Some equations and formulae that might or might not be useful:

$\Delta E = h\nu$; $\nu = \frac{c}{\lambda}$; $\lambda = \frac{h}{p}$

$h = 6.62 \times 10^{-34}$ J s; $\hbar = h/(2\pi)$
$c = 3 \times 10^{8}$ m/s; $k_B = 1.38 \times 10^{-23}$ J K^{-1}

$\hat{p}_x = -i\hbar \frac{\partial}{\partial x}$; $E_{kinet} = \frac{p^2}{2m}$

$\Delta p_x \cdot \Delta x \geq \frac{\hbar}{2}$;

$E = \frac{\hbar^2 k^2}{2m}$; $\Psi_+(x) = Ae^{ikx}$; $\Psi_-(x) = Ae^{-ikx}$

$m_e = 9.1 \times 10^{-31}$ kg

$E_n = \frac{h^2 n^2}{8ma^2}$; $\Psi_n(x) = \sqrt{\frac{2}{a}} \sin\left(\frac{\pi n}{a} x\right)$

$m_p = 1.67 \times 10^{-27}$ kg; 1 amu = 1.66×10^{-27} kg

$E_n = \left(n + \frac{1}{2}\right)h\nu$; $\Psi_n(x) = A_n H_n\left(\sqrt{\alpha}x\right) e^{-\alpha x^2/2}$;
$\nu = \frac{1}{2\pi}\sqrt{\frac{k}{\mu}}$; $\alpha = \sqrt{k\mu}/\hbar$;

$H_0(\xi) = 1$; $H_1(\xi) = 2\xi$; $H_2(\xi) = 4\xi^2 - 2$;
$H_3(\xi) = 8\xi^3 - 12\xi$; here $\xi = \sqrt{\alpha}x$
$A_n = \frac{1}{\sqrt{2^n n!}}\left(\frac{\alpha}{\pi}\right)^{1/4}$;

$E_{m_l} = \frac{\hbar^2}{2I} m_l^{\,2}$; $\Psi_{m_l}(\phi) = \frac{1}{\sqrt{2\pi}} e^{im_l\phi}$;

$\hat{l}_z = -i\hbar \frac{\partial}{\partial \phi}$; $l_z = m_l \hbar$; $I = \mu r^2$;

$E_l = \frac{l(l+1)\hbar^2}{2I}$; $\Psi_{l,m_l} = Y_{l,m_l}(\theta,\phi)$; $\left|\vec{l}\right|^2 = l(l+1)\hbar^2$;
$l_z = m_l \hbar$

$Y_{0,0}(\theta,\phi) = 1/\sqrt{4\pi}$; $Y_{1,0}(\theta,\phi) = (3/4\pi)^{1/2}\cos\theta$;
$Y_{1,\pm1}(\theta,\phi) = \mp(3/8\pi)^{1/2}\sin\theta\, e^{\pm i\phi}$;
$Y_{2,0}(\theta,\phi) = (5/16\pi)^{1/2}(3\cos^2\theta - 1)$;
$Y_{2,\pm1}(\theta,\phi) = \mp(15/8\pi)^{1/2}\cos\theta\sin\theta\, e^{\pm i\phi}$;
$Y_{2,\pm2}(\theta,\phi) = (15/32\pi)^{1/2}\sin^2\theta\, e^{\pm 2i\phi}$

$e^{i\alpha} = \cos\alpha + i\sin\alpha$;
$\cos\alpha = (e^{i\alpha} + e^{-i\alpha})/2$; $\sin\alpha = (e^{i\alpha} - e^{-i\alpha})/2i$

$\sin 2\alpha = 2\sin\alpha\cos\alpha$;
$\cos 2\alpha = \cos^2\alpha - \sin^2\alpha$;
$2\sin^2\alpha = 1 - \cos 2\alpha$; $2\cos^2\alpha = 1 + \cos 2\alpha$

$\int_0^\infty e^{-ax^2} x^{2n}\, dx = \sqrt{\frac{\pi}{a}}\,\frac{1\cdot 3\cdot 5\cdot \ldots \cdot (2n-1)}{2^{n+1}a^n}$; (for $n \geq 0$)

$\int_0^\infty e^{-ax^2} dx = \frac{1}{2}\sqrt{\frac{\pi}{a}}$; $\int_0^\infty e^{-ax^2} x^2\, dx = \frac{1}{4a}\sqrt{\frac{\pi}{a}}$

$\int_0^a \sin^2\left(\frac{\pi n}{a}x\right)dx = \frac{a}{2}$; $\int_0^\infty x^n e^{-ax} dx = \frac{n!}{a^{n+1}}$;

I might add more equations