Subject Name	Mathematics-IV	Subject Code	KAS-402
Date of Handout		Max Marks	
Date of Submission			

Assignment-2

1. Solve the following differential equations:

(i) $x^2(y-z)p + y^2(z-x)q = z^2(x-y)$, where $p = \frac{\partial z}{\partial x}, q = \frac{\partial z}{\partial y}$

(ii) $xyp + y^2q = xzy - 2x^2$

(iii) $yp + xq = xz^2y(x^2 - y^2)$

(iv) $(x+2z)\,p + (4zx - y)\,q = 2x^2 + y$

(v) $(y + zx)\,p - (x + yz)\,q + y^2 - x^2 = 0$

2. Solve each of the following partial differential equations by Charpit's method:

i. $z^2 = pqxy$;

ii. $z = p^2x + q^2y$;

iii. $2x(z^2q^2 + 1) = pz$

iv. $pz = (p^2 + q^2)x$