# Ram Ram Coders!

#### SUGGESTIONS FOR OPTIMAL USE

- → Follow the questions in a serial wise manner for optimal results.
- → You can follow the playlists as you wish, but our suggestion for optimal results is the manner as given below.
- → For doubts(academic/non academic), our link to social media handles are given as follows:

<u>Telegram</u>, <u>Instagram</u>, <u>YouTube</u>

#### Hope you achieve great heights

#### Achhe Placement ka sapna bhul nhi jaana re

### **Maths**

- 1. Find factors check for prime.
- 2. Prime Sum
- 3. Missing Number in an array
- 4. Trailing zeroes in a factorial.
- 5. Next similar number.
- 6. Missing two numbers.
- 7. <u>nCr.</u>

- 8. Unique Paths.
- 9. LCM and GCD.
- 10. <u>Smallest positive number that cannot be represented</u> as a sum.

#### **Arrays**

- 1. Left And Right Rotate
- 2. 2-Sum
- 3. Remove Duplicates From Sorted Array.
- 4. Wave Array.
- 5. Possible Triangle Triplet.
- 6. Find Pivot Index
- 7. 3 Sum Closest
- 8. Merge Sorted Array
- 9. Sort Colors
- 10. Binary search Introduction
- 11. Forest Search
- 12. Painters Partitioning
- 13. Allocate Minimum Number of Pages
- 14. Find Missing in 2D Array
- 15. Sort An Array According To Other
- 16. Largest Sum Contiguous Subarray
- 17. Stock Buy and Sell
- 18. Sliding Window Technique
- 19. Maximum Number of Vowels in a Substring
- 20. Sliding Window Maximum

- 21. Jump Game
- 22. Search in Rotated Sorted Array
- 23. Lower Bound And Upper Bound STL
- 24. Rotate Image
- 25. Matrix Multiplication
- 26. Sort The Matrix Diagonally
- 27. Search in a row column Sorted matrix
- 28.Is Sudoku Valid
- 29. Row With Max 1's
- 30. Set Matrix Zeroes
- 31. Trapping Rain Water
- 32. Spiral Matrix

# **Hashing**

- 1. Intro to hash-maps.
- 2. Longest sub-array with zero sum.
- 3. Longest sub-array with zero sum-2.
- 4. Check if a string is isogram
- 5. Anagrams.
- 6. Longest substring without repeating characters.
- 7. Array subset of another array.
- 8. Longest consecutive subsequence.
- 9. Sum equals to sum.
- 10. <u>Find all pairs with a given sum.</u>
- 11. Zero sum sub-arrays.
- 12. Longest sub-array with at most k distinct elements.

- 13. Top k frequent elements.
- 14. <u>Sub-arrays with k distinct integers.</u>
- 15. Find largest d in the array such that a+b+c=d.

### **Strings**

- 1. Reverse Words in a given Strings.
- 2. Add Strings
- 3. Integer To Roman
- 4. Recursively Remove All Adjacent Duplicates
- 5. Implement Atoi
- 6. Remove All Adjacent Duplicates in String
- 7. Longest Palindrome Substring
- 8. Most Important String str.find() explained.

# **Stack**

- 1. Parenthesis Checker
- 2. Evaluation Of Postfix Expression
- 3. Infix To Postfix
- 4. Next Greater Element
- 5. Stock Span Problem
- 6. The Celebrity Problem
- 7. Min Stack
- 8. Largest Rectangle in histogram

- 9. Remove K Digits
- 10. <u>Maximum Rectangle</u>

### **Queue + Priority\_queue + Heap**

- 1. Reverse First k Elements of Queue.
- 2. Stack Using Queue
- 3. Queue Using Two Stacks.
- 4. First Non-Repeating Character in a Stream.
- 5. Rotten Oranges.
- 6. Steps By knight
- 7. Minimum Cost Of Ropes
- 8. Kth Largest Element in a stream
- 9. Find Medium in A Stream

### **Greedy**

- 1. Maximum product of 3 numbers.
- 2. Maximum number of toys.
- 3. Minimum operations.
- 4. Majority element.
- 5. Fractional knapsack.
- 6. Minimum platforms.
- 7. Best time to buy and sell stocks.
- 8. Jump game 2.
- 9. Policeman catch thieves.

- 10. Merge intervals.
- 11. Minimize the heights 2.
- 12. <u>Disjoint intervals.</u>
- 13. Gas station.
- 14. <u>Maximum sum of increasing order elements from narrays.</u>
- 15. <u>Job sequencing problem.</u>
- 16. N-meetings in one room.
- 17. Coin piles.
- 18. <u>Water the plants.</u>

#### Recursion.

- 1. Recursion beginner's video.
- 2. Geeco-nacci number.
- 3. Print 1 to N without using loop.
- 4. Pascal's triangle
- 5. Delete middle element of stack.
- 6. Sort a stack.
- 7. Power of numbers.
- 8. Find kth bit in nth binary string
- 9. Josephus problem.
- 10. Print N-bit binary numbers having more 1s than 0s.
- 11. Subset sums.
- 12. Count good numbers.
- 13. Generate parentheses.
- 14. Permutation with spaces.
- 15. Predict the winner.

#### 16. Tower of Hanoi.

### **Linked List**

- 1. Reverse Linked List
- 2. Delete Node in Linked List
- 3. Middle Of the Linked List
- 4. Linked List Cycle
- 5. Linked List Cycle 2
- 6. Swap Nodes in pairs
- 7. Add Two Numbers
- 8. Palindrome Linked List
- 9. Remove Nth Node from End of List.
- 10. Intersection of two Linked List
- 11. Partition List.
- 12. Rearrange A Linked List
- 13. <u>Merge two Sorted Lists.</u>
- 14. Rotate List.
- 15. <u>Reverse Nodes in k-Group.</u>
- 16. Sort List.
- 17. <u>Copy List With Random Pointer</u>
- 18. Sorted Insert For Circular Linked List.
- 19. <u>Flattening a Linked List.</u>

#### **Binary Tree**

- 1. Binary Tree Introduction.
- 2. Inorder Traversal.
- 3. Preorder & Postorder Traversal.
- 4. Maximum Depth Of Binary Tree.
- 5. Binary Tree level order Traversal.
- 6. <u>Level Order Traversal in Spiral Form.</u>
- 7. Vertical Traversal Of Binary Tree
- 8. Left And Right View of Binary tree.
- 9. Boundary Traversal of Binary Tree.
- 10. Symmetric Tree.
- 11. Populating Next Right Pointers in Each Node.
- 12. Sum Tree.
- 13. Balanced Binary Tree.
- 14. <u>Lowest Common Ancestor.</u>
- 15. Inorder Traversal.
- 16. <u>Postorder Traversal (Iterative).</u>
- 17. <u>Preorder Traversal (Iterative).</u>
- 18. <u>Binary Tree Paths</u>
- 19. <u>Burning Tree.</u>
- 20. All Nodes Distance k in Binary Tree
- 21. <u>Diameter Of Binary Tree.</u>
- Path Sum.
- 23. <u>Path Sum 2.</u>
- 24. Contructing Binary Tree from Post/Pre/In-Order

- 25. Construct Binary Tree from Preorder & inorder.
- 26. Binary Tree From Preorder & Postorder.

### **Binary Search Tree**

- 1. Search in Binary Search Tree.
- 2. Validate Binary Search Tree.
- 3. Insert Into Binary Search Tree.
- 4. <u>Delete Node In BST.</u>
- 5. Convert Sorted List to Binary Search Tree.
- 6. <u>Balance A Binary Search Tree.</u>
- 7. Construct Binary Search Tree From Preorder Traversal.
- 8. Construct Binary Search Tree From Postorder Traversal.
- 9. Delete Nodes Greater Than K.

# **Backtracking.**

- 1. Backtracking for beginners.
- 2. Flood fill algorithm.
- 3. Rat in a maze.
- 4. Permutations.
- 5. Possible words from phone digits.
- 6. Path with maximum gold.
- 7. Word search.

- 8. N-queens.
- 9. Sudoku.
- 10. <u>Palindrome partitioning.</u>

#### **Graph**

- 1. Graph Representation (Introduction).
- 2. Graph Traversal (Adjacency List And Adjacency Matrix).
- 3. BFS (Adjacency List).
- 4. DFS (Adjacency List).
- 5. Number Of Island.
- 6. Find Whether Path Exist.
- 7. Snake and Ladder.
- 8. Covid Spread.
- 9. <u>Detect Cycle in Undirected Graph (BFS).</u>
- 10. <u>Detect Cycle in Undirected Graph (DFS)</u>
- 11. <u>Bipartite Graph.</u>
- 12. <u>Bipartite Graph (BFS)</u>
- 13. <u>Number Of Connected Components in</u>
  Undirected Graph
- 14. Topological Sort.
- 15. Kahn's Algorithm
- 16. Detect Cycle in undirected Graph (DFS).
- 17. <u>Detect Cycle in Undirected Graph (BFS).</u>
- 18. <u>Dijkstra's Shortest path Algorithm.</u>
- 19. Dijkstra's Shortest Path Algorithm (Code)

20.	Inti	<u>roduc</u>	ction	Of	Mini	mum	<b>Spanning</b>	<b>Tree</b>
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- 21. <u>Introduction To Prims Algorithm.</u>
- 22. Prim's Algo Code
- 23. Union and Find
- 24. Kruskal's Algo
- 25. <u>Kruskal's algo-code</u>
- 26. Bellman Ford algo
- 27. Bellman Ford Algo(code)
- 28. <u>Strongly Connected Components(Kosaraju's Algo)</u>

#### **Dynamic Programming.**

- 1. DP's beginner's video.
- 2. Count ways to reach nth stair.
- 3. Reach a given score.
- 4. Coin change.
- 5. Coin change 2.
- 6. Counting bits.
- 7. Number of unique paths.
- 8. Player with max score.
- 9. Stickler thief.
- 10. 0-1 knapsack problem.
- 11. Knapsack with duplicate items.
- 12. Maximum sum problem.
- 13. Longest common subsequence.
- 14. Maximum number of insertions and deletions.

- 15. Longest Palindromic subsequence.
- 16. Minimum cost to make two strings identical.
- 17. Buying vegetables.
- 18. Longest increasing subsequence.
- 19. Minimum number of deletions to a sorted sequence.
- 20. <u>Distinct subsequences.</u>
- 21. Repeating subsequences.
- 22. Regular expression matching.
- 23. Regular expression matching 2.
- 24. <u>Shortest common subsequence.</u>
- 25. Max length chain.
- 26. <u>Interleaving string.</u>
- 27. Scramble strings.
- 28. Egg dropping puzzle.
- 29. Intro to tabular DP.
- 30. Nth Fibonacci number.
- 31. Count ways to reach nth stairs.
- 32. A DP guide.
- 33. Reach a given score.
- 34. Coin change.
- 35. Coin change 2.
- 36. 0-1 Knapsack problem.
- 37. Knapsack with duplicate items.
- 38. <u>Subset sum problem</u>
- 39. Minimum sum partition.
- 40. Longest Common subsequence.
- 41. Longest increasing subsequence.

- 42. <u>Longest increasing subsequence 2.</u>
- 43. Longest common substring.
- 44. Regular expression match.
- 45. Number of unique paths.
- 46. Box stacking.
- 47. Predict the winner.
- 48. Regular expression match.
- 49. Matrix Chain Multiplication(Recursive)
- 50. Matrix Chain Multiplication(Tabular)
- 51. Count Palindromic Subsequences

#### **BITS MANIPULATION**

- 1. Bit manipulation all you need to know.
- 2. Number of 1 Bits.
- 3. <u>Sum of numbers without using mathematical operators.</u>
- 4. Reverse Bits.
- 5. Single Number.
- 6. Find Missing and Repeating.
- 7. Single Number 2.
- 8. Sub array with given XOR.
- 9. XORing the Sub arrays.
- 10. Bit Difference.

# For queries, contact us Telegram, Instagram, YouTube

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