Oxford Cambridge and RSA

November 2020

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

J249 01/02/03/04

Data Sheet (Insert)

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INSTRUCTIONS

- Do **not** send this Data Sheet for marking. Keep it in the centre or recycle it.

INFORMATION

- This document has **2** pages.

Equations in physics

change in thermal energy = mass × specific heat capacity × change in temperature

thermal energy for a change in state = mass × specific latent heat

for gases: pressure × volume = constant
(for a given mass of gas and at a constant temperature)

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

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

potential difference across primary coil × current in primary coil =
potential difference across secondary coil × current in secondary coil

Higher tier only –

pressure due to a column of liquid = height of column × density of liquid × g

force on a conductor (at right angles to a magnetic field) carrying a current = magnetic flux density × current × length

potential difference across primary coil ÷ potential difference across secondary coil = number of turns in primary coil ÷ number of turns in secondary coil