Top 20 Coding Questions and Answers for Cognizant & TCS Campus Recruitment (2025 Batch - Freshers)

1. Reverse a String

Input: "hello"

Output: "olleh"

Python:

```
s = "hello"
print(s[::-1])
```

2. Check Palindrome String

Input: "madam"

Output: Yes

Python:

```
s = "madam"
print("Yes" if s == s[::-1] else "No")
```

3. Fibonacci Series up to N

Input: 5

Output: 0 1 1 2 3

Python:

```
n = 5
a, b = 0, 1
for _ in range(n):
    print(a, end=' ')
    a, b = b, a + b
```

4. Prime Number Check

Input: 7

Output: Prime

Python:

```
n = 7
is_prime = all(n % i != 0 for i in range(2, int(n**0.5)+1))
print("Prime" if is_prime and n > 1 else "Not Prime")
```

5. Factorial Using Recursion

Input: 5

Output: 120

Python:

```python
def fact(n):
    return 1 if n==0 else n*fact(n-1)
print(fact(5))
```

6. Find Max in Array

Input: [1, 9, 3]

Output: 9

Python:

```python
arr = [1, 9, 3]
print(max(arr))
```

7. Print Diamond Pattern

Input: 3

Output:

```
  *
 ***
*****
 ***
  *
```

Python:

```python
n = 3
for i in range(n):
    print(" "*(n-i-1) + "*"*(2*i+1))
for i in range(n-2, -1, -1):
    print(" "*(n-i-1) + "*"*(2*i+1))
```

8. Anagram Check

Input: "listen", "silent"

Output: Anagram

Python:

```
s1 = "listen"
s2 = "silent"
print("Anagram" if sorted(s1)==sorted(s2) else "Not Anagram")
```

9. Second Largest in Array

Input: [2, 3, 1, 4]

Output: 3

Python:

```
arr = [2, 3, 1, 4]
arr = list(set(arr))
arr.sort()
print(arr[-2])
```

10. FizzBuzz

Print numbers 1 to 15. For multiples of 3 print "Fizz", 5 print "Buzz", both 3 and 5 print "FizzBuzz".

Python:

```
for i in range(1, 16):
    if i % 3 == 0 and i % 5 == 0:
        print("FizzBuzz")
    elif i % 3 == 0:
        print("Fizz")
    elif i % 5 == 0:
        print("Buzz")
    else:
        print(i)
```

11. Count Vowels in a String

Input: "education"

Output: 5

Python:

```
s = "education"
vowels = "aeiouAEIOU"
print(sum(1 for ch in s if ch in vowels))
```

12. Sum of Digits

Input: 1234

Output: 10

Python:

```
n = 1234
print(sum(int(d) for d in str(n)))
```

13. Remove Duplicates from Array

Input: [1, 2, 2, 3]

Output: [1, 2, 3]

Python:

```
arr = [1, 2, 2, 3]
print(list(set(arr)))
```

14. GCD of Two Numbers

Input: 12, 18

Output: 6

Python:

```
import math
print(math.gcd(12, 18))
```

15. Find Missing Number in Sequence

Input: [1, 2, 4, 5]

Output: 3

Python:

```
arr = [1, 2, 4, 5]
n = 5
print(n*(n+1)//2 - sum(arr))
```

16. Count Frequency of Elements

Input: [1, 2, 2, 3]

Output: {1:1, 2:2, 3:1}

Python:

```
from collections import Counter
```

```python
print(dict(Counter([1, 2, 2, 3])))
```

17. Binary Search (on sorted list)

Input: arr=[1,2,3,4,5], target=4

Output: Index 3

Python:

```python
def binary_search(arr, target):
    low, high = 0, len(arr)-1
    while low <= high:
        mid = (low + high)//2
        if arr[mid] == target:
            return mid
        elif arr[mid] < target:
            low = mid + 1
        else:
            high = mid - 1
    return -1
print(binary_search([1,2,3,4,5], 4))
```

18. Check Armstrong Number

Input: 153

Output: Yes

Python:

```python
n = 153
total = sum(int(d)**3 for d in str(n))
print("Yes" if total == n else "No")
```

19. Convert Decimal to Binary

Input: 10

Output: 1010

Python:

```python
print(bin(10)[2:])
```

20. Merge Two Sorted Arrays

Input: [1,3,5], [2,4,6]

Output: [1,2,3,4,5,6]

Python:

```python
arr1 = [1,3,5]
arr2 = [2,4,6]
print(sorted(arr1 + arr2))
```