

Quiz-I

Subject Name & Code- Partial differential Equation (BMC-403)

Session & Semester: 2022-23 (Even Sem)

Course & Year: B.Sc. IInd Year

All questions are compulsory

1. What is the degree of the pde $\frac{\partial^2 z}{\partial x^2} = \left(1 + \frac{\partial z}{\partial y}\right)^{1/2}$.
2. Write the Charpit's auxiliary equations.
3. Classify the second order PDE $\partial^2 u / \partial x^2 + 4(\partial^2 u / \partial x \partial y) + 4(\partial^2 u / \partial y^2) = 0$.
4. Find the particular integral of the PDE $(DD' + aD + bD' + ab)z = e^{mx+ny}$.
5. Solve $(D^2 + 3DD' + 2D'^2)z = 0$.
6. Solve $(y^2/x)p + xzq = y^2$.
7. What is the order of the PDE $p \tan y + q \tan x = \sec^2 z$.
8. What is type of the PDE $(2x + 3y)p + 4xq - 8pq = x + y$.
9. Write the definition of Quasi linear PDE.
10. Write the definition of linear PDE.