

Assignment.

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Section.	B
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Application of ODE's

(i) Newton's law of cooling.

(a) Beam.

(b) Physical Application

(c) Radio Active Element.

(d) Electrical Circuits.

(e) Modelling Free Mechanical Oscillation

(f) No Damping.

(g) Light Damping.

(h) Heavy Damping.

(i) Modelling Forced Mechanical Oscillation

(ii) Computer Exercise Activity.

(iii) Modelling with First order Equation

Application PDE:

In Many Engineering or Science Problems such as heat transfer, elasticity, quantum mechanics, water flows & other Problems are governed by Partial differential equation. By nature this type of Problem is much more complicated than the previous ordinary differential equation.

There are several major methods for the solution of PDE.

- (1) Separation of Variable
- (2) Method of Characteristic
- (3) Integral transform
- (4) Super Position Principle
- (5) Change of Variable
- (6) Lie Group method
- (7) Symmetrical method as well as various numerical method.