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Subject Differential equation

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Assignment # 01

Q1

Ans. Application of ODE's

- 1) Newton's law of cooling
- 2) Beam
- 3) Physical Application
- 4) Radio Active element
- 5) Electrical circuits
- 6) Modeling free mechanical oscillations.
- 7) No Damping
- 8) Light Damping
- 9) Heavy Damping
- 10) Computer exercise or activity
- 11) Modeling with first order equation.

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) Separational method as well as various numerical method.

Application of PDE:-

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