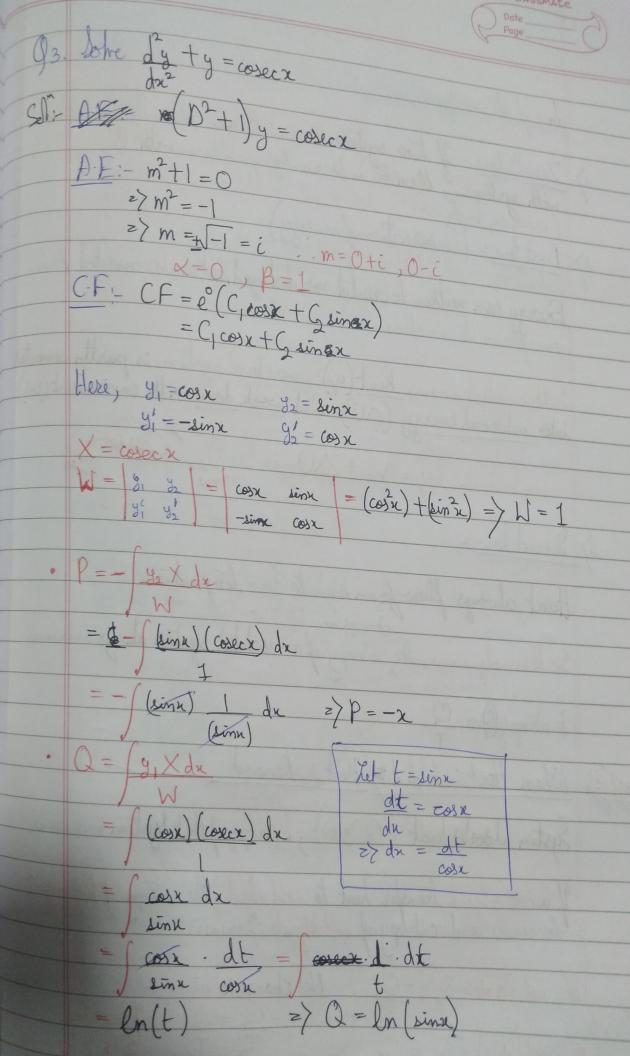
on She (D+a2) y = tanax ST: A.E = m2+a=0 2) m=-a= z/m=1/-a2=tai _.m=0+ai,0-ai X=0, B=a CF = CF = e (Cycosax+Gsinax) = Cycosax+Gsinax Here, $y_1 = \cos \alpha x$ $y_2 = \sin \alpha x$ $y_1' = \alpha (-\sin \alpha x) y_1' = \alpha \cos \alpha x$ Here, X = tanax $| M = | y_1 | y_2 | = cosax sinax$ $| y_1 | y_2 | = a(-sinax) a cosax$ = a cosax + a sinax = a (cosax + sinax) - => W = a = - (sinax) (tanax) dx =-1 sinax (sinax) dx a linax Edx cosax $=-1/((1-\cos^2\alpha x)dx =-1/(\cos\alpha x-\cos\alpha x)dx$ a cosax a = - 1 (secax - 1) du = - log(secax + tanax). 1 - sinax
d(ax) d(ax) tfanak) - simax} P= 1 [sisan - log(seean + tonax)]

g, X dx = (corax) (tanax) dx (cosan) - sinax PI: PI=Py+Qy = | singx - log secax tanan cosax + (-cosax) (sinax) = Deinax cosax - log (secart tanax) · co1qx = -log(secant tanax) y=C++1 - C1 cosax + G sinax - log (secax + tanax)

Os. Solve (D+a) y = secax $51^{2} + 4^{2} = 0$ $\Rightarrow m^{2} = -a^{2}$ z/m=+va=+ai - m=0+ai,0-ai $\alpha = 0$, $\beta = \alpha$ $CF := CF = e(C_1 x s s a x + G_2 s in a x)$ = $C_1 cos a x + G_2 s in a x$ Hore, g, = cosax g2 = sinax $y'_1 = -\alpha \sin \alpha$ $y'_2 = \alpha \cos \alpha \alpha$ X = 2ecax $M = 19 y_2 = cosax sinax$ y' y'' = a sinax a xosax= a (cosax + dinax) · D= - g X dx = - (cosax) (secax) dx cosax

= - 42 X dx (sinax) (secax) du = - sinax · 1 ·dx sosan a - tanax dx 2) dx = -dt Cosax a (zsinax) $= \int . \ln(t) . P = \int . \log(\cos ax)$ PI = Py + Qy $= PI = 1 \log(\cos \alpha x) + x \cdot (\sin \alpha x)$ $= \frac{1}{a^2} \log(\cos \alpha x) \cdot (\cos \alpha x) + x \cdot (\sin \alpha x)$ y = CF+PI = C1 cosax + Gsinax + I losax log(wax) + x (sinax)



PI := PI = PY + QY2 $= (-x) \cos x + \ln(\sin x) \cdot (\sin x)$ $= PI = \sin x \ln(\sin x) - x \cos x$

= C, cosaxt G sinaxt sinxlu(sinx) - xcosx