NPTEL Video Course - Computer Science and Engineering - Combinatorics

Subject Co-ordinator - Dr. L. Sunil Chandran

Co-ordinating Institute - IISc - Bangalore

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

Lecture 1 - Pigeon hole principle - (Part 1)
Lecture 2 - Pigeon hole principle - (Part 2)
Lecture 3 - Pigeon hole principle - (Part 3)
Lecture 4 - Pigeon hole principle - (Part 4)
Lecture 5 - Elementary concepts and basic counting principles
Lecture 6 - Elementary concepts; Binomial theorem; Bijective proofs - Part (1)
Lecture 7 - Bijective proofs â Part (2)
Lecture 8 - Bijective proofs - Part (3); Properties of binomial coefficients; Combinatorial identities - Part
Lecture 9 - Combinatorial identities - Part (2); Permutations of multisets â Part (1)
Lecture 10 - Permutations of multisets â Part (2)
Lecture 11 - Multinomial Theorem, Combinations of Multisets â Part (1)
Lecture 12 - Combinations of Multisets - Part (2)
Lecture 13 - Combinations of Multisets â Part (3), Bounds for binomial coefficients
Lecture 14 - Sterlingâ s Formula, Generalization of Binomial coefficients - Part (1)
Lecture 15 - Generalization of Binomial coefficients - Part (2)
Lecture 16 - Generalization of Binomial coefficients - Part (3); Double counting - Part (1)
Lecture 17 - Double counting - Part (2)
Lecture 18 - Hallâ s Theorem for regular bipartite graphs; Inclusion exclusion principle - Part (1)
Lecture 19 - Inclusion exclusion principle - Part (2)
Lecture 20 - Inclusion exclusion principle - Part (3)
Lecture 21 - Inclusion exclusion principle - Part (4)
Lecture 22 - Inclusion exclusion principle - Part (5)
Lecture 23 - Recurrence Relations - Part (1)
Lecture 24 - Recurrence Relations - Part (2)
Lecture 25 - Recurrence Relations - Part (3)
Lecture 26 - Recurrence Relations - Part (4)
Lecture 27 - Recurrence Relations - Part (5)
Lecture 28 - Generating functions - Part (1)
Lecture 29 - Generating functions - Part (2)

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 - Solving recurrence relations using generating functions - Part (1)
Lecture 31 - Solving recurrence relations using generating functions - Part (2)
Lecture 32 - Exponential generating functions - Part (1)
Lecture 33 - Exponential generating functions - Part (2), Partition Number - Part (1)
Lecture 34 - Partition Number - Part (2)
Lecture 35 - Partition Number - Part (3)
Lecture 36 - Partition Number - Part (4); Catalan Numbers - Part (1)
Lecture 37 - Catalans Numbers - Part (2)
Lecture 38 - Catalan Numbers - Part (3), Sterling numbers of the 2nd kind
Lecture 39 - Difference Sequences
Lecture 40 - Sterling Numbers
Lecture 41 - Summary
```

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

www.digimat.in