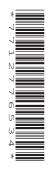


# GCSE (9–1) Physics B (Twenty First Century Science) J259 01/02/03/04

Data Sheet (Insert)



## June 2019

### 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) Physics B (J259 01/02/03/04).
- This document consists of **2** pages.

### **Equations in physics**

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

energy to cause a change in state = mass × specific latent heat

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

 $(final speed)^2 - (initial speed)^2 = 2 \times acceleration \times distance$ 

energy stored in a stretched spring =  $\frac{1}{2} \times \text{spring constant} \times (\text{extension})^2$ 

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 = magnetic flux density × current × length of conductor

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

change in momentum = resultant force × time for which it acts



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