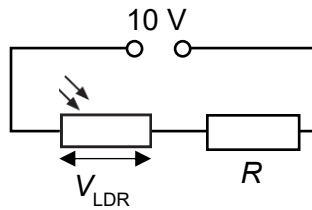


**23** A light-dependent resistor (LDR) is connected in series with a fixed resistor of resistance  $R$  and a 10 V power supply shown below. At a particular light intensity, the resistance of the LDR is  $5.3\ \Omega$  and the potential difference  $V_{LDR}$  across it is 4.5 V.



What is  $V_{LDR}$  if the light intensity is increased such that the resistance of the LDR is  $3.1\ \Omega$ ?

- A** 1.5 V
- B** 2.6 V
- C** 3.2 V
- D** 3.5 V