

## DISCRETE STRUCTURE

A list of video lectures

1. Prove set  $G = \{0, 1, 2, 3, 4, 5\}$  is Abelian group of order 6, addition modulo
2. Prove set  $G = \{1, 2, 3, 4, 5, 6\}$  is Abelian group of order 6, multiplication modulo
3. Ring
4. Prove that a ring  $R$  is commutative, if and only if  $(a+b)^2 = a^2 + 2ab + \dots$
5. Integrity Constraints
6. Finite State Machine
7. Cyclic Group
8. Coset of Subgroup
9. Quantifiers
10. Isomorphic Graph
11. Homomorphism graph
12. Symmetric relation
13. Asymmetric relation
14. Transitive relation
15. Inverse relation
16. Identity Relation
17. Equivalence relation
18. Algebraic structure
19. Semigroup
20. Monoid
21. Group
22. Abelian Group
23. Generating Function
24. Generating Function Ex. 01
25. Recurrence Relation Ex. 01

26. Recurrence Relation Ex. 02
27. Recurrence Relation Ex. 03
28. Obtain particular solution  $ar + 5ar^{-1} + 6ar^{-2} = 3r^2 - 2r + 1$
29. Chromatic Number
30. Ordered Pair
31. Relation
32. Reflexive Relation
33. Ir-reflexive Relation
34. Symmetric Relation
35. Inclusion Exclusion Principal
36. Inclusion Exclusion Principal Ex. 01
37. Pigeonhole Principal
38. SET Construction Method
39. SET Types
40. SET Operations
41.  $(A \cap B) \times (C \cap D) = (A \times C) \cap (B \times D)$  |Relation example
42. Group, Abelian Group, Sub Group
43. Proposition | Basic Logical | Conjunction | Disjunction | Negation
44. CNF: Conjunctive Normal Form
45. POSET
46. Hasse Diagram
47. Lattice
48. Mathematical Induction
49. Mathematical Induction | Prove  $2+4+6+\dots+2n=n(n+1)$
50. Mathematical Induction | sum of cubes of three Consecutive integers is ...
51. Numerical problem on Relation
52. Binary Operations

- 53. Numerical problem on Semi Group
- 54. Numerical problem on Group
- 55. Algebraic Structure
- 56. SET and its Types

Related posts:

- 1. Prove that a ring  $R$  is commutative, if and only if  $(a+b)^2 = a^2 + 2ab + \dots$
- 2. Identity Relation | Discrete structure | Prof. Jayesh Umre
- 3. Inverse relation | Discrete structure | Prof. Jayesh Umre
- 4. Asymmetric relation | Discrete structure | Prof. Jayesh Umre
- 5. Ordered Pair | Prof. Jayesh Umre
- 6. Reflexive relation | Discrete structure | Prof. Jayesh Umre
- 7.  $(A \wedge B) \times (C \wedge D) = (A \times C) \wedge (B \times D)$  | Relation example | Prof. Jayesh Umre
- 8. Mathematical Induction | Prof. Jayesh Umre
- 9. Mathematical Induction | sum of cubes of three Consecutive integers is ...
- 10. Numerical problem on Group | Prof. Jayesh Umre
- 11. Equivalence relation | Discrete structure | Prof. Jayesh Umre
- 12. Transitive relation | Discrete structure | Prof. Jayesh Umre
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- 15. Irreflexive relation | Discrete structure | Prof. Jayesh Umre
- 16. Relation | Discrete Structure | Prof. Jayesh Umre
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- 18. SET Operations | Prof. Jayesh Umre

19. SET Types | Prof. Jayesh Umre
20. SET Construction methods | Roster | Description | Prof. Jayesh Umre
21. CNF: Conjunctive Normal Form
22. Proposition | Basic Logical | Conjunction | Disjunction | Negation | Prof...
23. Ring | Discrete structure | Prof. Jayesh Umre
24. Prove set  $G = \{1, 2, 3, 4, 5, 6\}$  is abelian group of order 6, multiplica...
25. Prove set  $G = \{0, 1, 2, 3, 4, 5\}$  is abelian group of order 6, addition m...
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