

IMS ENGINEERING COLLEGE	IMSEC/QF/48
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	Issue No: 02
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Prepared by: MR	Approved by: Director

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

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