

## Assignment-2

1. Obtain the P.D.E by eliminating the arbitrary Constants:  $z = ax + by + a^2 + b^2$
2. Obtain the P.D.E by eliminating the arbitrary Constants:  $z = a(x + y) + b(x - y) + abt + c$
3. Obtain the P.D.E by eliminating the arbitrary functions:  $z = yf\left(\frac{y}{x}\right)$
4. Obtain the P.D.E by eliminating the arbitrary functions:  $z = f(x + iy) + g(x - iy)$
5. Obtain the P.D.E by eliminating the arbitrary functions:  $F(x + y + z, x^2 + y^2 - z^2) = 0$
6. Obtain the P.D.E by eliminating the arbitrary functions:  $F(ax + by + cz, x^2 + y^2 + z^2) = 0$
7. Solve  $xp + yq = z$
8. Solve  $2p + 3q = 1$
9. Solve  $pyz + qzx = xy$
10. Solve  $(mz - ny)p + (nx - lz)q = ly - mx$
11. Solve  $x(y - z)p + y(z - x)q = z(x - y)$
12. Solve  $(y + z)p + (z + x)q = x + y$
13. Solve  $yz - p(xy + q) - qy = 0$
14. Solve  $p^2 + q^2 = m^2$
15. Solve  $2p^2 + 6p + 2q + 4 = 0$