

Electrical Quantities MCQ QP1

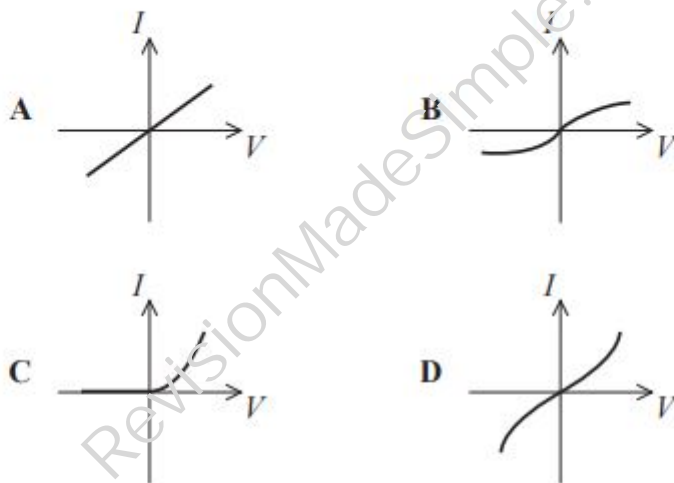
- 1 Which of the following equations does **not** include any SI base quantities?
- A $P = W \div t$
 - B $Q = I \times t$
 - C $R = V \div I$
 - D $W = Q \times V$
- 2 Which of the following shows a derived unit expressed in terms of SI base units?
- A coulomb = ampere \times second
 - B ohm = volt \div ampere
 - C volt = joule \div coulomb
 - D watt = joule \div second
- 3 A circuit contains a battery of four cells in series. Each cell has e.m.f. 1.5 V. A charge of 3.0 C passes through the battery. What is the energy transferred?
- A 0.5 J
 - B 2.0 J
 - C 4.5 J
 - D 18 J
- 4 Which of the following is equivalent to a single SI base unit?
- A coulomb per second
 - B joule per coulomb
 - C joule per second
 - D metre per second

- 5 The current in a wire is I and the drift velocity of the electrons in the wire is v . The wire is replaced with another of the same metal but half the diameter.

If the current in the new wire is the same, the drift velocity is

- A $\frac{v}{4}$
- B $\frac{v}{2}$
- C $2v$
- D $4v$

- 6 Which of the following current-potential difference (I - V) graphs shows the correct behaviour for a negative temperature coefficient thermistor?



- A
- B
- C
- D

- 7 A potential difference of 6 V is applied to a component to provide a current of 3 A for 2 minutes.

In this time the charge flowing through the component is

- A 6 C
- B 36 C
- C 360 C
- D 2160 C