Experiment-1: Study and Configuration of Ardunio Kit (theory)

Experiment-2:

2a - Basic Programming using Arduino - LED and Switch Interface

- (A) Blink the onboard LED in Uno - https://wokwi.com/projects/448957484081397761
- (B) Blink the user LED in Uno using the port D8 – previous link but use '8' instead of '13'
- (C) Switch ON/OFF a LED using a digital Switch-button using External Pullup variable - https://wokwi.com/projects/448957799955515393
- (D) Switch ON/OFF a LED using a digital Switch-button using External Pulldown variable – previous link, only change in the "if (button == LOW)".
- (E) Switch/Keypad Interface - https://wokwi.com/projects/448957344726677505

2b - Basic Programming using Arduino - Analog & Digital Sensor Interface

- (A) Temperature Sensor Analog Interface - https://wokwi.com/projects/449019538043227137
- (B) LDR Sensor Digital Interface - https://wokwi.com/projects/448958113703120897

2c - Basic Programming using Arduino - Serial Communication (LEARN!)

2d - Basic Programming using Arduino - Local display of sensor data using LCD - https://wokwi.com/projects/449018861710626817

2e – Basic Programming using Arduino - Display of Sensor values in Mobile handset using Bluetooth

[NO answer!]

Experiment-3: Study of ESP8266 12E Node MCU (theory)

Experiment-4:

4a - Basic Programming using NodeMCU - Remote control of Electrical appliances using Mobile handset and Wi-Fi [NO answer!]

4b - Basic Programming using NodeMCU - Local Web server using NodeMCU and displaying Sensor values. [NO answer!]

Experiment-5: Study and Configuration of Raspberry PI (theory)

Experiment-6: Design and development of a Temperature Detection System using LM35 Temperature sensor - https://wokwi.com/projects/449019247187106817

Experiment-7: Design and development of a Gas Detection System using MQ5 sensor(theory)

Experiment-8: Design and development of a Moisture Detection System using Soil Moisture Sensor - https://wokwi.com/projects/449055890587182081

Experiment-9: Design and development of an Intrusion Detection System using PIR sensor.

https://wokwi.com/projects/448937504801457153

Experiment-10: Design and development of a Heartbeat Monitoring system using Heart beat sensor - https://wokwi.com/projects/449030777214412801