

IQRA NATIONAL UNIVERSITY

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SECTION : A

MODULE : 8TH SEMESTER

Application of ODE'S

- 1) Newton's law of cooling
- 2) Beams
- 3) Physical Application
- 4) Radio Active Element
- 5) Electrical Circuit
- 6) Modelling free mechanical oscillations
- 7) No Damping
- 8) Light Damping
- 9) Heavy Damping
- 10) Modelling forced mechanical oscillations.
- 11) Computer Exercise or activity.
- 12) Modelling with first order Equations.

There are general major
Methods for the
solution of PDE

- 1) Separation of variables
- 2) Method of characteristic
- 3) Integral transform,
- 4) Super position principle
- 5) Change of variable.
- 6) Lie group method
- 7) Semi analytical method as well as various numerical Method.

Application of PDE

Partial differential equations
In many engineering & sciences problems such as heat transfer, elasticity, quantum mechanics, water flow and other the problems are governed by partial differential equation by nature, this type of problem is much more complicated than the previous ordinary differential equation.