Formulae For Physics III

Quantity	Formulae
Temprature	$^0C = \frac{5(^0F-32)}{9}$
	$^0F = 1.8^0C + 32$
	$K = 273 + ^0C$
Boyles Law	$P_1V_1 = P_2V_2$
Charles Law	$\frac{V_1}{T_1}=\frac{V_2}{T_2}$
General Law	$\frac{P_1V_1}{T_1}=\frac{P_2V_2}{T_2}$
Mirror formula	$f=\frac{uv}{u+v}$
	OR
	$\frac{1}{f}=\frac{1}{v}+\frac{1}{u}$
	f = focal length
	v = image distance
	u = object distance
	convex lens and concave mirror has a positive focal length
	concave lens and convex mirror has a negative focal length
Energy Quantization	$E = hf$
	$E = \frac{hc}{\lambda}$
	$\blacktriangle E = E_n - E_0$
	$E_{k(max)}=hf - w_0$
	$w_0 = hf_0$
	$V_s = \frac{hf-w_0}{q}$
	$V_a=\frac{hf}{q}$
	$E = w_0+E_{k(max)}$
	$eV_s = E_k$
	E = Photon energy
	h = planck's constant = 6.63 x 10^{-34}Js
	f = frequency

c = speed of light = $3.0 \times 10^8 m/s$

λ = wave length

$\blacktriangle E$ = Energy Change

E_n = Energy in excited state, n = 1,2,3,4,…..

E_0 =Energy in ground state

E_k = Kinetic Energy of electron

w_0 = work function

$q = e$ = electronic charge = $1.6 \times 10^{-19} C$

V_s = stopping potential

V_a= accelerating potential

De Brogilie Hypothesis

$$\lambda = \frac{h}{mv}$$

where $\rho = mv$

$$\lambda = \frac{h}{\rho}$$

h = planck's constant = $6.63 \times 10^{-34} Js$

ρ = momentum($kgms^{-1}$)

"Don't let anyone ever dull your sparkle"

-Awwal