

# **Robotics Training Level 1 Syllabus**

## **(Basic Electronics and Robotics)**

**1. Glow an LED on Breadboard**

**2. Play a Buzzer on Breadboard**

**3. Run a Motor on Breadboard**

**4. Operate an LED with a Push Button**

**5. Operate a Buzzer with a Push Button**

**6. Operate a Motor with a Push Button**

**7. Operate an LED with a Switch**

**8. Operate a Buzzer with a Switch**

	<b>Robotics Training Level 1 Syllabus</b> <b>(Basic Electronics and Robotics)</b>
9.	Operate a Motor with a Switch
10.	Control the Brightness of an LED using a Potentiometer
11.	Control the Sound of a Buzzer using a Potentiometer
12.	Control the Speed of a Motor using a Potentiometer
13.	Series Connection of LEDs
14.	Series Connection of Multiple Output Devices with SW, PoT
15.	Parallel Connection of LEDs
16.	Parallel Connection of Multiple Output Devices with SW, PoT

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**17. Glow an RGB LED**

**18. Control an RGB LED with SW, PB, PoT, etc.**

**19. Light/Darkness Sensor using LDR**

**20. How to Use Transistor**

**21. Touch Sensor Using Transistor**

**22. Water Level Indicator Using Transistor**

**23. Automatic Streetlight Using Transistor**

**24. Display a Hexadecimal Number on a 7-segment Display**

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25.	Control 7-Segment Display with SW, PB, PoT, Transistor, etc.
26.	Charging and Discharging of a Capacitor
27.	RGB LED and 7-Segment with Capacitor
28.	Simple Door Bell (Voltage Regulator)
29.	555 Timer IC Bistable Mode (Touch Sensor)
30.	555 Timer IC Astable Mode (Blinking of LEDs)
31.	555 Timer IC Monostable Mode (Door Alarm)
32.	Electricity Detector using CD4017 IC

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33.	LED Chaser using CD4017 and 555 Timer IC
34.	Electronic Dice using CD4017 IC
35.	IR Proximity Sensor with Voltage Regulator on Breadboard
36.	Automatic Sanitizer Dispenser
37.	Automatic Water/Soap Water Dispenser
38.	Fire Alarm
39.	Touch Controlled Lamp
40.	Touch Controlled Bell
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41.	Touch Controlled Fan
42.	Touch Controlled Fan and Lamp
43.	Automatic Door Opening System
44.	Automatic Streetlight using LDR Sensor
45.	Locker Security System
46.	Laser Security System
47.	Automatic Agriculture System
48.	Water Level Indicator using Moisture Sensor

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49.	Rain Sensing Alarm
50.	Wireless Home Automation
51.	Object Follower Robot
52.	Object Avoider Robot
53.	Light Follower Robot
54.	Light Avoider Robot
55.	Remote Controlled Robot
56.	Line Tracking Robot
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57.	Wired Robot
58.	Automatic Power Generation
59.	Sweeping and Mopping Circuit
60.	Solar Tracker System
61.	LED with Solar Panel
62.	Buzzer with Solar Panel
63.	Motor with Solar Panel
64.	Create Anti-Smart Streetlight using Transistor
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