

Assignment-3

1. Solve $p(1+q) = qz$.
2. Solve $\sqrt{p} + \sqrt{q} = x + y$
3. Solve $pe^y = qe^x$
4. Solve $(px + qy - z)^2 = d(1 + p^2 + q^2)$
5. Solve $(D_x^2 - D_x D_y - 6D_y^2)z = 0$
6. Solve $(2D_x^2 + 5D_x D_y + 2D_y^2)z = 0$
7. Solve $(D_x^4 - D_y^4 - 2D_x^2 D_y^2)z = 0$
8. Solve $(D_x^3 - 6D_x^2 D_y + 11D_x D_y^2 - 6D_y^3)z = 0$
9. Solve $(D_x^2 - D_y^2)z = x - y$
10. Solve $(D_x^2 + D_y^2)z = \cos mx \cdot \cos ny$
11. Find the complementary function of $(x^2 D_x^2 + 2xy D_x D_y - x D_x)z = \frac{x^3}{y^2}$
12. Find the particular integral of $(x^2 D_x^2 + 2xy D_x D_y - x D_x)z = \frac{x^3}{y^2}$
13. Find the complementary function of $(x^2 D_x^2 - y^2 D_y^2)z = xy$
14. Find the particular integral of $(x^2 D_x^2 - y^2 D_y^2)z = xy$
15. Solve $(D^2 - 4D + 4)y = e^{2x}$
16. Solve $(D_x + 2D_y - 3)z = 0$
17. Find the complete solution of the PDE $(p+q)(z-px-qy)=1$