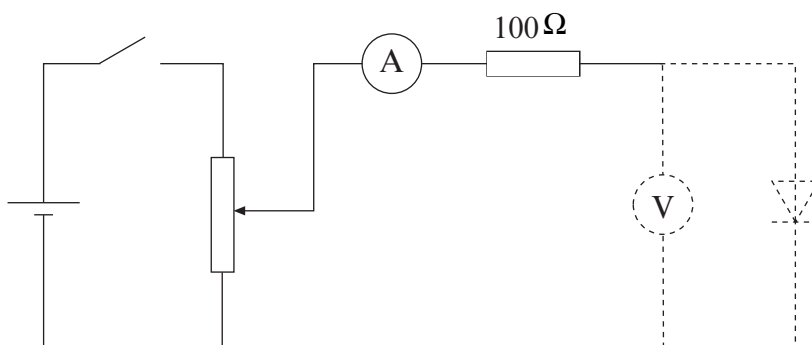


**Task A3: Current - Potential difference characteristic for a diode (15 minutes).**

In this task you will investigate the relationship between current,  $I$ , and potential difference,  $V$ , for a semiconductor diode.

**Repeat readings are not required for this task.**

- (a) Complete the diagram of the electrical circuit that has been set up for you. [2]



*Correct symbol and correct polarity of the diode (1)*

*Voltmeter connected across diode (1)*

- (b) Complete the following table by varying the d.c. supply to the values of current given in the table. Record the appropriate value of potential difference across the diode in the table. [1]

Current (mA)	Potential Difference (V)
30.0	
20.0	
15.0	
10.0	
5.0	
2.0	
0.5	

*pd values correct (to resolution of the meter)  
[no penalty if other similar values of current substituted]*