

# EEE Digital Assignment

## Staircase Wiring

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Slot: L10+L11

Batch: 10(B-Tech Computer Science (Core))

# STAIRCASE WIRING

## AIM:

Verify the following conditions using staircase wiring with the following components

Condition 1

| Switch 1 | Switch 2 | lamp |
|----------|----------|------|
| 1        | 1        | ON   |
| 1        | 3        | OFF  |
| 3        | 1        | OFF  |
| 3        | 3        | ON   |

Condition 2

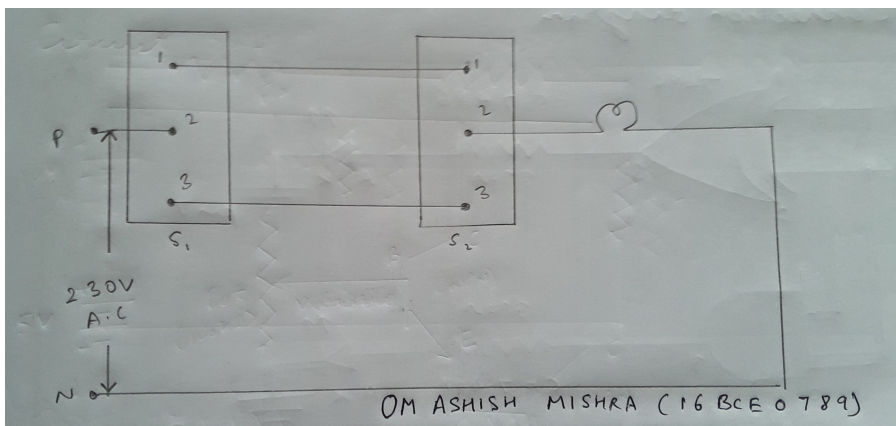
| Switch 1 | Switch 2 | lamp |
|----------|----------|------|
| 1        | 1        | OFF  |
| 1        | 3        | ON   |
| 3        | 1        | ON   |
| 3        | 3        | OFF  |

## APPARATUS REQUIRED:

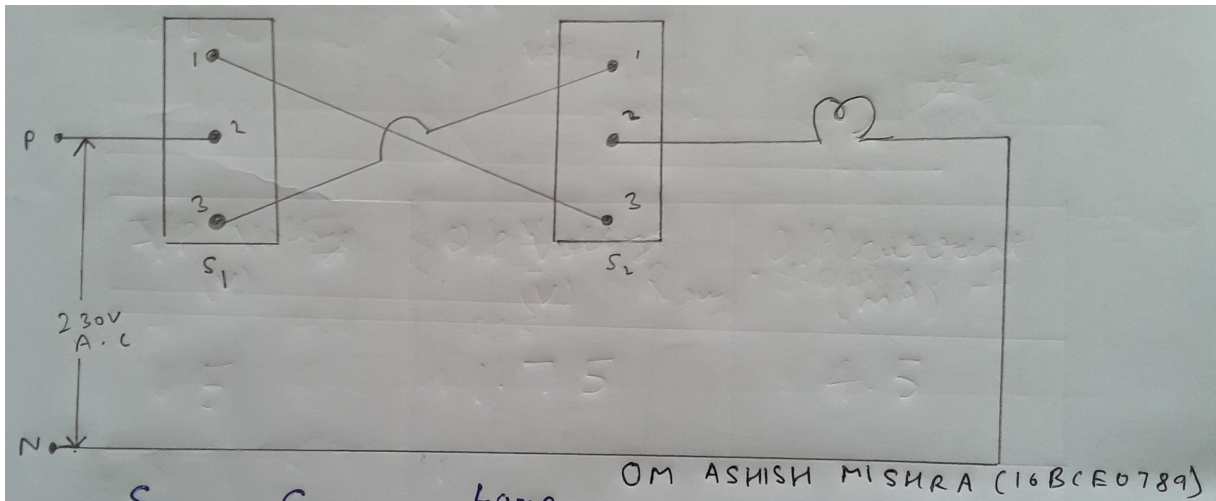
- Two way switches - 2
- lamp - 1
- Connecting wires

## Circuit Diagrams:

Condition 1:



Condition 2:



**Picture of Breadboard connection:**

Condition 1



Switch 1



Switch 2



Situation 1



Situation 2 & 3



Situation 4



Condition 2:



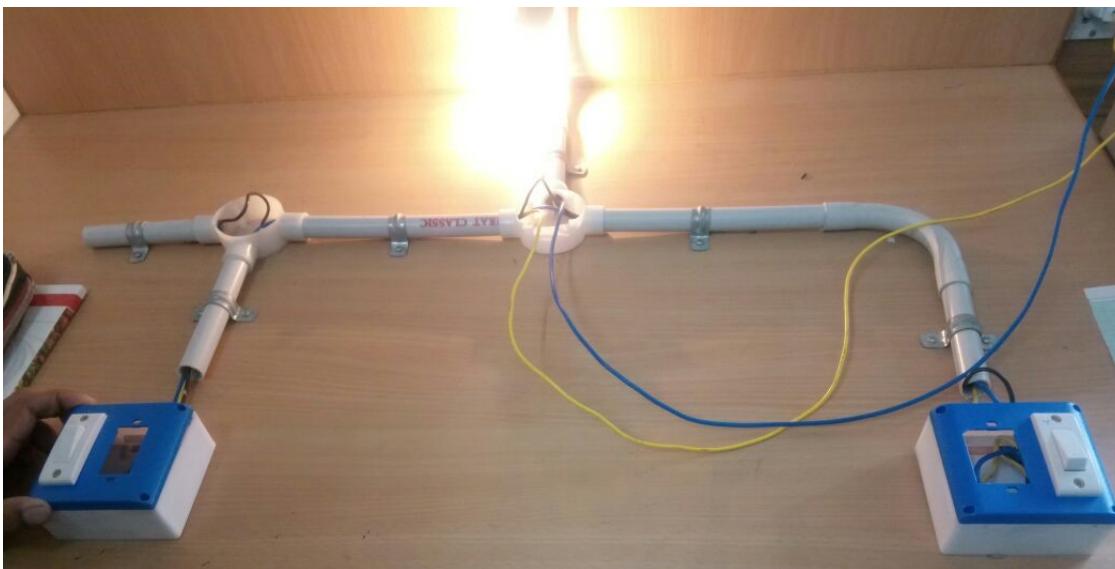
Switch 1



Switch 2



Situation 1



Situation 2 & 3



Situation 4

**Manual Calculation(s) / Rough Work:**

No Manual Calculation(s) / Rough Work is done for this experiment.

**Graph:**

No Graph has been done for this experiment.

**Tabulations:**

Condition 1

| Switch 1 | Switch 2 | lamp |
|----------|----------|------|
| 1        | 1        | ON   |
| 1        | 3        | OFF  |
| 3        | 1        | OFF  |
| 3        | 3        | ON   |

Condition 2

| Switch 1 | Switch 2 | lamp |
|----------|----------|------|
| 1        | 1        | OFF  |
| 1        | 3        | ON   |
| 3        | 1        | ON   |
| 3        | 3        | OFF  |



**Inference / Result:**

From this experiment we learn to find the output by using a 2 way keys and simultaneously learnt how to use staircase lights and how beneficial is this experiment in our day-to-day life.