



SYNERGY SCHOOL OF ENGINEERING
DEPARTMENT OF COMPUTER SCIENCE ENGINEERING
Lesson Plan of IOT Lab

Discipline : CSE	Semester: - 5TH Sem	Name of the teaching faculty: - Ms. Asmita Pranayani		
Subject: - IOT Lab	No. of Days/week class Allotted: 4	No. of weeks: -15 SESSION-2026-27 WINTER		
No. of week	No. of lab class	Topic to be Taught	DATE OF DELIVERY	
			G1	G2
1 ST	1 st	Introduction to IOT, Arduino IDE Installation Arduino Board Setup and LED Blink Program		
	2 nd	Introduction to IOT, Arduino IDE Installation Arduino Board Setup and LED Blink Program		
2 ND	1 st	Digital Input/Output using Arduino Multiple LED Control and Push Button Interfacing.		
	2 nd	Digital Input/Output using Arduino Multiple LED Control and Push Button Interfacing.		
3 RD	1 st	Introduction to Sensors and DHT11 Reading Temperature and Humidity Data		
	2 nd	Introduction to Sensors and DHT11 Reading Temperature and Humidity Data		
4 TH	1 st	erial Monitor Display and Data Logging Mini Experiment using DHT11		
	2 nd	erial Monitor Display and Data Logging Mini Experiment using DHT11		
5 TH	1 st	PIR Sensor Interfacing LDR Sensor Interfacing.		
	2 nd	PIR Sensor Interfacing LDR Sensor Interfacing.		
6 TH	1 st	Motion Detection System Light Intensity Monitoring System		
	2 nd	Motion Detection System Light Intensity Monitoring System		
7 TH	1 st	Relay Module Interfacing Automatic Light/Fan Control using Relay		
	2 nd	Relay Module Interfacing Automatic Light/Fan Control using Relay		
8 TH	1 st	Introduction to MQTT Protocol Installing and Configuring Mosquitto Broker		
	2 nd	Introduction to MQTT Protocol Installing and Configuring Mosquitto Broker		
9 TH	1 st	MQTT Publisher Program MQTT Subscriber Program		
	2 nd	MQTT Publisher Program MQTT Subscriber Program		
10 TH	1 st	ESP8266 Introduction and Wi-Fi Configuration Sending Sensor Data to Thing Speak		
	2 nd	ESP8266 Introduction and Wi-Fi Configuration Sending Sensor Data to Thing Speak		
11 TH	1 st	Cloud Dashboard Monitoring IoT Data Upload and Analysis		
	2 nd	Cloud Dashboard Monitoring IoT Data Upload and Analysis		
12 TH	1 st	Real-Time Sensor Data Collection Edge Computing using Python		
	2 nd	Real-Time Sensor Data Collection Edge Computing using Python		
13 TH	1 st	CSV Data Storage using Python Data Visualization using Matplotlib		
	2 nd	CSV Data Storage using Python Data Visualization using Matplotlib		

A. Pranayani
02/06/26

Smsh
02/06/2026

14 TH	1 st	AES Encryption Basics Encrypting and Transmitting Sensor Data		
	2 nd	AES Encryption Basics Encrypting and Transmitting Sensor Data		
15 TH	1 st	Web-Based Home Automation Project Project Demonstration and Viva		
	2 nd	Web-Based Home Automation Project Project Demonstration and Viva		

Signature
02/06/2026
Prepared by:

A. Pranayani
02/06/26

Signature
02/06/26

PRINCIPAL
Synergy School of Engineering
Dhenkanal

Signature
02/06/2026
Verified by:

HOU
Comp. Science & Engg. Dept
SSE, Dhenkanal