

# Experiments List

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## List of experiments for XI standard

### Combined for complete syllabus

1. Half wave rectifier
2. Full wave rectifier
3. Bridge rectifier
4. Characteristics of PN junction diode
5. Characteristics of LEDs
6. Study of electromagnetic relay coil
7. Study of resistors
8. Combination of resistors (series and parallel)
9. Study of LEDs (series and parallel combination)
10. Study of diodes (series and parallel combination)

## List of experiments for XII standard

### Paper I experiments

1. Zener diode load regulation
2. Zener diode line regulation
3. LM317 load regulation
4. LM317 line regulation
5. Photo relay using LDR (measurement of voltages)
6. Photo relay using LDR (measurement of currents)
7. Inverting amplifier using opamp
8. Non-inverting amplifier using opamp
9. Inverting adder using opamp
10. Subtractor using opamp
11. Inverting integrator using opamp
12. Inverting differentiator using opamp
13. Buffer i.e. unity gain amplifier using opamp
14. Comparator (4-types) using opamp
15. Schmitt trigger using opamp

## List of experiments for XII standard

### Paper II experiments

1. Study of basic gates
2. Study of De Morgan's theorem
3. Study of Ex-OR gate using IC7486
4. Study of Ex-OR gate using basic gates
5. RS flip flop using NAND and NOR gates
6. RS flip flop using IC 7474
7. Study of Boolean equations using basic gates
8. Study of diode matrix ROM
9. Study of NAND as universal building block
10. Study of NOR as universal building block
11. Binary ladder using voltage values
12. Binary ladder using full scale deflection
13. Study of 4-bit binary adder using IC7483
14. Study of Multiplexer
15. Study of demultiplexer
16. Study of Encoder
17. Study of Decoder

If you are a teacher working in a Jr. College, then you may like to know more about our experimental kits for above experiments. Our experimental kits are very accurate and low cost. Please spare some time and know more about the kits, as given in the following pages...

# Lab Experimental Kits



## Accurate Readings Perfect Setup!

Our lab experimental kits are designed as per your requirement for **11<sup>th</sup> & 12<sup>th</sup> Bifocal Electronics, Electrical & Computer Science, MCVC Electronics & Electrical, Engineering & Polytechnic Experiments.**

## Handmade kits

Every kit is handmade kit. **Prof. Dattaraj Vidyasagar** personally designs each kit as per your requirement, build the necessary circuit and fully test it to give you best possible results.

## Accuracy & Reliability

Due to handmade designing and thorough testing, every kit is can give you up to 99% accuracy in readings. For that we suggest using good quality measuring instruments like voltmeter, ammeter and CRO.

This is because we test every kit with general purpose measuring instruments like *SANVA multimeter, Mastech DMM and simple Aplab or HP CRO*. Due to this testing procedure, we can guarantee to get accurate results even on your own general purpose ammeter, voltmeter & CRO.

## Kit Price

- **Rs.3000/- per kit**(if your order *more* than 10 different kits)
- **Rs.2900/- per kit**(if your order *less* than 10 different kits)
- **Rs.2800/- per kit** (if your order *less* than 5 different kits)
- *We do not ship the kits to your city.* You will have to pick up kits from **Vidyasagar Academy, Akola**. Because we also give full training (2-3 hours) to concerning teacher, about taking readings and using the kits.
- We also supply complete practical booklet with procedure, observation table, specifications of components, etc. which you can directly give to your students for doing practicals.

We design all types of experiment kits as per your lab & syllabus requirement  
Microcontroller board is our speciality

## Album of Kits



This is the basic kit of doing all types of experiments related to resistors. It can be used for series & parallel combination of resistors, complicated combinations, understanding effective resistance of circuits, current calculations, calculation of wattage (*power dissipation*) of resistors and many more.

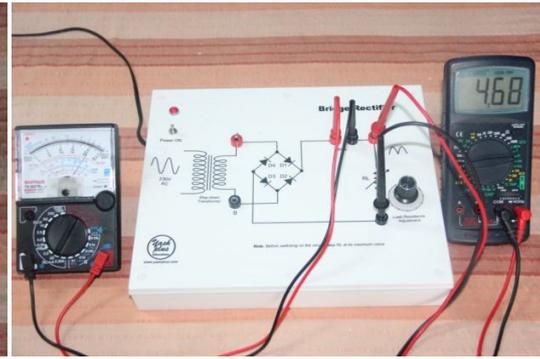
The kit has STAINLESS STEEL connecting terminals. So its contact resistance is practically zero. It is also free from corrosion and dust adhering, etc. This kit is supplied with

10 connecting chords (5 red & 5 black) with crocodile clips at both ends, as shown in the photograph.

*Every kit will have built-in regulated power supply. You have to connect the kit directly to 230V AC mains.*



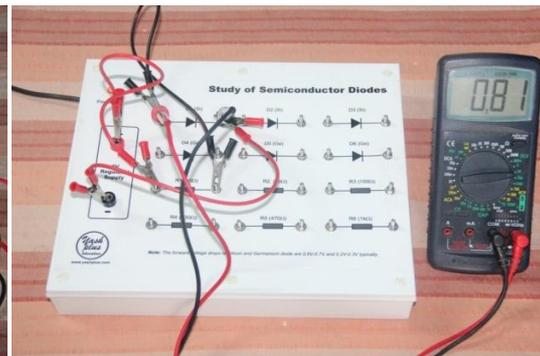
Full Wave rectifier with loading effect



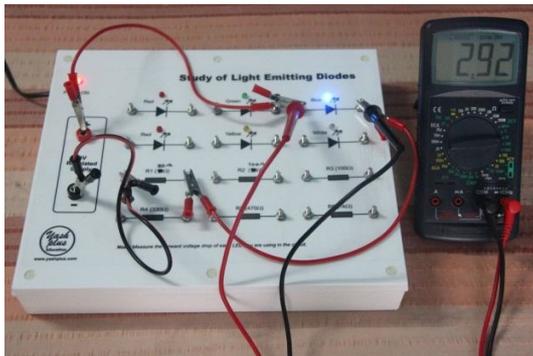
Bridge rectifier with loading effect



Study of electromagnetic switch



Study of semiconductor diodes (Si & Ge)



Study of LEDs (all types)



Characteristics of LEDs (Red & Green)

## Features of Our Kits

- Fully equipped with on-board apparatus (*excluding meters like DMM*)
- Well-tuned kits as per HSC Board/ MCVC pattern of practical experiments
- Each experiment kit is handmade and tested for ACCURATE READINGS
- Designed to understand its relevant theory given in practical booklet
- High quality spare parts are used inside each experimental board, like low heat & noise transformer, regulated precision power supply, stainless steel connectors, high efficiency semiconductors
- Low noise designing, electric shock proof HD Poly Vinyl Chloride body
- Less tolerance resistors used for accurate reading, fine and clean computerized circuit printed on each board for best vision. **You can also visit our website to place your order: [www.vsagar.org](http://www.vsagar.org)**

**How to buy?**

Contact us to place your order

[info@vsagar.org](mailto:info@vsagar.org)

Cell: 99-60-991-991