Paper Reference(s)   4PH1 / 2P
Pearson Edexcel International GCSE (9–1)

Physics
UNIT: 4PH1
PAPER: 2P

Formulae Booklet

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You may find the following formulae useful.

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energy transferred =
current × voltage × time

$E = I \times V \times t$

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frequency $= \dfrac{1}{\text{time period}}$

$f = \dfrac{1}{T}$

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power $= \dfrac{\text{work done}}{\text{time taken}}$

$P = \dfrac{W}{t}$

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power $= \dfrac{\text{energy transferred}}{\text{time taken}}$

$P = \dfrac{W}{t}$

Turn over

orbital speed = $\dfrac{2\pi \times \text{orbital radius}}{\text{time period}}$

$v = \dfrac{2 \times \pi \times r}{T}$

(final speed)^2 = (initial speed)^2 +
(2 × acceleration × distance moved)

$v^2 = u^2 + (2 \times a \times s)$

pressure × volume = constant

$p_1 \times V_1 = p_2 \times V_2$

$\dfrac{\text{pressure}}{\text{temperature}}$ = constant

$\dfrac{p_1}{T_1} = \dfrac{p_2}{T_2}$

Turn over

$$\text{force} = \frac{\text{change in momentum}}{\text{time taken}}$$

$$F = \frac{(mv - mu)}{t}$$

$$\frac{\text{change of wavelength}}{\text{wavelength}} = \frac{\text{velocity of a galaxy}}{\text{speed of light}}$$

$$\frac{\lambda - \lambda_0}{\lambda_0} = \frac{\Delta\lambda}{\lambda_0} = \frac{v}{c}$$

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

$$\Delta Q = m \times c \times \Delta T$$

Where necessary, assume the acceleration of free fall, $g = 10 \text{ m/s}^2$.