

**OXFORD CAMBRIDGE AND RSA EXAMINATIONS
GCSE (9–1)
J250 05/06/11/12
COMBINED SCIENCE A
(GATEWAY SCIENCE) PHYSICS
DATA SHEET (INSERT)
JUNE 2018
MODIFIED ENLARGED 36pt**

READ INSTRUCTIONS OVERLEAF



INSTRUCTIONS

Do not send this Data Sheet for marking; it should be retained in the centre or destroyed.

INFORMATION

The information in this Data Sheet is for the use of candidates following GCSE (9–1) Combined Science A (Physics) (J250 05/06/11/12).

Equations in physics

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

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

$$\begin{aligned} &\text{thermal energy for a change in state} \\ &= \text{mass} \times \text{specific latent heat} \end{aligned}$$

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

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

HIGHER TIER ONLY

$$\begin{aligned} &\text{force on a conductor (at right angles} \\ &\text{to a magnetic field) carrying a current} \\ &= \text{magnetic field strength} \times \text{current} \times \text{length} \end{aligned}$$

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