

## **TCS NQT Questions**

### **Problems on Arrays**

- 1) Find the smallest number in an array
- 2) Find the largest number in an array
- 3) Second Smallest and Second Largest element in an array
- 4) Reverse a given array
- 5) Count frequency of each element in an array
- 6) Rearrange array in increasing-decreasing order
- 7) Calculate sum of the elements of the array
- 8) Rotate array by K elements – Block Swap Algorithm
- 9) Average of all elements in an array
- 10) Find the median of the given array
- 11) Remove duplicates from a sorted array
- 12) Remove duplicates from unsorted array
- 13) Adding Element in an array
- 14) Find all repeating elements in an array
- 15) Find all non-repeating elements in an array
- 16) Find all symmetric pairs in array
- 17) Maximum product subarray in an array
- 18) Replace each element of the array by its rank in the array
- 19) Sorting elements of an array by frequency
- 20) Rotation of elements of array- left and right
- 21) Finding equilibrium index of an array
- 22) Finding Circular rotation of an array by K positions
- 23) Sort an array according to the order defined by another array
- 24) Search an element in an array
- 25) Check if Array is a subset of another array or not

### **Problems on Numbers**

- 1) Check if a number is palindrome or not
- 2) Find all Palindrome numbers in a given range
- 3) Check if a number is prime or not
- 4) Prime numbers in a given range
- 5) Check if a number is armstrong number or not
- 6) Check if a number is perfect number
- 7) Even or Odd
- 8) Check weather a given number is positive or negative
- 9) Sum of first N natural numbers
- 10) Find Sum of AP Series
- 11) Program to find sum of GP Series
- 12) Greatest of two numbers
- 13) Greatest of three numbers

- 14) Leap Year or not
- 15) Reverse digits of a number
- 16) Maximum and Minimum digit in a number
- 17) Print Fibonacci upto Nth Term
- 18) Factorial of a number
- 19) Power of a number
- 20) Factors of a given number
- 21) Print all prime factors of the given number
- 22) Check if a number is a strong number or not
- 23) Check if a Number is Automorphic
- 24) GCD of two numbers
- 25) LCM of two numbers
- 26) Check if a number is Harshad number
- 27) Check if the number is abundant number or not
- 28) Sum of digits of a number
- 29) Sum of numbers in the given range
- 30) Permutations in which N people can occupy R seats in a classroom
- 31) Program to add two fractions
- 32) Replace all 0s with 1s in a given integer
- 33) Can a number be expressed as a sum of two prime numbers
- 34) Calculate the area of circle
- 35) Program to find roots of a Quadratic Equation

### **Problems on Number System**

- 1) Convert Binary to Decimal
- 2) Convert binary to octal
- 3) Decimal to Binary conversion
- 4) Convert decimal to octal
- 5) Convert octal to binary
- 6) Convert octal to decimal
- 7) Convert digits/numbers to words

### **Problems on Sorting**

- 1) Bubble Sort Algorithm
- 2) Selection Sort Algorithm
- 3) Insertion Sort Algorithm
- 4) Quick Sort Algorithm
- 5) Merge sort algorithm

### **Problems on String**

- 1) Check if a given string is palindrome or not
- 2) Count number of vowels, consonants, spaces in String
- 3) Find the ASCII value of a character

- 4) Remove all vowels from the string
- 5) Remove spaces from a string
- 6) Remove characters from a string except alphabets
- 7) Reverse a String
- 8) Remove brackets from an algebraic expression
- 9) Sum of the numbers in a String
- 10) Capitalize first and last character of each word
- 11) Calculate frequency of characters in a string
- 12) Find Non-repeating characters of a String
- 13) Check if two strings are anagram of each other
- 14) Count common sub-sequence in two strings
- 15) Check if two strings match where one string contains wildcard characters
- 16) Return maximum occurring character in the input string
- 17) Remove all duplicates from the input string.
- 18) Print all the duplicates in the input string.
- 19) Remove characters from first string present in the second string
- 20) Change every letter with the next lexicographic alphabet in the given string
- 21) Write a program to find the largest word in a given string.
- 22) Write a program to sort characters in a string
- 23) Count number of words in a given string
- 24) Write a program to find a word in a given string which has the highest number of repeated letters
- 25) Change case of each character in a string
- 26) Concatenate one string to another
- 27) Write a program to find a substring within a string. If found display its starting position
- 28) Reverse words in a string