EE201 - DEVELOPING YOUR EXPERIMENT SKILLS

- Before you start your experiment, make sure that the devices on your table (power supply, signal generator and oscilloscope) are operating properly. Inform your TA in case of any problem.
- Try to set up your circuits similar to the figures in your experiment sheets. This will help you (and your TA's) a lot in troubleshooting.
- Avoid using unnecessary short circuit cables in setting up your circuit. There might be broken cables and you might not notice this because of their covering. Moreover, use of unnecessary elements will make your circuit unnecessarily complex.
- Do not bend the legs of the simple circuit elements like resistors, capacitors and diodes close to their connection points. Their legs can easily be broken and this makes them useless.
- Do not bend the legs of the complex circuit elements like transistors and op-amps at all. Place them in your your breadboard as they are and make sure that no leg is short circuited with another (if this is not necessarily implied by the circuit topology).
- Make sure that you use the elements with correct values in your circuit. You can (and should) measure the resistances of your resistors with your avometer. Circuit elements are kept in boxes containing elements of specified values, however this does not guarantee (with probability one) that the element you have taken has that value. The values of commercially available resistors can be determined by learning the color code for resistors. Try to get familiar with this code as soon as possible. Still you are advised to check your resistors with your avometer as they can be burnt. On the other hand, you can directly read the values of capacitors. You can also find descriptive information on some special diodes.
- Do not connect any signal generator, power supply or oscilloscope probes before you make sure that your circuit is set up correctly. Check your circuit at least once, before you connect them.
- In case of any unexpected/unwanted situation, switch off your power supply and signal generator immediately and ask for the help of your TA.
- There might be several reasons for your unexpected observations:
  1. There is some problem with your power/signal sources (power supply, signal generator) or measurement devices (avometer, oscilloscope).
  2. The circuit is not set up correctly.
  3. You have used an element with wrong value or an element is burnt.
  4. The breadboard has some problem.

  So in case of any unexpected result, you should check your devices and circuits. If everything seems all right, you should check whether your breadboard has some problem or not, and ask your TA to change it if necessary.