Implementing IoT concepts with python	CO4
L 34		Applications of IoT	
L 35		Connected cars IoT Transportation	
L 36		Smart Grid using IoT	
L 37		Healthcare sectors using IoT	
L 38		Revision	

Text Books:

A Bahaga, V. Madisetti, "Internet of Things- Hands on approach", University press, 2014.

References:

A Bahaga, V. Madisetti, "Internet of Things- Hands on approach", University press, 2014.
S.K.Vasudevan, A.S.Nagarajan, "Internet of Things", Wiley, 2019.
CunoPfister, "Getting started with Internet of Things", Maker Media, 1st edition, 2011. Samuel Greenguard, "Internet of things", MIT Press, 2015.

Web resources:

http://www.datamation.com/open-source/35-open-source-tools-for-the-internet-of-things-1.html
https://developer.mbed.org/handbook/AnalogIn
http://www.libelium.com/50_sensor_applications
M2MLabs Mainspring http://www.m2mlabs.com/framework Node-RED http://nodered.org/