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Sub:

Differential Equations:

Sub. Teacher:

Madam Shumaila Mazhar:

Assignment:

Q:

Application Of ODE's:

1 → Newton Law of cooling.
2 → Beam
3 → Physical application
4 → Radioactive elements
5 → Electrical Circuits.
6 → Modelling free mechanical ossilations.
7 → No damping.
8 → Light Damping.
9 → Heavy Damping.
10 → Modelling forced mechanical ossillation
11 → Computer exersice & activity
12 → Modelling with first order equation

There are several major methods for the solution of PDE:

1) Seperation of variables.
2) Methods of characteristics.
3) Integral transforms
4) Super position principle
5) Change of variables
6) Lie group method.
7) Semianalytical method as well as numerical

Application of PDE:

Partial Differential Equations:

→ In many engineering & science problems such as heat transfer problems, electricity, quantum mechanics, Water flow and others. The problems are governed by partial differential equation. By nature this type of problem is much more complicated than the previous ordinary differential equation.