Order Code - 33515
Electricity Trainer

'Electricity Trainer' is a versatile training kit for a laboratory. It is designed such that all the basic electrical circuits can be tested with the help of this trainer kit. The experiments given with training system develop mental starting from an introduction to the circuit, basic fundamentals and complete circuits like series and parallel circuits, electromagnetic induction, coil behaviors with AC and DC circuits diode and transistor characteristics etc. This simple training kit provides a strong foundation for future studies in electrical or electronics. This takes students from the basic of ohm's law, through simple series and parallel circuit analysis and into same elementary aspects of electronics where they will build circuits using capacitors, transistor and diodes. Student can study how the resistance of a light bulb filament changes as it heats up.

With this system a set of coils and cores are provided- These high quality coils and laminated iron cores provides an effective introduction to electromagnetic theory. Each coil is labeled with number of turns. These can be used in study of

The Equipment is Useful for Students at level in engineering / technical institutes (EC & Telecom) Technical training centers in communication organizations, R&D personal and practicing engineering in research labs and industry.

Object:

Experiments that can be performed

01 To study the Resistances individually, as well as in series and in parallel connections.
02 To study the ohm's law mathematical relation ship between three variables voltage (V), current (I) and resistance (R).
03 To study the voltage and current flowing into the circuit.
04 To study the behavior of current when light bulbs are connected in series/parallel circuit.
05 To study the Kirchoff's Law for electrical circuits
06 To study the R-C circuit and find out the behavior of capacitor in a R-C network and study the phase shift due to capacitor. .
07 To study the L-C circuit and its oscillations.
08 To study the characteristics of a semiconductor diode.
09 To study the characteristics of a transistor.
10 To understand the Faraday's Law of electromagnetic induction.
11 To study the behavior of current when inductance is introduced in the circuit.
12 To study the Lenz's Law and effect of eddy current.
13 To study the relay and construct a switching circuit by using relay
14 To study the Oersted experiment.
15 To study the phenomenon of mutual induction.
16 To construct and study the step down transforn1er with the help of given coils and cores.
17 To construct and study the step up transformer.
18 To study the effects of moving I core on a step up transformer.
19 To convert a galvanometer into voltmeter.
20 To convert a galvanometer into ammeter.

Note: Specifications are subject to change.

Tesca Technologies Pvt. Ltd.
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Specification & Features:

DC power Supply	:	5V. 200 mA
DC power Supply	:	12V. 200 mA
AC power Supply	:	6V, lA
Relay	:	12V
Galvanometer	:	30 -0 -30 .
Galvanometer Resistance	:	80 Ohm
Light Bulbs (3 Nos.)	:	6V
Potentiometers (3 Nos.)	:	25 Ohm. 1 W 10 K Ohm. 1 W
Switch	:	1 Pole, 2 Way Toggle Type
Core Types	:	E, I, U
Main Supply	:	230V AC 50Hz
* Dimension	:	W 340 x H 110 x D 210

COILS

No. of Turn	Qty.	SWG	Maximum Current (Amp.)	Inductance(Approx)
200	1	21	1.000	85 mH
400	2	23	0.542	3.25 mH
800	1	27	0.253	13.1 mH
1600	1	31	0.126	52.3 mH
3200	1	36	0.050	220mH

Accessories Component Box -:

01.	Resistors	-40
02.	Capacitors	-04
03.	Transistors	-02
04.	Diodes	-02
05.	Mains lead	-01
06.	Magnetic Compass	-01
07.	Bar Magnet	-01
08.	Set of Coils	-06
09.	E, I, U Core	
10.	Multimeter	-01
11.	Screw Driver	-01
12.	Connection Patch Cords	-25

Other Apparatus Required:

* Cathode Ray Oscilloscope 20MHz.

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