Electrical and Electronics Engineering Lab Report

Exp No: *01*
Exp Name: ***Study of different equipments in circuit lab.***
Equipmets: 1.DC power supply 2.Bread board 3.Ammeter 4.Voltmeter
5.Multimeter 6.Wire stripper 7.Resistor

Now describing each of the equipments with their definition below.

1.DC power supply: A DC power supply is a type of power supply that gives direct current (DC) voltage to power a device. Because DC power supply is commonly used on an engineer‘s or technician‘s bench for a ton of power tests, they are also often called a “bench power supply”.

fig0.1: DC Power Supply

2.Bread board: A breadboard, solderless breadboard, or protoboard is a construction base used to build semi-permanent prototypes of electronic circuits. Unlike a perfboard or stripboard, breadboards do not require soldering or destruction of tracks and are hence reusable. For this reason, breadboards are also popular with students and in technological education.
A modern solderless breadboard socket consists of a perforated block of plastic with numerous tin plated phosphor bronze or nickel silver alloy spring clips under the perforations. The clips are often called tie points or contact points. The number of tie points is often given in the specification of the breadboard.

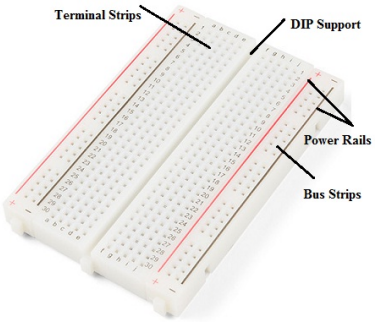

fig0.2: Breadboard

3.Ammeter: An ammeter (*abbreviation of* Ampere meter) is an instrument used to measure the current in a circuit. Electric currents are measured in amperes (A), hence the name. For direct measurement, the ammeter is connected in series with the circuit in which the current is to be measured. An ammeter usually has low resistance so that it does not cause a significant voltage drop in the circuit being measured.

fig 0.3: Ammeter

4.Voltmeter: A voltmeter is an instrument used for measuring electric potential difference between two points in an electric circuit. It is connected in parallel. It usually has a high resistance so that it takes negligible current from the circuit.
Analog voltmeters move a pointer across a scale in proportion to the voltage measured and can be built from a galvanometer and series resistor. Meters using amplifiers can measure tiny voltages of microvolts or less. Digital voltmeters give a numerical display of voltage by use of an analog-to-digital converter.

fig 0.4: Voltmeter

5.Multimeter: A multimeter is a measuring instrument that can measure multiple electrical properties. A typical multimeter can measure voltage, resistance, and current,

in which case it is also known as a volt-ohm-milliammeter (VOM), as the unit is equipped with voltmeter, ammeter, and ohmmeter functionality, or volt-ohmmeter for short. Some feature the measurement of additional properties such as temperature and capacitance.

fig 0.5: Multimeter

6.Wire stripper: A wire stripper is a small, hand-held device used to strip the electrical insulation from electric wires.

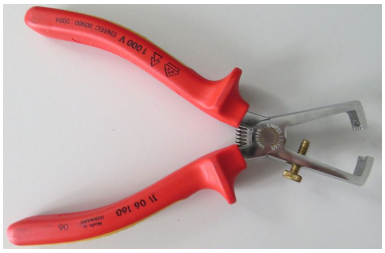

fig 0.6: Wire stripper

7.Resistor A resistor is a passive two-terminal electrical component that implements electrical resistance as a circuit element. In electronic circuits, resistors are used to reduce current flow, adjust signal levels, to divide voltages, bias active elements, and terminate transmission lines, among other uses. High-power resistors that can dissipate many watts of electrical power as heat may be used as part of motor controls, in power distribution systems, or as test loads for generators. Fixed resistors have resistances that only change slightly with temperature, time or operating voltage. Variable resistors can be used to adjust circuit elements (such as a volume control or a lamp dimmer), or as sensing devices for heat, light, humidity, force, or chemical activity.

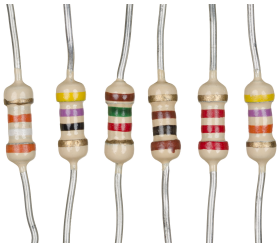

fig 0.7: Resistor

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