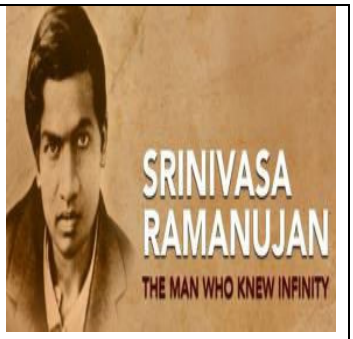
	SRM Institute of Science and Technology Kattankulathur	
	DEPARTMENT OF MEATHEMATICS	
	18MAB201T- TRANSFORMS AND BOUNDARY VALUE PROBLEMS	
	UNIT - I Partial Differential Equations Tutorial Sheet - 2	

Sl. No.	Questions	Answer
	Part - A	
1	**Find the singular integral of the PDE** $z = px + qy + p^2 - q^2$	$4z = y^2 - x^2$
2	**Find the complete integral of the PDE** $\sqrt{p} + \sqrt{q} = \sqrt{x}$	$z = \frac{x^2}{2} + ax - \frac{4\sqrt{a}}{3}x^{\frac{3}{2}} + ay + c$
3	**Solve** $yp = 2xy + \log q$	$z = x^2 + ax + \frac{e^{ay}}{a} + c$
4	**Find the complete integral of** $p + q = \sin x + \sin y$	$z = ax - \cos x - \cos y - ay + c$
5	**Solve** $p\tan x + q\tan y = \tan z$	$\phi\left(\frac{\sin x}{\sin y}, \frac{\sin y}{\sin z}\right) = 0$
	Part - B	
6	**Solve** $(3z - 4y)p + (4x - 2z)q = 2y - 3x$	$\phi\left(x^2 + y^2 + z^2, 2x + 3y + 4z\right) = 0$
7	**Solve** $(x^2 - yz)p + (y^2 - zx)q = z^2 - xy$	$\phi\left(\frac{x - y}{y - z}, xy + yz + zx\right) = 0$
8	**Solve** $(2z - y)p + (x + z)q + 2x + y = 0$	$\phi\left(x^2 + y^2 + z^2, z + 2y - x\right) = 0$
9	**Solve** $(y + z)p + (z + x)q = x + y$	$\phi\left(\frac{x - y}{y - z}, (x + y + z)(x - y)^2\right) = 0$
10	**Solve** $x^2(y - z)p + y^2(z - x)q = z^2(x - y)$	$\phi\left(\frac{1}{x} + \frac{1}{y} + \frac{1}{z}, xyz\right) = 0$