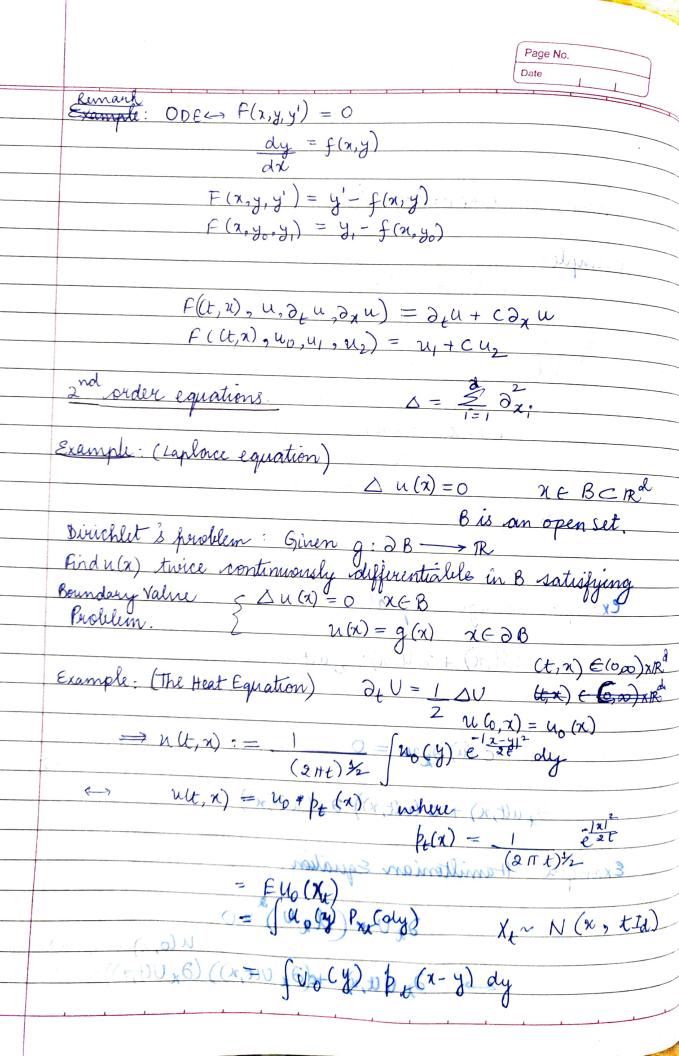
		Page No.
04-75		Date
	10 mm	
	10 to	
	2	
	Partial Differential Equations:	
	example: Transport equation: $\partial_t U + \epsilon \partial_z V = 0$	
	213-1-213	
	60 y 60	u=ult,x) xER t>0.
	$\frac{\partial_{x}}{\partial x} = \frac{\partial}{\partial x} = \frac{\partial}{\partial x}$	u (0, x) = no x.
	dt 2x.	Victor, K7 = No X.
	Complienting 2 11 C 711	
	Generalisation: $\partial_{t} u + C \cdot \nabla v = 0$	
	where e=(c,2, cd)	
	$\nabla = (\partial_{\chi_1}, \dots, \partial_{\chi_d})$	
$u(x,t) := u_0(x-ct).$		
	example: $\partial_t u + c(x)$, $\nabla u = 0$	
	$u(0,x) = u_0(x)$	
W. Francisco	Example Burger's equation: 4+4	$u_{\chi} = 0$
	AGINE COLDING CALL	$u(0,x) = u_0(x)$
* × /	$\partial_{+} u(t,n) + u(t,n) \partial_{+} u(t,n) = 0$	vo (o) rep the co
CALC	, ,	
* (1/ 1 = U, (u(0, n) =	- /
	and the second of the second o	76E
	$\partial_t u + c(u) \partial_t u = 0$	1011 w
	2 (2112)	c(z) = Z
	$\partial_{x}u(t,x) + O(u(t,x)) \partial_{x}(u(t,x)) = 0$	
	of unity of months	
	Example: Hamiltonian Equation:	
	1	$U(0,x)=u_0(x)$
	$U(0,x) = u_0(x)$ $U(0,x) = u_0(x)$ $U(0,x) = 0$	



Example: Wave equation

$$\frac{\partial^2 V}{\partial t} = C S V = C \frac{S^2}{1 - 1} \frac{\partial^2 U}{\partial t}$$

The method of characteristics