**EXPERIMENT NO 01**

**TITLE:** Safety measures in electrical lab.

**THEORY:**

Electrical safety is very broad and diverse topic. Somehow someone of us may have experienced electrical shock. The cause of the reaction is current flowing through the body. Some general guidelines that can be used to reduce the risk of injury caused by laboratory hazards are as follows:

1. Avoid contacts with energized electrical circuits.
2. Disconnect power source before servicing or repairing electrical equipment.
3. When it is necessary to handle the equipment that is plugged in, be sure hands are dry & wear non-conductive gloves & shoes when possible.
4. If it is unsafe to do so, work with only one hand & keep other hand in pocket.
5. If water or chemical is spilled on equipment, shut off power at main switch.
6. If an individual comes in contact with a live electrical conductor, don't touch equipment, cord or person. Disconnect the power source from the circuit break or pull out the plug.
7. Don't make the circuit break changes or perform any wiring when wire is on.
8. Don't wear lose fitting clothes or jewellery in lab.
9. It is wise in electrical lab to wear pants rather than shorts or skirts, ties are also dangerous
10. Powered equipment can't be used caution when handling it after it has been operating.
11. Do your wiring, Setup a careful circuit checkout after applying power.
12. Use wires of appropriate length. Don’t allow them to drop over your equipment. Avoid splices which create live surfaces when running a pair of wires to adjacent terminals, twist the wire together so they don't dangle.
13. Do not touch anything if your hands are wet. The "one-hand" approach is safest.
14. If you can't keep your hand in pocket, do not touch any metal object with freehand.
15. Do not pull wires out until you're absolutely sure that the circuit is completely dead.
16. All the electrical equipments must be connected to proper earth line.
17. All high voltage equipments must be properly marked & danger signs displayed.
18. Don’t depend on switches to de energize a circuit. Pull the plug out of the socket.
19. If you are working on a high voltage circuits, have a co-worker who knows how to break to get you free & how to give you mouth to mouth resuscitation & closed chest heart massage.
20. When you're mentally or physically tired, avoid work on energized circuits.
21. High voltage connections must have no sharp circuits.
22. Permanent or temporary disclosures. around high voltage equipment should be used.
23. Report any damage to equipment hazards potential hazards to lab instructors.
24. No ungrounded electrical appliance is to be used in laboratory unless it is double insulated.
25. Keep as neat as possible. Keep work area clear of items that are not to be used in experiment.
26. When unplugging a power cord, pull on the plug.
27. By Ohio fire code, extension words must be connected to a power strip equipped with a fuse.

CONCLUSION: