## NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

```
NPTEL Video Course - Aerospace Engineering - NOC: Gasdynamics: Fundamentals and Applications
Subject Co-ordinator - Prof. Srisha Rao M V
Co-ordinating Institute - IISc - Bangalore
Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable
Lecture 1 - Introduction
Lecture 2 - Flow Regimes
Lecture 3 - Thermodynamics - 1
Lecture 4 - Thermodynamics - 2
Lecture 5 - Thermodynamics - Numerical
Lecture 6 - Flow equations - Integral Form
Lecture 7 - Flow equations - Differential Form
Lecture 8 - Quasi-1D Assumption
Lecture 9 - Speed of Sound
Lecture 10 - Speed of Sound - Numerical
Lecture 11 - Stagnation properties
Lecture 12 - Pitot tube
Lecture 13 - Sonic/Star properties
Lecture 14 - Numerical
Lecture 15 - Normal Shock - I
Lecture 16 - Normal Shock - II-a
Lecture 17 - Normal Shock - II-b
Lecture 18 - Normal Shock - III
Lecture 19 - Normal Shock - IV
Lecture 20 - Normal Shock - Numerical
Lecture 21 - The Shock Tube
Lecture 22 - Waves of infinitesimal Amplitude
Lecture 23 - Waves of finite amplitude
Lecture 24 - Shock Tube Relations
Lecture 25 - Unsteady Flows - Numerical
Lecture 26 - Oblique Shock Waves
Lecture 27 - Expansion waves
Lecture 28 - Shock Expansion Method
Lecture 29 - Shock Reflection
```

Get DIGIMAT For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

## NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

```
Lecture 30 - Oblique Shock and Expansion waves - Numerical
Lecture 31 - Varying Area Duct Flows - I
Lecture 32 - Varying Area Duct Flows - II
Lecture 33 - Converging Nozzle and Chocking
Lecture 34 - Converging and Diverging Nozzle Operation
Lecture 35 - Varying area flow- Numericals - I
Lecture 36 - Diffusers Intakes/Inlets
Lecture 37 - Experimental facilities
Lecture 38 - Varying area flow - Numericals - II
Lecture 39 - Varying area flow - Numericals - III
Lecture 40 - Varying area flow - Numericals - IV
Lecture 41 - 1D flow with friction - Fanno flow - I
Lecture 42 - 1D flow with friction - Fanno flow - II
Lecture 43 - 1D flow with friction - Fanno flow - III
Lecture 44 - 1D flow with friction - Fanno flow - Numericals
Lecture 45 - 1D Flows with Heat Addition: Rayleigh Flows - I
Lecture 46 - 1D Flows with Heat Addition: Rayleigh Flows - II
Lecture 47 - 1D Flows with Heat Addition: Rayleigh Flows - Numericals
Lecture 48 - Generalized 1D Flows
Lecture 49 - Small perturbation theory - I
Lecture 50 - Small perturbation theory - II
Lecture 51 - Small perturbation theory - III
Lecture 52 - Method of Characteristics: 2D Supersonic Flow - I
Lecture 53 - Method of Characteristics: 2D Supersonic Flow - II
Lecture 54 - Method of Characteristics: Applications
Lecture 55 - Hypersonic Flows - I
Lecture 56 - Hypersonic Flows - II
Lecture 57 - Edney Shock Interaction
Lecture 58 - Shock Boundary Layer Interaction - I
Lecture 59 - Shock Boundary Layer Interaction - II
Lecture 60 - Concluding Remarks
```

\_\_\_\_\_\_