

**LAB: BUILDING CIRCUITS**SERIES CIRCUITS**Part 1**

a) Draw a circuit diagram with 1 lamp and 1 battery with 2 cells. *****USE A RULER*****
(2 marks, App)

b) Build it. Observe the brightness of the lamp. Describe your observations below.
(1 mark, Com)

Part 2

a) Draw a circuit diagram with 2 lamps in series and 1 battery with 2 cells.
*****USE A RULER*****
(3 marks, App)

b) Build it. DESCRIBE the brightness of the lamps compared to part 1.
(1 mark, Com)

Part 3

a) Draw a circuit diagram with 3 lamps in series and 1 battery with 2 cells.
*****USE A RULER*****
(4 marks, App)

b) Build it. DESCRIBE the brightness of the lamps compared to parts 1 and 2.
(1 mark, Com)

c) What happens when **one lightbulb** is unscrewed? Do the results change if a different bulb is unscrewed?

(2 marks, App)

d) What happens to electrical energy as it goes through multiple loads in a series circuit?

(1 mark, App)

PARALLEL CIRCUITS

Part 1

a) Draw a circuit diagram with 2 lamps connected in parallel and 1 battery with 2 cells.

*****USE A RULER*****

(3 marks, App)

b) Build it. Observe the brightness of the lamp. Describe your observations below.

(1 mark, Com)

Part 2

a) Draw a circuit diagram with 3 lamps connected in parallel and 1 battery with 2 cells.

*****USE A RULER*****

(4 marks, App)

b) Build it. Observe the brightness of the lamps. Describe your observations below.

(1 mark, Com)

c) What happens when **one lightbulb** is unscrewed? Do the results change if a different bulb is unscrewed? WHY?

(3 marks, App)

d) What happens to electrical energy as it goes through multiple loads in a parallel circuit?

(1 mark, App)