NPTEL Video Course - Mathematics - NOC:Advanced Engineering Mathematics

Subject Co-ordinator - Prof. P.N. Agarwal

Co-ordinating Institute - IIT - Roorkee

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

Lecture 1 - Analytic Function
Lecture 2 - Cauchy-Riemann Equations
Lecture 3 - Harmonic Functions, Harmonic Conjugates and Milne's Method
Lecture 4 - Applications to the Problems of Potential Flow - I
Lecture 5 - Applications to the Problems of Potential Flow - II
Lecture 6 - Complex Integration
Lecture 7 - Cauchy's Theorem - I
Lecture 8 - Cauchy's Theorem - II
Lecture 9 - Cauchy's Integral Formula for the Derivatives of Analytic Function
Lecture 10 - Morera's Theorem, Liouville's Theorem and Fundamental Theorem of Algebra
Lecture 11 - Winding Number and Maximum Modulus Principle
Lecture 12 - Sequences and Series
Lecture 13 - Uniform Convergence of Series
Lecture 14 - Power Series
Lecture 15 - Taylor Series
Lecture 16 - Laurent Series
Lecture 17 - Zeros and Singularities of an Analytic Function
Lecture 18 - Residue at a Singularity
Lecture 19 - Residue Theorem
Lecture 20 - Meromorphic Functions
Lecture 21 - Evaluation of real integrals using residues - I
Lecture 22 - Evaluation of real integrals using residues - II
Lecture 23 - Evaluation of real integrals using residues - III
Lecture 24 - Evaluation of real integrals using residues - IV
Lecture 25 - Evaluation of real integrals using residues - V
Lecture 26 - Bilinear Transformations
Lecture 27 - Cross Ratio
Lecture 28 - Conformal Mapping - I
Lecture 29 - Conformal Mapping - II

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

www.digimat.in

```
Lecture 30 - Conformal mapping from half plane to disk and half plane to half plane - I
Lecture 31 - Conformal mapping from disk to disk and angular region to disk
Lecture 32 - Application of Conformal Mapping to Potential Theory
Lecture 33 - Review of Z-transforms - I
Lecture 34 - Review of Z-transforms - II
Lecture 35 - Review of Z-transforms - III
Lecture 36 - Review of Bilateral Z-transforms
Lecture 37 - Finite Fourier Transforms
Lecture 38 - Fourier Integral and Fourier Transforms
Lecture 39 - Fourier Series
Lecture 40 - Discrete Fourier Transforms - I
Lecture 41 - Discrete Fourier Transforms - II
Lecture 42 - Basic Concepts of Probability
Lecture 43 - Conditional Probability
Lecture 44 - Bayes Theorem and Probability Networks
Lecture 45 - Discrete Probability Distribution
Lecture 46 - Binomial Distribution
Lecture 47 - Negative Binomial Distribution and Poisson Distribution
Lecture 48 - Continuous Probability Distribution
Lecture 49 - Poisson Process
Lecture 50 - Exponential Distribution
Lecture 51 - Normal Distribution
Lecture 52 - Joint Probability Distribution - I
Lecture 53 - Joint Probability Distribution - II
Lecture 54 - Joint Probability Distribution - III
Lecture 55 - Correlation and Regression - I
Lecture 56 - Correlation and Regression - II
Lecture 57 - Testing of Hypotheses - I
Lecture 58 - Testing of Hypotheses - II
Lecture 59 - Testing of Hypotheses - III
Lecture 60 - Application to Queuing Theory and Reliability Theory
```