



**DIPLOMA IN MECHATRONICS**

**CENTRALIZED QUESTION BANK**

**1047234640 - FUNDAMENTALS OF INTERNET OF THINGS**

**DIRECTORATE OF TECHNICAL  
EDUCATION GOVERNMENT OF  
TAMILNADU**

## DIPLOMA END SEMESTER / YEAR EXAMINATION – 2025

**Course:** Mechatronics

**Subject :** Fundamentals of Internet of Things

**QP Code :** 1047234640

**Time :** 3 Hours

**Date :**

**Session:**

**Max Marks:** 100

### Answer the following Questions

1. To implement LED Blink and LED pattern with Arduino
2. Creating different LED patterns and controlling with pushbutton switches.
3. Automated LED light control based on input from IR sensor and LDR
4. To display your name in a LCD 16x2 display with Arduino.
5. Controlling servo motors with the help of joystick
- 6 Measurement of temperature and Pressure using ESP32
- 7 Calculate the distance to an object with the help of an Ultrasonic sensor and display it on a LCD
- 8 Design a system that integrates ultrasonic sensors for accurate distance measurement in the identified areas.
- 9 Integrate sensors such as GPS, accelerometers, and panic Basic Burglar alert security system with the help of PIR sensor and Buzzer
- 10 Modules and sensor interfacing-Interfacing IR sensor and LED with ESP32

### Allocation of Marks

Sl. No	Description	Marks
1	Aim & Tools Required	10
2	Procedure / Steps	20
3	Execution	20
4	Output / Result	10
5	Written Test	30
6	Viva Voce	10
<b>Total</b>		<b>100</b>