Expt. No. 02

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STAIRCASE WIRING

Aim :

To develop and test the staircase wiring using protens.

APPARATUS REQUIRED :

Laptop with protens software.

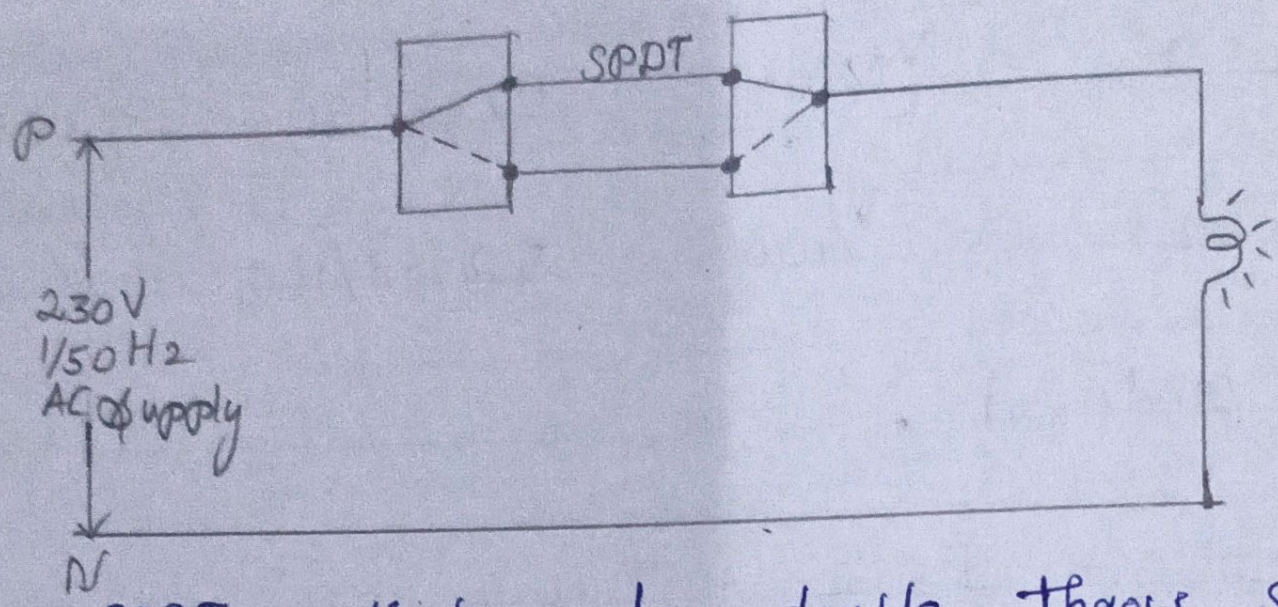
THEORY :

Staircase wiring is a common multiple way switching or two way switching connection. It involves wiring for one light with two switches. In this set up is controlled by two switches located at different position. It allows the user to operate the load from separate position above or below the staircase from inside or outside of room or two way led switch.

PROCEDURE :

Drag the required components from the proteus library.

CIRCUIT DIAGRAM :

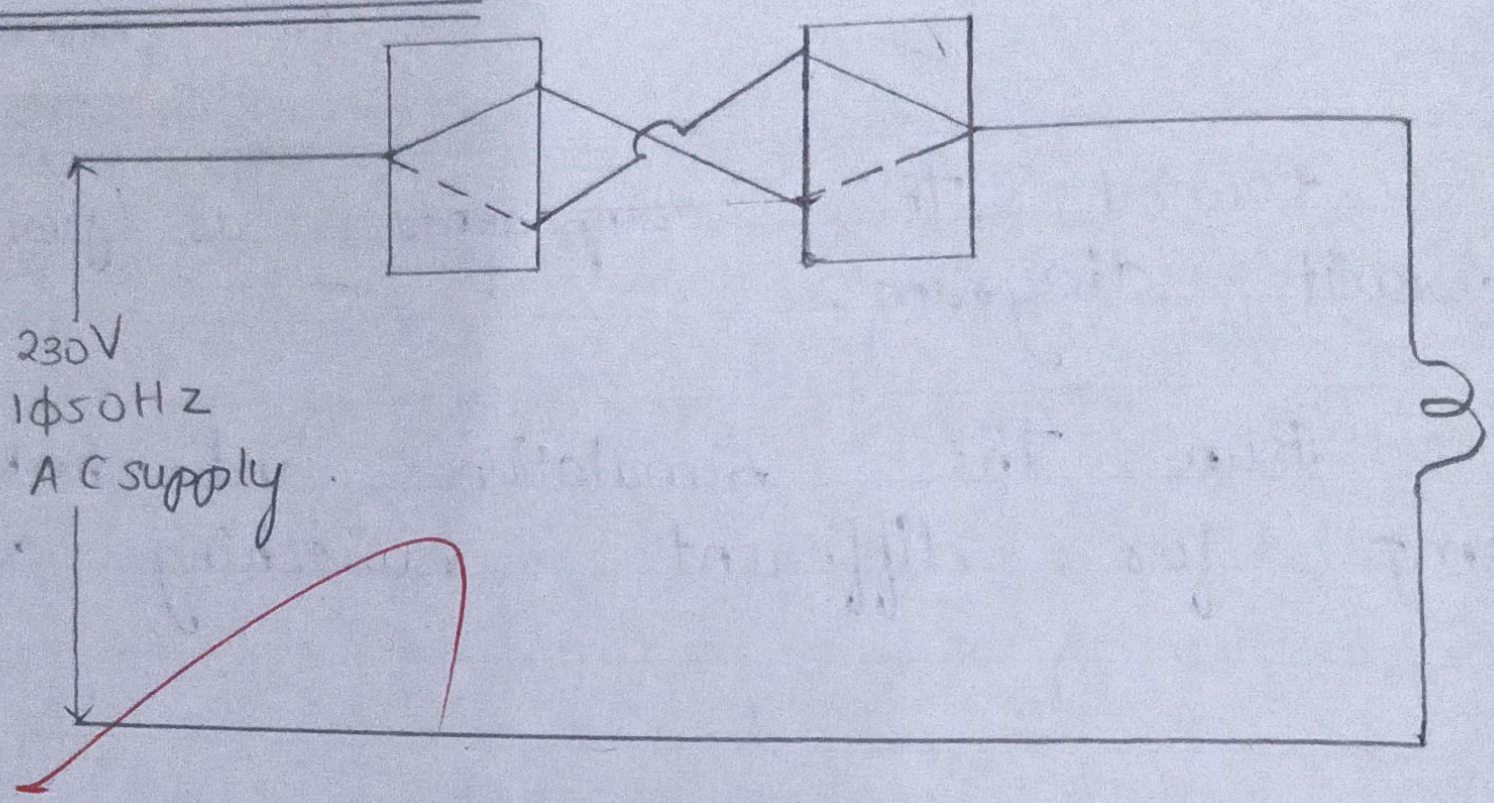


SPDT - Single pole double throws switch.

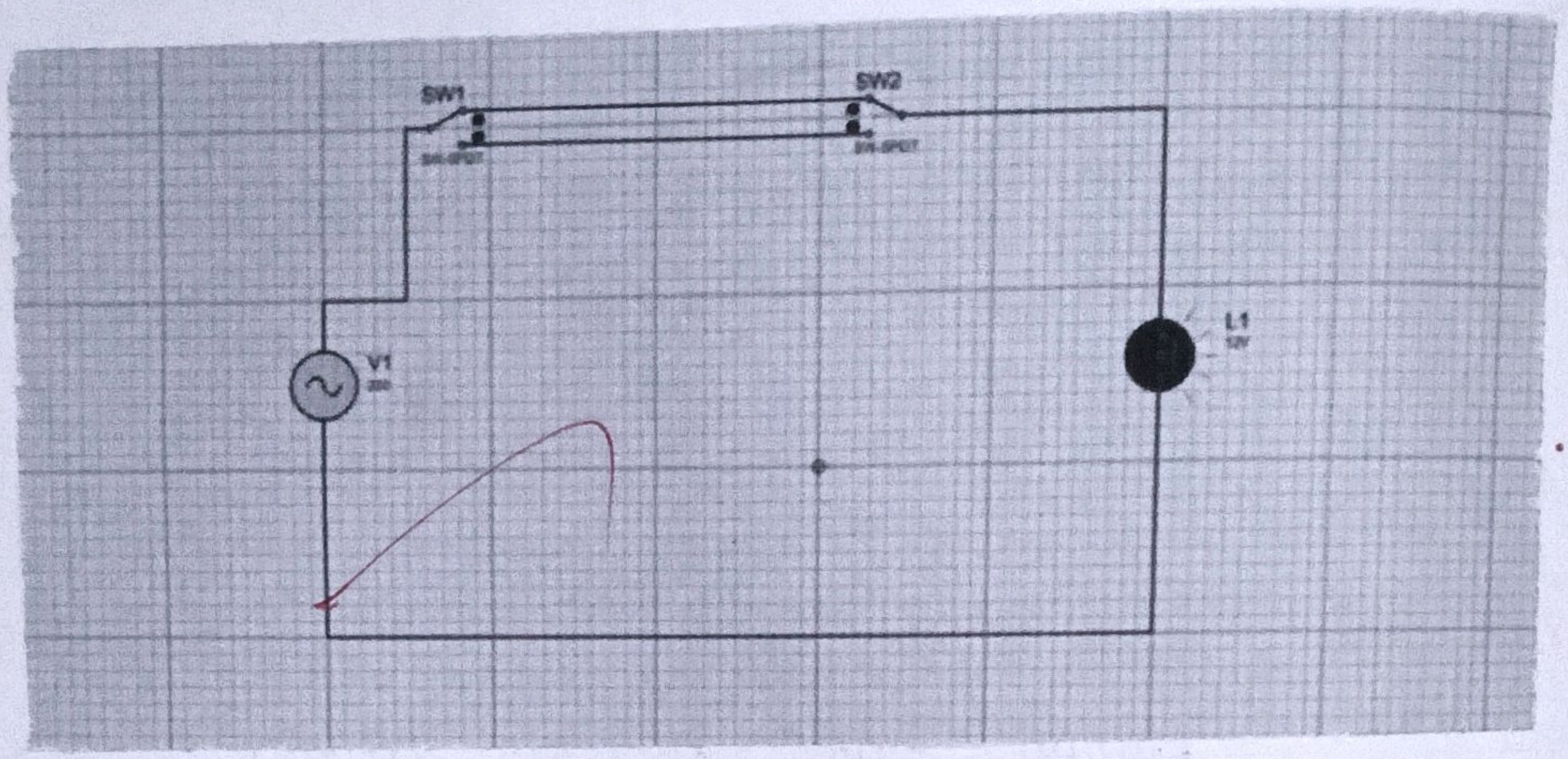
NODE	S_1	S_2	LAMP
1	ON	ON	ON
2	ON	OFF	OFF
3	OFF	ON	OFF
4	OFF	OFF	ON

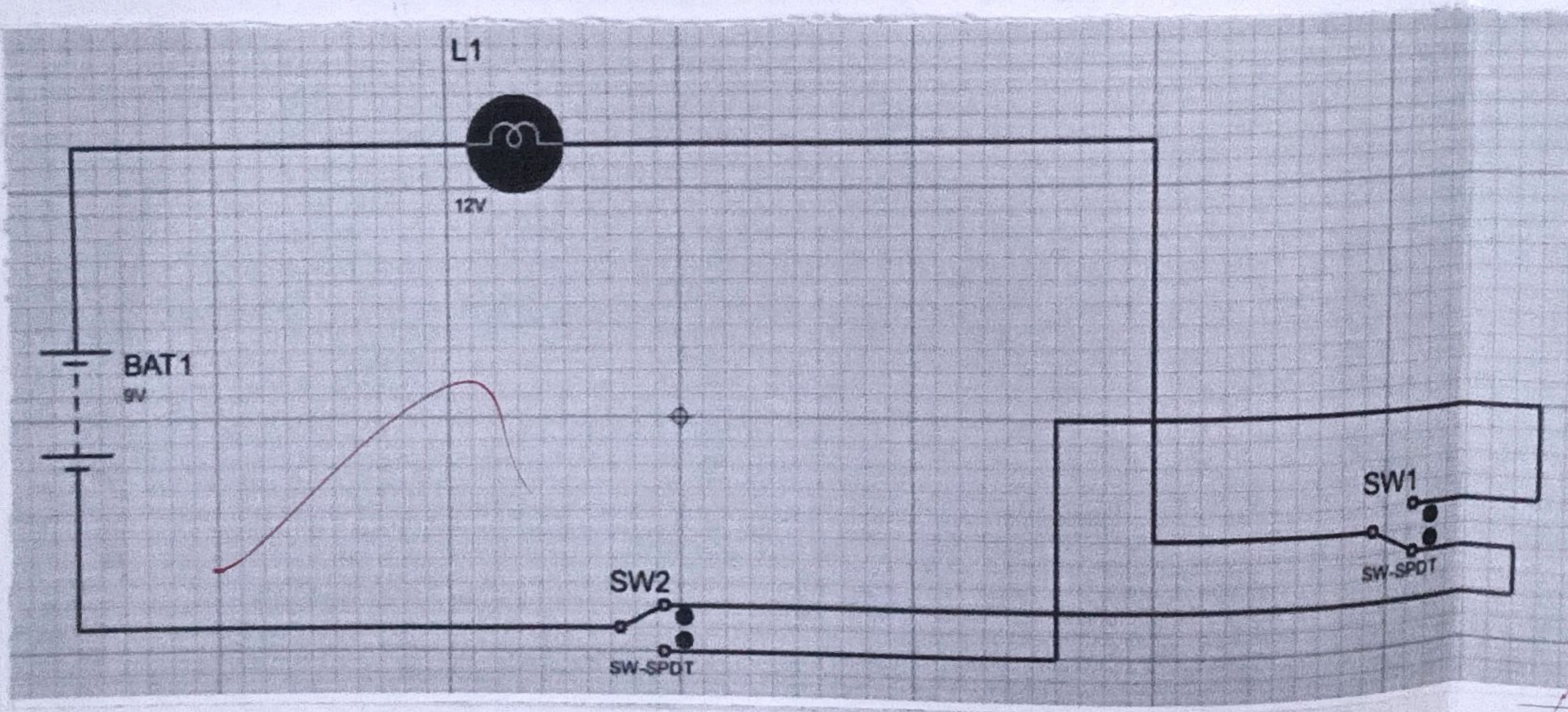
COMPONENTS	PROTEUS	SPECIFICATION
AC Supply	Vsine	Amplitude = 230V
Two-way switch	SPDT	Frequency = 50Hz
Lamp	Animated	230V

CROSS CONNECTION :



NODE	S_1	S_2	LAMP
1	ON	ON	OFF
2	ON	OFF	ON
3	OFF	ON	ON
4	OFF	OFF	OFF


SW1
SW2
V1
L1


L1
12V
BAT1
9V
SW2
SW-SPDT
SW1
SW-SPDT

Connect the components as per the circuit diagram.

Run the simulation and check the lamp for different switching conditions.

RESULT :

Thus the staircase wiring connections were developed and tested successfully.