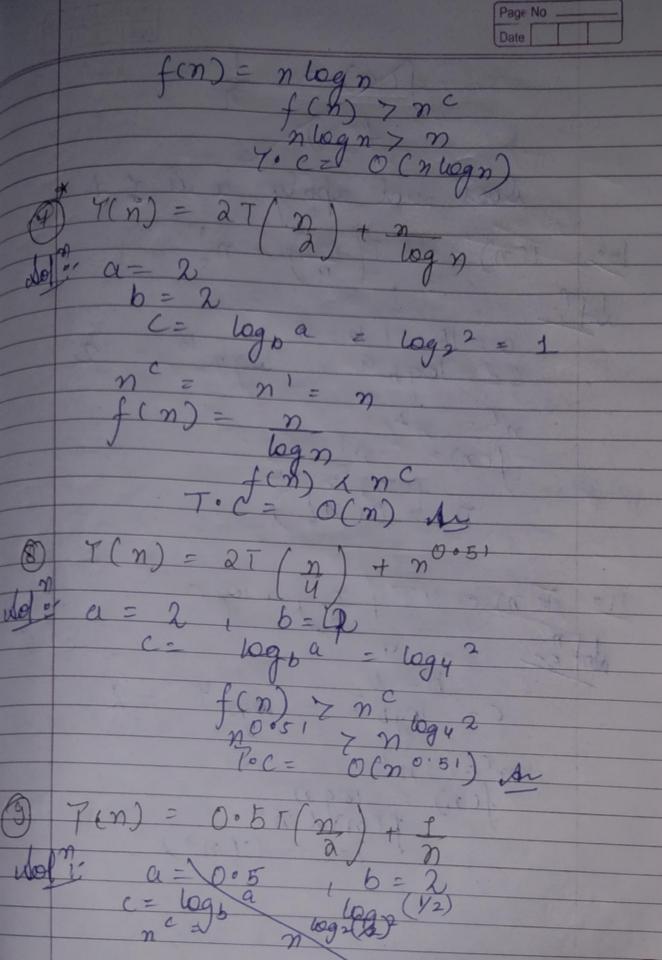
Lutorial - 4  $Q_{10} = 3T(n) + n^{2}$  $\frac{d}{d} = 3$   $\frac{d}{d} = 3$   $\frac{d}{d} = 2$   $\frac{d}{d} = 2$   $\frac{d}{d} = 2$  $f(n) = n^2$  $n^{c} = n \log_{2}^{3}$   $n^{c} = n \log_{2}^{3} \times n^{2}$   $n^{c} = n \log_{2}^{3} \times n^{2}$  $\frac{\sqrt{(n)} = \sqrt{(n)} + n^2}{\sqrt{(n)}}$   $\frac{\sqrt{(n)} = \sqrt{(n)} + n^2}{\sqrt{(n)}}$ 3 T(n) = T(n) + an c = logo a.  $\frac{\text{dold}}{n} = \frac{1}{n} = \frac{1}{2}$   $f(n) = \frac{1}{2}$ 

 $T(n) = 2^n T(n) + n^n$ a = 2  $c = 2 \log_p a + \frac{1}{p} = 2$  f(n) = n f(n) = nyou to my as a is not appeared. P(n) = 16 P(n) +n a = 16  $c = \frac{b}{\log a} = \frac{y}{\log 4} = \frac{2}{\log 4}$   $\log 4 = \log 2$   $\log 4 = \log 4$ f(n) = n  $f(n) \times n^{c}$   $f(n) \times n^{c}$   $f(n^{2}) \text{ due}$  $Y(n) = 2T(n) + n \log n$  $C = \frac{2}{\log_2 \alpha} = \frac{1}{\log_2 2} = \frac{1}{2}$ 



Does not apply a us of P(n) = 16 T/ n) + n% logy to f(n)= n/ f(n)= n/ 70c= o(n/)  $\Gamma\left(\frac{n}{a}\right) + \log n$ logo a = log2 4 = 2  $f(n) = \log n \\ f(n) \leq n^{c}$ 

(Ten) = ogut (n) T/n) + logn T(n) = In F(n) + wgn Can not apply gaster's  $3T\left(\frac{n}{a}\right)+n$ T(n) = nc= togba - tog2  $\frac{3}{\log b^{a}} = \frac{3}{\log 3} = 1$ To(n) & nc To(n) duy

150 7(n) = 4 a = 4 b = 2 c = log b a = log 2 4 = 2f(n) = n c f(n) 1 n c f(r) (n²) 37 (n) 4 n logn T(n)  $\frac{a=3}{\log 6} = \frac{16=3}{\log 4} = \frac{1}{2}$  $f(n) = n \log n \\ f(n) = n \log n \\ 7 \circ c = O(n \log n)$ |70|P(n) = 3T(n) + 20wol oa = 3 b = 3  $c = log_0 a = log_3 = 1$  f(n) = 2f(n) 1 n C T·C= O(n)

Positive so we can not  $(n) = n^2$ T(2) + n(2-cosn) ing b a = 1092 ' =  $f(n) = n(\lambda - \cos n)$   $f(n) = n(\lambda - \cos n)$   $T(n) = n(\lambda - \cos n)$