

Charge and current

Specification reference	Checklist questions	
4.1.1 a	Can you define electric current as rate of flow of charge?	<input type="checkbox"/>
4.1.1 b	Can you describe the coulomb as the unit of charge?	<input type="checkbox"/>
4.1.1 c	Can you recall the elementary charge e equals $1.6 \times 10^{-19} \text{ C}$?	<input type="checkbox"/>
4.1.1 d	Can you explain why the net charge on a particle or an object is quantised and a multiple of e ?	<input type="checkbox"/>
4.1.1 e	Can you explain current as the movement of electrons in metals and movement of ions in electrolytes?	<input type="checkbox"/>
4.1.1 f	Can you describe the difference between conventional current and electron flow?	<input type="checkbox"/>
4.1.1 g	Can you recall and apply Kirchhoff's first law?	<input type="checkbox"/>
4.1.2 a	Can you describe what is meant by mean drift velocity of charge carriers?	<input type="checkbox"/>
4.1.2 b	Can you carry out calculations using $I = A n e v$, where n is the number density of charge carriers?	<input type="checkbox"/>
4.1.2 c	Can you explain the distinction between conductors, semiconductors, and insulators in terms of n ?	<input type="checkbox"/>