

## **DIGITAL SYSTEM**

### **1<sup>st</sup> PRACTICUM: USE PROTEUS 8**

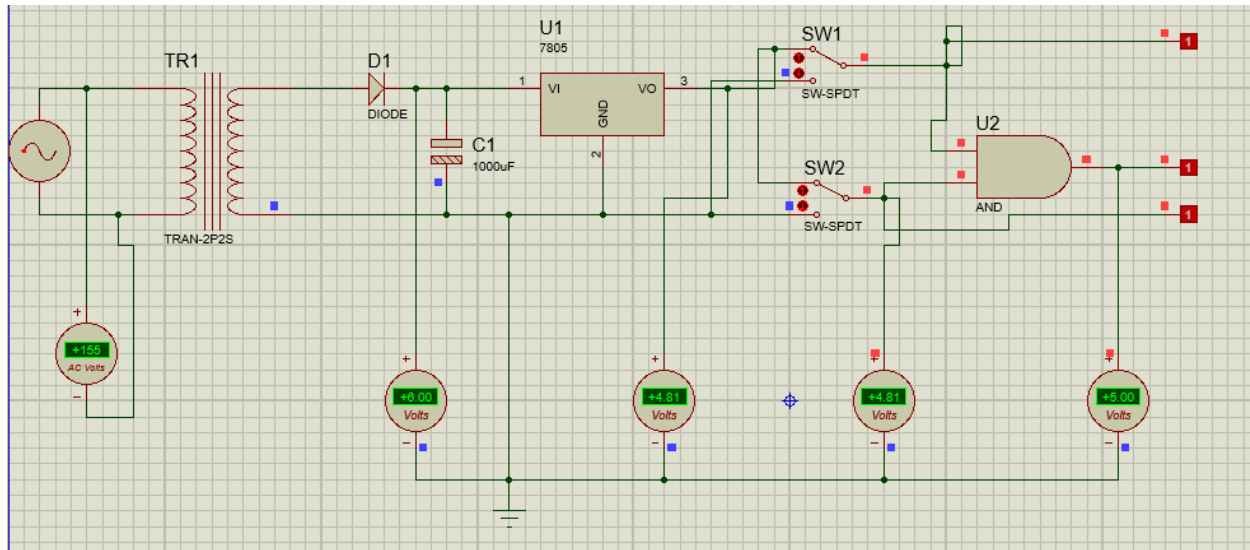


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**2018**

1. The circuit results that have been simulated by clicking "run the simulation".



2. Measurement

- a. Voltmeter AC : +155 Volt
- b. Voltmeter DC 1 : +6.00 Volt
- c. Voltmeter DC 2 : +4.81 Volt
- d. Voltmeter DC 3 : +4.81 Volt
- e. Voltmeter DC 4 : +5.00 Volt

3. a. Differences in AC and DC voltage

- AC : alternating current
- DC : direct current
- AC voltage is easier to produce than DC voltage.
- AC voltage can be easily changed and transmitted, but DC voltage is difficult to change; Therefore they are difficult to send.
- Active components such as inductors, capacitors, transistors, and ammeters respond to AC voltage in a different way from DC voltage.
- A capacitor will forward the AC voltage, but it will block the DC signal while the inductor will do the opposite.
- Clean area under voltage - the time curve of an AC signal is zero while not zero for a DC signal.

b. The voltage character of each voltmeter

- Voltage at AC Voltmeter : (AC). And have character : positive stable
- Voltage at DC 1 Voltmeter : (DC). And have character : positive unstable
- Voltage at DC 2 Voltmeter : (DC). And have character : positive unstable
- Voltage at DC 3 Voltmeter : (DC). And have character : positive unstable
- Voltage at DC 4 Voltmeter : (DC). And have character : positive unstable