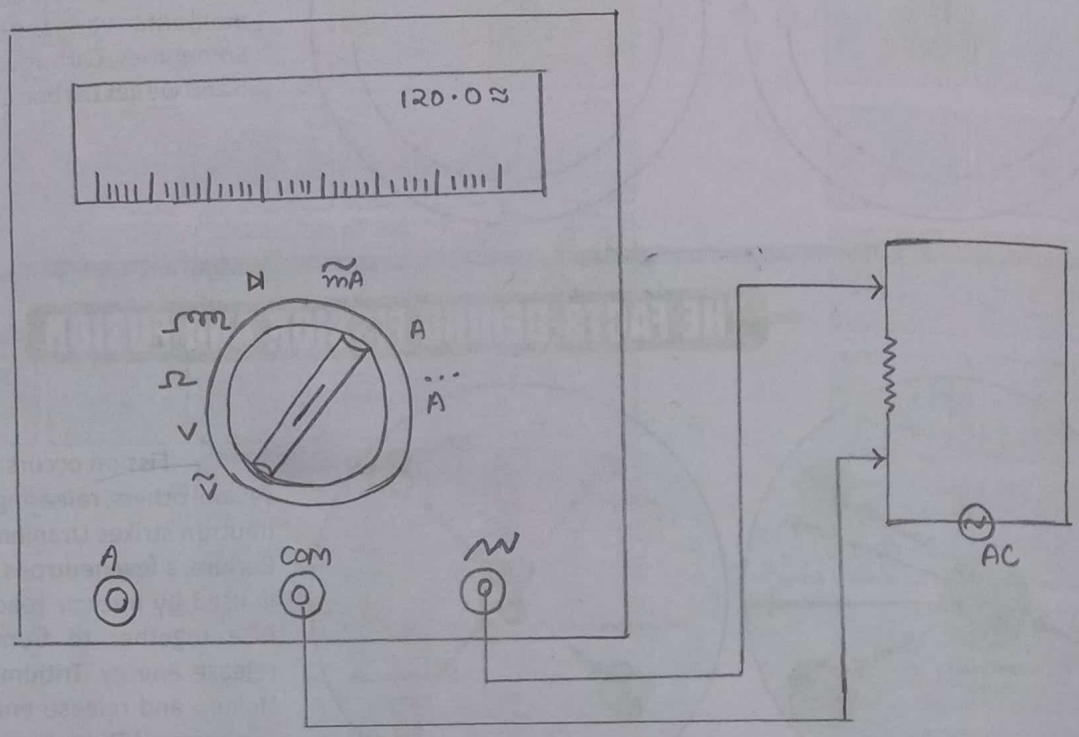
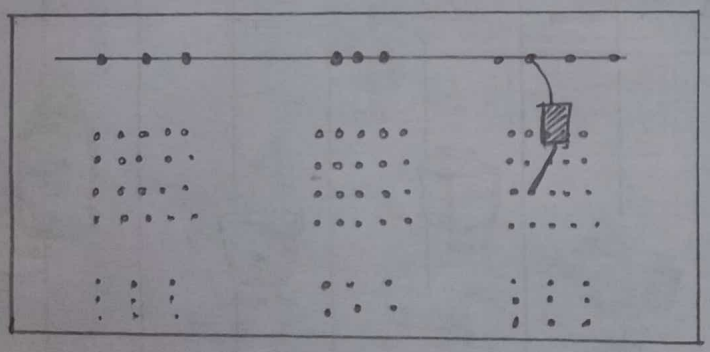


Multimeter



Bread Board

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EXPERIMENT - 01

Aim :-

Introduction to CRO, function generator, multimeter, Broad Board, DC Power supply, Identification of various components.

Theory :-

(i) Introduction to CRO :

The Cathode-ray oscilloscope (CRO) is a common laboratory instrumment that provides accurate time & amplitude measurements of voltage signals over a wide range of frequency. its reliability, stability, and ease of operation make it suitable as a general purpose laboratory instrumment.

(ii) Introduction to function Generator :

In the laboratory the device we use to produce A.C signals of various types is called the waveform or function Generator.

(iii) Introduction to digital multimeter (DMM) :

The DMM is used to make measurements of voltage, current & resistance. Both AC & DC signals can be measured using the DMM.

(iv) Introduction to Breadboard :

A bread board is used to make up temporary circuits for testing or to try out an idea. No soldering is required so it is easy to change connections and replace components; parts will not be

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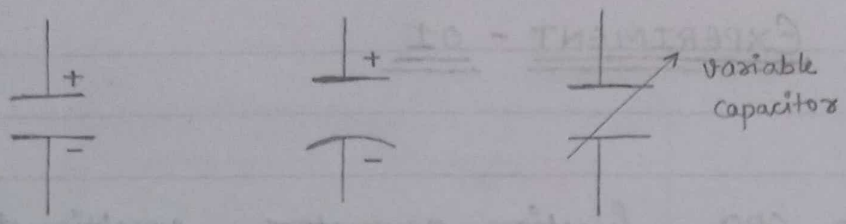
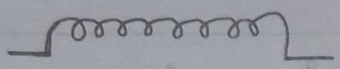
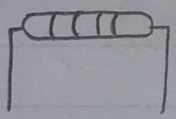


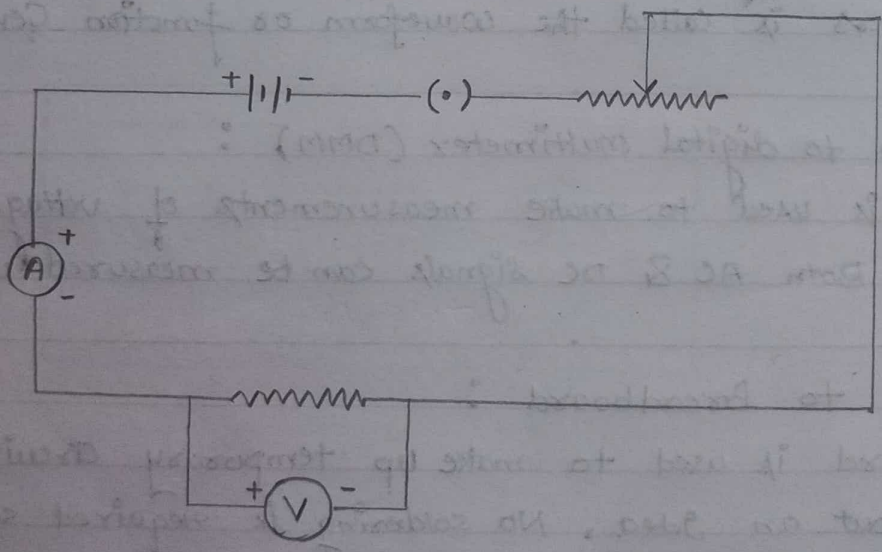
Capacitor



→ Inductor



→ Resistance



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be damaged so they will be available to re-use afterwards.

(v) Introduction to DC power supply :-

It is easy to use, low power, four output general purpose laboratory supply. it is suitable for experimental set-ups, circuit development and low voltage application

(vi) Resistor :-

The property of a substance which appears the flow of electric current through it is called Resistance. A resistor is a components or device designed to have a known value of resistance. Resistance of a resistor depends on their length, resistivity and its cross-sectional Area.

(vii) Capacitor :-

The Capacitor is a passive components which stores the electrical energy in the electric field when the electric current passes through it. A capacitor is of 2 types :

(a) Ceramic Capacitors

(b) Electrolytic capacitors

(viii) Inductor :-

The Inductor is a passive components which stores the Electrical energy in the magnetic field which the Electric current passes through it. Electric current (I) flows through, the core generates the magnetic field around it. Consider the magnetic field to generate flux (ϕ). The ratio of ϕ to I gives the Inductance.

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