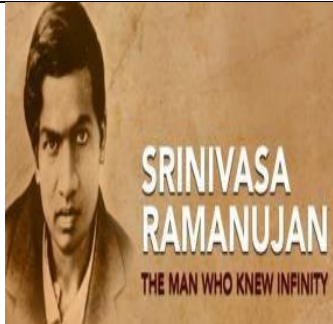
	SRM Institute of Science and Technology Kattankulathur		
	DEPARTMENT OF MATHEMATICS		
	18MAB201T- TRANSFORMS AND BOUNDARY VALUE PROBLEMS		
	UNIT - I Partial Differential Equations Tutorial Sheet - 2		
Sl. No.	Questions	Answer	
Part - A			
1	Find the singular integral of the PDE $z = px + qy + p^2 + pq + q^2$	$3z + x^2 - xy + y^2 = 0$	
2	Find the singular integral of the PDE $z = px + qy + \left(\frac{q}{p} - p\right)$	$yz = 1 - x$	
3	Find the complete integral of the PDE $p(1 - q^2) = q(1 - z)$	$4(az + 1 - a) = (x + ay + b)^2$	
4	Solve $p - q = x^2 + y^2$	$z = \frac{1}{3}(x^3 - y^3) + a(x + y) + c$	
5	Find the complete integral of $\sqrt{p} + \sqrt{q} = x + y$	$z = \frac{(x + a)^3}{3} + \frac{(y - a)^3}{3} + b$	
6	Solve $p + q = \sin x + \sin y$	$z = a(x - y) - \cos x - \cos y + b$	
Part - B			
7	Solve $x(y - z)p + y(z - x)q = z(x - y)$	$\varphi(xyz, x + y + z) = 0$	
8	Solve $(x^2 - yz)p + (y^2 - zx)q = z^2 - xy$	$\varphi\left(\frac{x - y}{y - z}, \frac{y - z}{x - z}\right) = 0$	
9	Solve $(mz - ny)p + (nx - lz)q = ly - mx$	$\varphi(lx + my + nz, x^2 + y^2 + z^2) = 0$	
10	Solve $x(y^2 + z)p - y(x^2 + z)q = z(x^2 - y^2)$	$\varphi(x^2 + y^2 - 2z, xyz) = 0$	
11	Solve $(x - y)p + (y - x - z)q = z$	$\varphi\left(x + y + z, \frac{z^2}{x - y + z}\right) = 0$	