



Oxford Cambridge and RSA

GCSE (9–1) Combined Science A (Gateway Science) Physics J250

Data Sheet (Insert)

Year 10 Tests

INSTRUCTIONS

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INFORMATION

- The information in this Data Sheet is for the use of candidates following GCSE (9–1) Combined Science A (Physics) (J250 05/11).
- This document consists of **2** pages.

Equations in physics

$$(\text{final velocity})^2 - (\text{initial velocity})^2 = 2 \times \text{acceleration} \times \text{distance}$$

$$\text{change in thermal energy} = \text{mass} \times \text{specific heat capacity} \times \text{change in temperature}$$

$$\text{thermal energy for a change of state} = \text{mass} \times \text{specific latent heat}$$

$$\text{energy transferred in stretching} = 0.5 \times \text{spring constant} \times (\text{extension})^2$$

$$\begin{aligned} &\text{potential difference across primary coil} \times \text{current in primary coil} = \\ &\text{potential difference across secondary coil} \times \text{current in secondary coil} \end{aligned}$$

Higher tier only –

$$\text{force on a conductor (at right angles to a magnetic field) carrying a current} = \text{magnetic flux density} \times \text{current} \times \text{length}$$

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