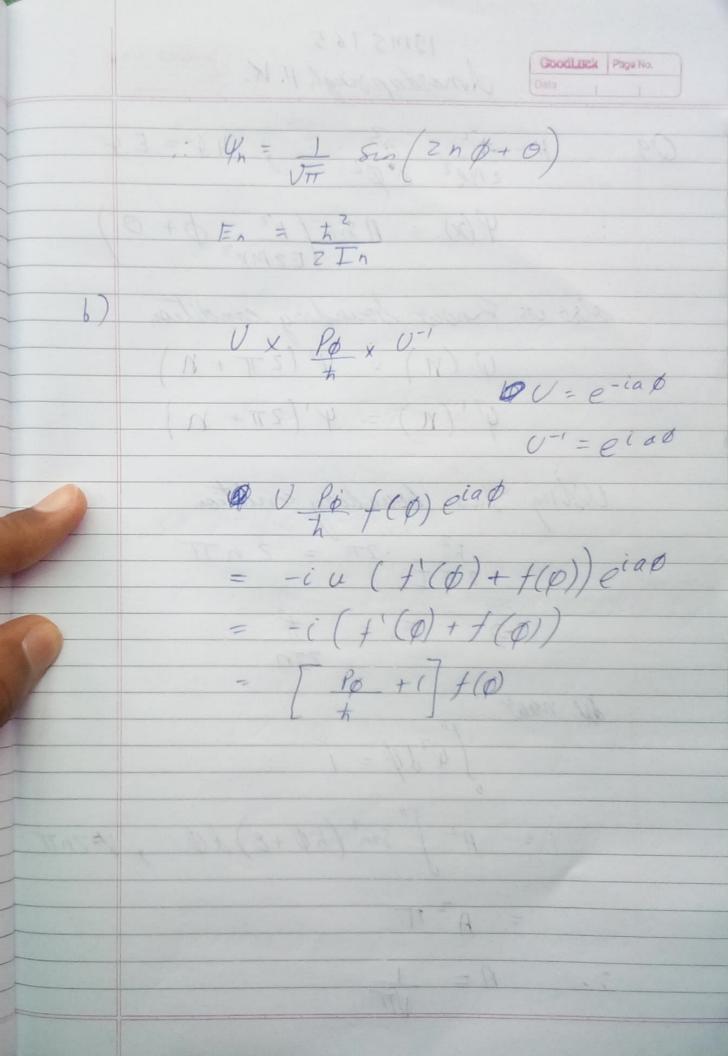
Anardysingh H. W. Date Date $H - -h^2 \partial^2$ $ZMR^2 \partial^2 \partial^2$ $H \varphi = E \varphi$:. $\Psi(x) = A sin / h^2 + 0$ also we know boundary condition $\psi(n) = \psi(2\pi + n)$ $\psi'(n) = \psi'(2\pi + n)$ Using Thise boundary condition $\frac{\hbar^2}{2\pi} \cdot 2\pi = 2n\pi$ $\frac{1}{2} = \frac{1}{2}$ J42/p=1 (= A2) Sin2 (KØ+8) dØ-, K=ZnTI



Olo 1/24 mw x (a, +d-) P = Jz + mw i x (a+-a-) (x2) = [(n/22/n) du = 1 x [(a, 2 + a, a + a a, +a2) | n) dx we ofserue [[n|a,2 |n) de= In+1 Into [h1. /2) dx =0 /<n/a=/n/dx = Jn/n-1/201/m2)dn=0 /<n/a, a./h) = In / (h/a+/n-1) dx = Jn Jh /(h1.11) dr

	Similarly $\int_{-\infty}^{\infty} \ln a_{-}a_{+} \ln = U_{h+1} / h_{+1} / h_{+1$
4 (4)	$= n+1$ $\frac{\langle x^2 \rangle}{zm\omega}$
jī)	follows in similar fashion $\langle \rho^2 \rangle = \frac{1}{2} \langle n \mid a_1^2 - a_1 a_2 - a_2 a_4 + a_2^2 \mid n \rangle dx$
(60)	$= 3nh m \omega (2nt1)$
·) i i)	$\frac{m\omega^{2}(2c^{2})}{2} + \frac{2p^{2}}{2m}$ $= \frac{m\omega^{2}}{2} + \frac{km\omega(2n+1)}{4m}$
	$= \frac{h \cdot \omega}{4} \left(\frac{2h+1}{4}\right) + \frac{h \cdot \omega}{4} \left(\frac{2n+1}{4}\right)$ $= \frac{h \cdot \omega}{4} \left(\frac{2h+1}{4}\right)$
	Z Ang

GoodLuck Page No. H - P + V = - h 2 1 K Hxf(n) = - + 0 (nf(n) + Vf(n) x = -h 2 (ref (n)+f(2)+Vxt(2) $\frac{--h^2(x f''(x)+2f'(x))}{2m}$ = x(- h = +"/x+ V/(x) = (Hx-XH)+ 11 10 (2h +1)