



## **Innovative Teaching - Learning Activities**

### **Two Days Workshop on “Hands-on Arduino”**

**Date:** 1<sup>st</sup> and 2<sup>nd</sup> Feb’ 2018

**Venue:** ME Lab (E &TC Dept.)

**Conducted by:** Staff members of E &TC Department,

**Expert talk:** Dr. R. S. Tiwari, Cognifront Software Ltd. Nashik on ‘Real life applications using Arduino’.

**Participants:** TE (ETX) students

**Number of Participants:** 30

#### **Objective of the workshop:**

- To bridge the gap of Microcontroller course in which ready to use microcontroller structure is not included
- To provide an opportunity for students to get aware of Arduino and thereby developing a stepping stone towards the development of an Embedded System.

#### **Outcome of the workshop:**

- Students understand about writing programs for Arduino.
- Practically worked on Arduino and get Hands-on.
- Understand Real life application of Arduino.

#### **Schedule of Workshop :**

Date: 1/2/2018

- Introduction to Arduino and its IDE
- Introduction to Arduino Board
- LED interfacing
- DC motor control
- Servo motor
- stepper motor
- LCD interfacing
- Temperature sensor interfacing



Date: 2/2/2018

- Passive infrared sensor interfacing
- Infrared Sensor interfacing
- Wireless communication
- Blue tooth communication
- Expert talk
- MATLAB support to Arduino





**Arduino Workshop**

**Pre-Workshop Feedback**

Date: 1/2/18 & 2/2/18

Name: Patil Harshali R Class: TE EITX

Roll Number: 49

1. Which microcontroller is used in Arduino ?

ATmega 328

2. What is the size of data bus ?

8 bit

3. How many digital input pins are available in Arduino ?

14

4. How many analog input pins are available in Arduino ?

6

5. Write any two important functions which are used in Arduino programming.

6. What is mean by sketch?

7. How much is the cost of Arduino board? upto 500.

8. What is mean by shield?

9. Which language is used for Arduino programming?

C prog

10. What is the maximum amount of current for any one of the Arduino pins?

  
Sign



### Arduino Workshop

#### Post-Workshop Feedback

Date: 1/2/18 & 2/2/18

Name: Patil Harshali R. Class: TYE (ELTY)

Roll Number: 49

da  
ms

✓ 1. Which microcontroller is used in Arduino?

Atmega 328 P

✓ 2. What is the size of data bus? 8 bit

✓ 3. How many digital input pins are available in Arduino? 14

✓ 4. How many analog input pins are available in Arduino? 6

✓ 5. Write any two important functions which are used in Arduino programming. void setup  
4  
void loop

✓ 6. What is mean by sketch? code is called as sketch

✓ 7. How much is the cost of Arduino board? starting from 300

8. What is mean by shield? for protecting IC's.

✓ 9. Which language is used for Arduino programming? C lang.

✓ 10. What is the maximum amount of current for any one of the Arduino pins?

40 mA

Sign



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## Arduino workshop

### Analysis

1/2/2018 and 2/2/2018

Roll No	Marks (10)
02	09
10	10
11	10
06	10
07	10
37	09
20	10
01	10
49	09
03	09
38	08
36	09
43	10
55	10
72	09
21	10
09	10