52072A Experimental Set Up has been designed specifically for begineers to learn Arduino and apply it in embedded applications. The board contains the necessary components and sensors that covers the basic as well as advanced areas of embedded system. All the practical can be implemented using Arduino Programming Language which is an open source project with codes & library available on github.

Practical experience on this set up carries great educative value for Science and Engineering Students

Object
To develop Arduino program for
01 Blinking of LED.
    - Controlling LED arrays.
02 Controlling LED using Push button.
03 Interfacing 20x4 LCD.
04 Interfacing 7 segment display.
05 Generating tone using buzzer.
06 Designing Real time Clock using DS1307 IC.
07 Control DC motor.
08 Interfacing 4x4 keypad matrix.
09 Sensing environment humidity by interfacing humidity sensor DHT11.
10 Measuring distance by interfacing ultrasonic sensor HC-SR04.
11 Sensing smoke & its level by interfacing Smoke sensor MQ-135.
12 Sensing temperature by interfacing Lm35 temperature sensor.
13 Interfacing LDR.

Features
The board consists of the following:
01 +5V & +3.3V D.C. at 100mA, IC regulated power supply internally connected.

02 Arduino UNO Board with USB port for up loading programming and data communication.
03 20x4 LCD for displaying output values.
04 4 digit seven segment display for displaying output values.
05 8 push buttons for controlling LED or to use it as an input unit.
06 8 LED for indicating output.
07 Buzzer for indicating output or to generate tone.
08 BREAD BOARD One Terminal Strips with 640 tie points and 2 Distribution Strips with 100 tie points each, totaling to 840 tie points. For further expension.
09 DS1307 IC to be used as Real Time Clock
10 L293D Dual H-Bridge Motor Driver IC with two 5V DC motor.
11 MAX232 IC with DB9 Connector for serial port communication.
12 Humidity Sensor DHT11.
13 Ultrasonic Sensor HC-SR04.
14 Gas/Smoke/Alcohol Sensor MQ-135.
15 Temperature Sensor LM35.
16 LDR.
17 4x4 Keypad Matrix.
18 Weight : 3.0 Kg. (Approx.)
19 Dimension : W 415 x H 165 x D 315

Accessories
01 CD with programs and software.
02 Mains Lead.
03 RS-232 Cable.
04 Arduino Cable.
05 Operating Instruction Manual.

Other Apparatus
01 Cathode Ray Oscilloscope 20MHz (CRO).
02 PC System with Windows 7, 8, 8.1 or 10 with 32 or 64 bit Operating System.

Note: Specifications are subject to change.