BRAC UNIVERSITY
DEPT. OF COMPUTER SCIENCE AND ENGINEERING
COURSE NO.: CSE250
Circuits and Electronics Laboratory

Experiment No. 1

Name of the Experiment:

CONSTRUCTION & OPERATION OF SIMPLE ELECTRICAL CIRCUITS

OBJECTIVE:

The experiment is to acquaint the students with some simple circuits and to make them familiar with diagram reading, drawing and wiring with the help of different types of switches (SPST- Single pole single throw, SPDT- single pole double throw, DPST- Double pole single throw, DPDT- Double pole Double throw) that will be frequently encountered in different experiments.

INSTRUCTIONS:

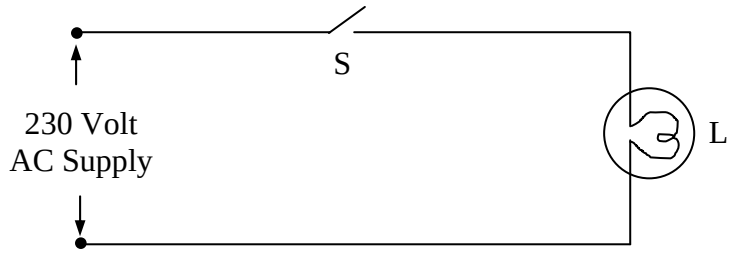
Read the following procedure carefully and draw the circuit diagrams accordingly in the space allotted for each procedure and then implement it practically. Your report must contain neat diagrams of the circuits.

APPARATUS:

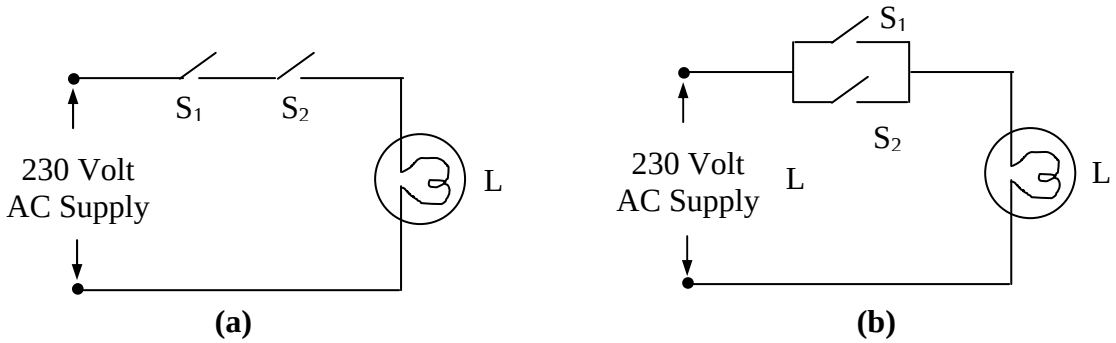
1) Two lamp boards (220v, 100w)
2) Two SPST, two SPDT and one DPDT switch.

PROCEDURE:

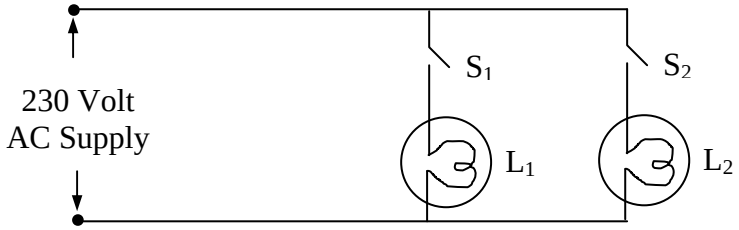
1. Connect an electric lamp so that it may be operated from a 220v ac supply using an SPST switch.



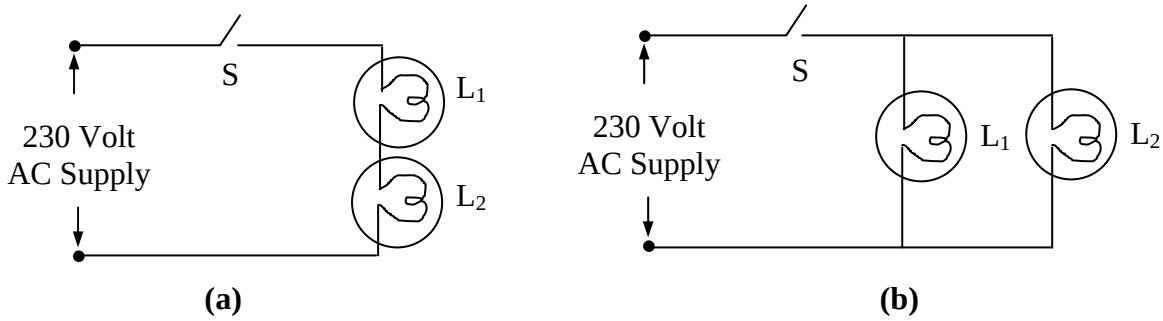
2. Connect a lamp so that it may be operated by either of two SPST switches.



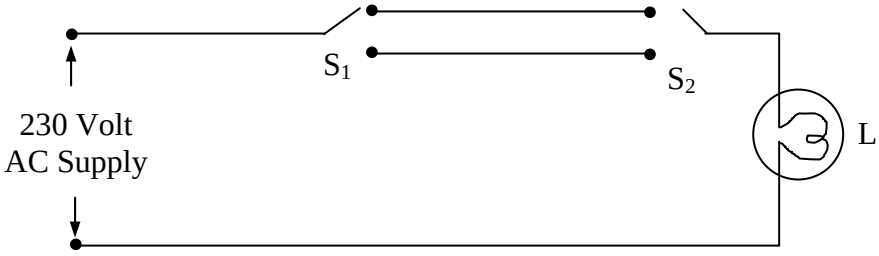
3. Connect two lamps so that either may be operated from a common source by its own switch.



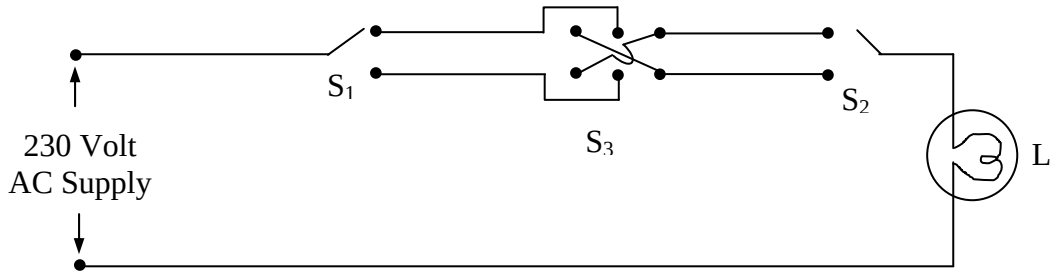
4. Connect two lamps so that both may be operated simultaneously from a common source by one SPST switch. Indicate the preferable one.



5. Connect a lamp so that it may be operated independently by either of two SPDT switches from a 220v source.



6. Connect a lamp using two SPDT and one DPDT switches to the power supply in such way so that the lamp may be turned ON/OFF by any of the three switches.



CAUTION:

1. **Don't switch on the supply until your teacher has checked the circuit.**
2. Take care of the reading of the apparatus.
3. Take care of any bare circuit element in energized condition.
4. Put on shoes with good insulation.

QUESTIONS:

1. What is an electrical circuit?
2. What is a short circuit?
3. Which method in procedure 4 is preferable? Why?
4. What is the disadvantage of the position of the switch in the following circuit?