11 Diagram 1 shows a light-emitting diode (LED) and a resistor in series with a cell and an ammeter.

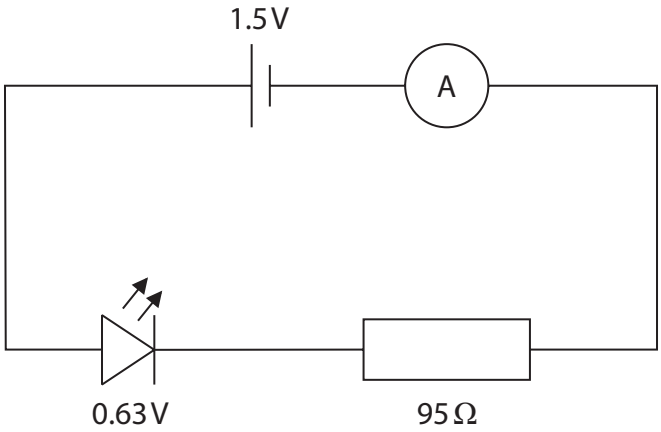

Diagram 1

(a) The voltage across the LED is 0.63 V.

Calculate the current in the circuit.

Give your answer in milliamps.

(4)

current = ... mA

(b) Diagram 2 shows a second LED and an extra resistor connected in parallel with the cell.

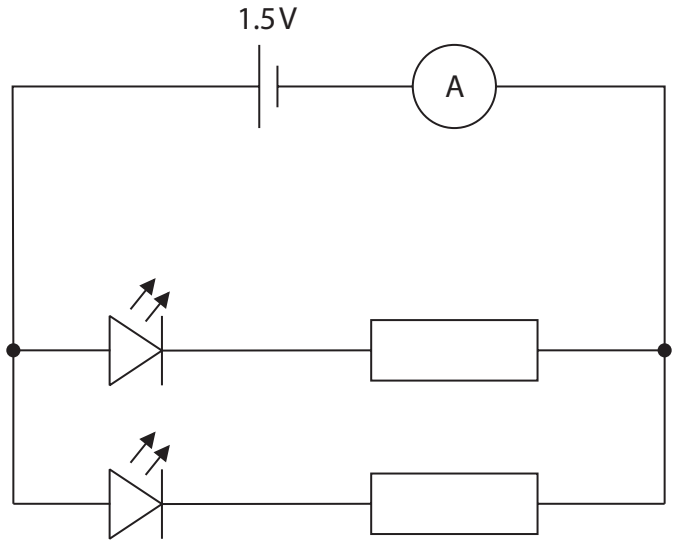

Diagram 2

The resistor and the LED are the same as the components used in diagram 1.
The two resistors are identical and the two LEDs are identical.

Explain how the ammeter reading will change.

(4)

(Total for Question 11 = 8 marks)