

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

NPTEL Video Course - Civil Engineering - NOC:Bridge Engineering

Subject Co-ordinator - Prof. Piyali Sengupta

Co-ordinating Institute - IIT - Kharagpur

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

- Lecture 1 - Components, Materials, Forms, Evolutions and Classifications of Bridges
- Lecture 2 - Site Selection, Subsoil Exploration and Traffic Projections for Bridges
- Lecture 3 - Hydraulic Characteristics, Economical Span and Choice of Bridge Type
- Lecture 4 - Standard Specifications for Road Bridges
- Lecture 5 - Standard Specifications for Rail Bridges
- Lecture 6 - Design of Slab Culverts
- Lecture 7 - Design of T-Beam and Slab Bridge
- Lecture 8 - Voided Slab Bridges, Skew Slab Culverts and Curved Bridge Decks
- Lecture 9 - Design of Box Culverts
- Lecture 10 - Design of Pipe Culverts
- Lecture 11 - Design of Steel Truss Bridges
- Lecture 12 - Design Example of Steel Truss Bridges
- Lecture 13 - Design of Plate Girder Bridges
- Lecture 14 - Design Example of Plate Girder Bridges
- Lecture 15 - Masonry Arch Bridges
- Lecture 16 - Concrete Arch Bridges
- Lecture 17 - Suspension Bridges
- Lecture 18 - Cable-Stayed Bridges
- Lecture 19 - Balanced Cantilever Bridges
- Lecture 20 - Prestressed Concrete Bridges
- Lecture 21 - Composite Bridges
- Lecture 22 - Rigid Frame Bridges
- Lecture 23 - Continuous Girder Bridges
- Lecture 24 - Design Example of Continuous Girder Bridges
- Lecture 25 - Bridge Piers
- Lecture 26 - Bridge Abutments
- Lecture 27 - Pile Foundations for Bridges
- Lecture 28 - Well and Pneumatic Caisson Foundations for Bridges
- Lecture 29 - Bridge Bearings

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- Lecture 30 - Bridge Joints
- Lecture 31 - Bridge Appurtenances
- Lecture 32 - Bridge Construction
- Lecture 33 - Maintenance and Rehabilitation of Bridges
- Lecture 34 - Rebuilding of Bridges
- Lecture 35 - Dynamic Response of Bridge Decks
- Lecture 36 - Seismic Design of Highway Bridges
- Lecture 37 - Seismic Design of Railway Bridges
- Lecture 38 - Lessons from Bridge Failures
- Lecture 39 - Fatigue and Fracture of Bridges
- Lecture 40 - Use of Shape memory Alloys in Bridges
- Lecture 41 - Use of Engineered Cementitious Composite (ECC) in Bridges
- Lecture 42 - 3D Printing of Bridges
- Lecture 43 - High Speed Railway Bridges