Physics Formulae II

Quantity	Formulae
Wave Number (K)	$K = \dfrac{\omega}{v}$
	$K = \dfrac{2\pi}{\lambda}$
Period(T)	$T = \dfrac{1}{f}$
Frequency(F)	$f = \dfrac{1}{T}$
Wave Speed(v)	$v = f\lambda$
Progressive Wave Equation	$Y = A\sin(\boldsymbol{\theta} \pm \varnothing\;)$
	$y = A\sin\dfrac{2\pi}{\lambda}(vt \pm x)$
	$y = A\sin\left(\dfrac{2\pi x}{\lambda}\right) \pm \omega t$
Speed of Sound	$V = \dfrac{2d}{t}$
	$\dfrac{V1}{\sqrt{T1}} = \dfrac{V2}{\sqrt{T2}}$
	v = speed
	T = Temprature in kelvin
Depth of the sea	$d = \dfrac{vt}{2}$
Intensity	$I = \dfrac{P}{A}$
	P = power
	A = area
Closed Pipe	$F_0 = \dfrac{V}{4L}$
	$F1 = 3F_0 \quad F2 = 5F_0 \quad F3 = 7F_0$
Open pipe	$F_0 = \dfrac{V}{2L}$
	$F1 = 2F_0 \quad F2 = 3F_0 \quad F3 = 4F_0$
A string	$F_0 = \dfrac{V}{2L}$
	$F1 = 2F_0 \quad F2 = 3F_0 \quad F3 = 4F_0$
Fundamental Frequency(f_0)	$F_0 = \dfrac{1}{2L}\sqrt{\dfrac{T}{\mu}}$

Magnification

$$m = \frac{image\,height}{object\,height}$$

$$m = \frac{v}{u}$$

u = object diistance
v = image distance

Suvat

$$v = u + at$$

$$s = \frac{u+v}{2} x t$$

$$s = ut + \frac{1}{2}at^2$$

$$s = vt - \frac{1}{2}at^2$$

$$v^2 = u^2 + 2as$$

Simple Harmonic Motion

$$\omega = \frac{\theta}{t}$$

$$v = \omega r \quad or \quad v = \omega A$$

$$\omega = 2\pi f$$

$$T = \frac{2\pi}{\omega}$$

$$a = \omega^2 r \quad or \quad a = \omega^2 a$$

$$a = \alpha r$$

$$\alpha = -\omega^2 A$$

$$360^0 = 2\pi \text{ rad}$$

ω = angular velocity
r = radius
A = amplitude
α = angular acceleration
T = period
t = time
θ =angle turned by body

"I am proud of myself"

-Awwal