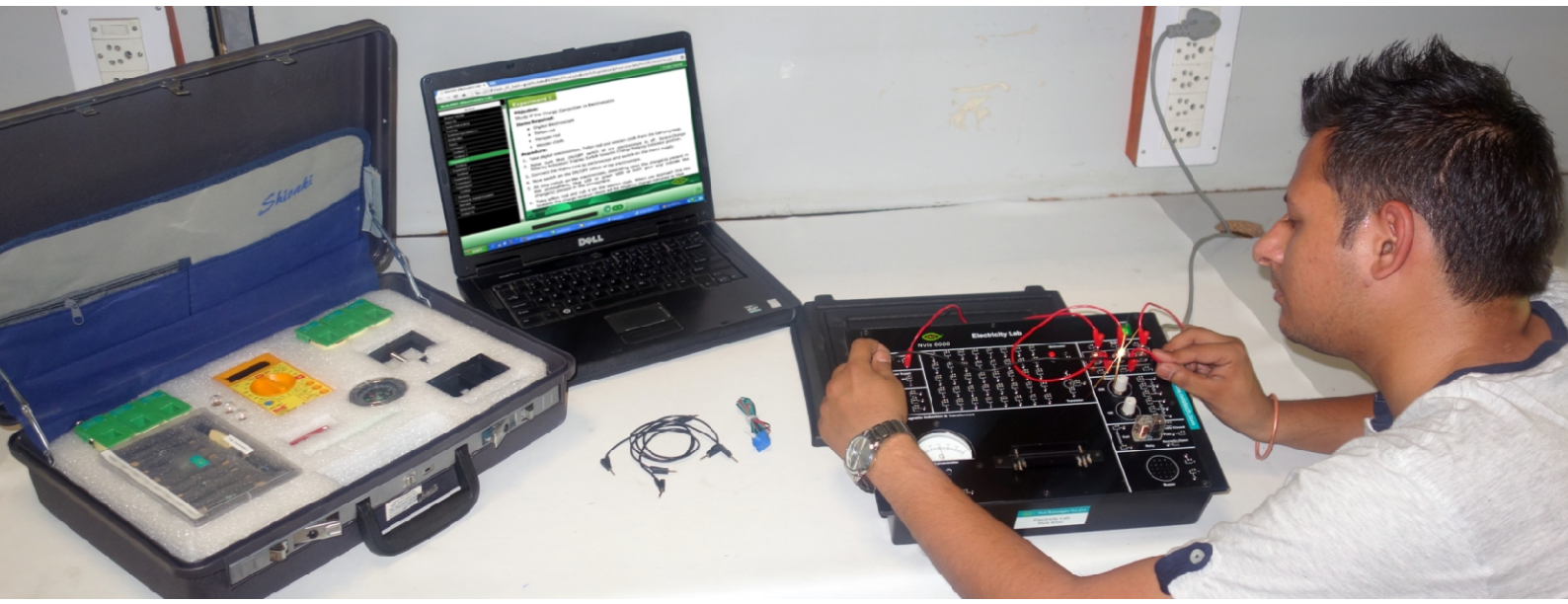
Electricity Lab

Nvis 6000



Nvis 6000 Electricity Lab is a versatile Training System for the laboratory. It is designed such that all the basic electrical circuits can be tested. The experiments given with this Training system will develop clear understanding of series and parallel circuits, electromagnetic induction, coil behavior with AC and DC circuits, diode and transistor characteristics etc. This simple training system provides a strong platform for detailed studies in electricals and electronics.

Features

- **Stand alone operation**
- **Durable, Easy to use kit**
- **Includes all the Basic Electrical fundamentals**
- **Solderless connections**
- **Complete set of coils and cores to understand the Basics of Electro magnetic induction and Transformers**
- **Provided with a component box to perform all the experiments**
- **CBT covering all the experiments**
- **Online product tutorial**

Scope of Learning

- Study of the Resistances individually as well as in series and in parallel connections
- Study of the Ohm's Law mathematical relationship between three variable Voltage (V), Current (I) and Resistance ®
- Study of the voltage and current flowing into the circuit
- Study of the Kirchhoff's Law for electrical circuits
- Study of the R-C circuit and find out the behavior of capacitors in a R-C network and study the phase shift due to capacitor
- Study of the L-C circuit and find out its behavior as resonance circuit
- Study of the characteristics of a semiconductor diode
- Study of the characteristics of a transistor
- Study of the behavior of current, when light bulbs are connected in circuit
- Study of understand the Faraday's Law of electromagnetic induction
- Study of the phenomenon of mutual induction
- Study of the Lenz's Law and effect of Eddy current
- Study of a Relay and construct a switching circuit by using relay
- Study of Oersted experiments
- Study of convert a Galvanometer into Volt meter
- Study of convert a Galvanometer into Ammeter
- Study of construct and study a step down transformer with the help of given coils and cores
- Study of construct and study a step up transformer
- To study the effects of moving I core on a step up transformer
- Study of the hysteresis curve

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Technical Specifications

DC Power Supply	: 5V, 200mA
AC Power Supply	: 6V, 1A
Relay	: 5V
Galvanometer	: 30 - 0 - 30
Galvanometer Resistance	: 80W
Light Bulbs	: 6V
Potentiometers	: 25W, 1W, 10kW, 1W
Switch	: 1 Pole, 2 Way Toggle type
Core Types	: E, I, U

Coils

No. of Turns	Wire Dimension (mm)	Maximum Current (Amp)	Inductance (Approximate)
200 Turn	0.818	1.46	590 mH
400 Turn	0.573	0.728	2.3 mH
800 Turn	0.404	0.363	9.2 mH
1600 Turn	0.251	0.144	34.2 mH
3200 Turn	0.170	0.072	134 mH

Fuse	: 1A
Power Supply	: 230V ±10%, 50Hz
Dimension (mm)	: W 345 x D 245 x H 105

Training System Includes

- Components box with
  a. Resistors b. Capacitors c. Transistors
  d. Diode e. Potentiometer
- E, I, U cores
- Set of coils
- Magnetic compass
- Bar magnets
- Screw driver
- Multimeter
- Connection patch cords
- CBT covering all the above experiments

Subject to change - Version 2.0

Designed and Manufactured in India by -
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