



PHYSICS EQUATIONS To Remember!

Topic 1 – Forces and motion

Speed = $\frac{\text{distance}}{\text{time}}$

Acceleration = $\frac{\text{change in speed}}{\text{time}}$

Force = $\frac{\text{mass}}{\text{acceleration}}$

mass = $\frac{\text{weight}}{\text{gravity}}$

Moment = Force x distance from pivot

Topic 2 – Electricity

Current = $\frac{\text{Power}}{\text{Voltage}}$

Resistance = $\frac{\text{Voltage}}{\text{Current}}$

Charge = Current x time

Topic 3 – Waves

wave speed = freq x wave length

Refractive index = $\frac{\text{angle of incidence}}{\text{angle of refraction}}$

$n = \frac{\sin i}{\sin r}$

Critical angle = $\frac{1}{\text{refractive index}}$

Topic 4 – Energy Transfer

Efficiency = $\frac{\text{useful energy output}}{\text{useful energy input}}$

Work done = Force x Distance moved

Gravitational potential energy
GPE = m x g x h
Mass x gravitational field strength x height

KE = $\frac{1}{2} \times m \times v^2$

Kinetic Energy = $\frac{1}{2} \times \text{mass} \times \text{speed}^2$

Topic 5 – Solids, Liquids, Gas

Density = $\frac{\text{mass}}{\text{volume}}$

Pressure = $\frac{\text{Force}}{\text{Area}}$

$P = h \times \rho \times g$

Pressure difference = height x density x gravitational field strength

*Equations given in exam not listed