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Test Name: Scaler Academy Entrance Quiz

Duration : 40 mins **Extra Time :** 0 min
Total Questions : 18
Attempted : 18 **Solved** : 6
Start Time : Thursday, 22 Sep 2022 8:32 PM +0530

Score
25.64
/100

QUESTION STATS

#	Problem	Type	Language	Score	Status	View Code
1	Find Oldest		NA	**0.0 / 30**	**Wrong Answer**	

Four friends meet after lockdown and decided to party. They decided that the oldest friends would pay the bill. Akash is two months older than Ajay, who is three months younger than Abhishek. Alice is one month older than Ajay. Who will pay the Bill?

- Akash
- Abhishek
- Ajay
- Alice

2	Find Time Complexity		NA	**0.0 / 50**	**Wrong Answer**	

What will be the time complexity of the above function where n is a positive integer?

- C++
- Java
- Python
- C#
- JS

```
void function (int n) {
    while (n > 0) {
        n++;
        n -= 2;
    }
}
```

```
public void function (int n) {
    while (n > 0) {
        n++;
        n -= 2;
    }
}
```

```
def function(n):
    while(n > 0):
        n += 1
        n -= 2
```

```
public void function (int n) {
    while (n > 0) {
        n++;
        n -= 2;
    }
}
```

```
function solve(n) {
  while(n > 0) {
   n++;
      n -= 2;
  }
}
```

- Infinite loop
- O(n)
- O(nlogn)
- O(logn)

None of the above

3	Output the code		NA	**0.0 / 50**	**Wrong Answer**

What will be the value of sum after running the below function?

- C++
- Java
- Python
- C#
- JS

```
void function(){
    int i = 0;
    int sum = 0;
    while(i < 100){
         sum = sum + i;
         sum = i + sum;
         i += 1;
    }
    cout<<sum;
}
```

```
void function(){
    int i = 0;
    int sum = 0;
    while(i < 100){
         sum = sum + i;
         sum = i + sum;
         i += 1;
    }
    System.out.println(sum);
}
```

```
def function():
    i = 0
    sum = 0
    while(i < 100):
         sum = sum + i
         sum = i + sum
         i += 1
    print(sum)
```

```
public void function(){
     int i = 0;
     int sum = 0;
     while(i < 100){
         sum = sum + i;
         sum = i + sum;
         i += 1;
     }
     Console.Write(sum);
 }
```

```
function solve() {
  var i = 0;
  var sum = 0;
  while (i < 100 ) {
   sum = sum + i;
      sum = i + sum;
      i++;
  }
  console.log(sum)
}
```

10000

9900

10100

5000

None of the above

4	Minimum Possible Maximum Sum		NA	**0.0 / 50**	**Wrong Answer**

You have an array of 10 integers: [19, 81, 2, 41, 61, 59, 28, 69, 76, 88]. Find a way to divide these integers into 5 pairs, such that, if you add up the numbers in each pair, then the maximum sum among the 5 pairs is minized. What is the minimum possible maximum sum?

- 90
- 169
- 120
- 21

5	Maths-2		NA	**50.0 / 50**	**Solved**

How many ways are there to collect 8 Rs when you have an infinite number of 1 and 2 Rs coins?

- 5
- 4
- 3
- 2
- None of the Above

6	Maths-3		NA	**0.0 / 50**	**Wrong Answer**

What is the rank of the word "BALL" in a dictionary that contains all permutation of the word "BALL" ?

- 4
- 3
- 2
- 1
- None of the above

7	Maths-4		NA	**0.0 / 50**	**Wrong Answer**

What is the smallest number that is divisible by each of the numbers given below

{1, 2, 3, 4, 5, 6, 7, 8, 9, 10 }

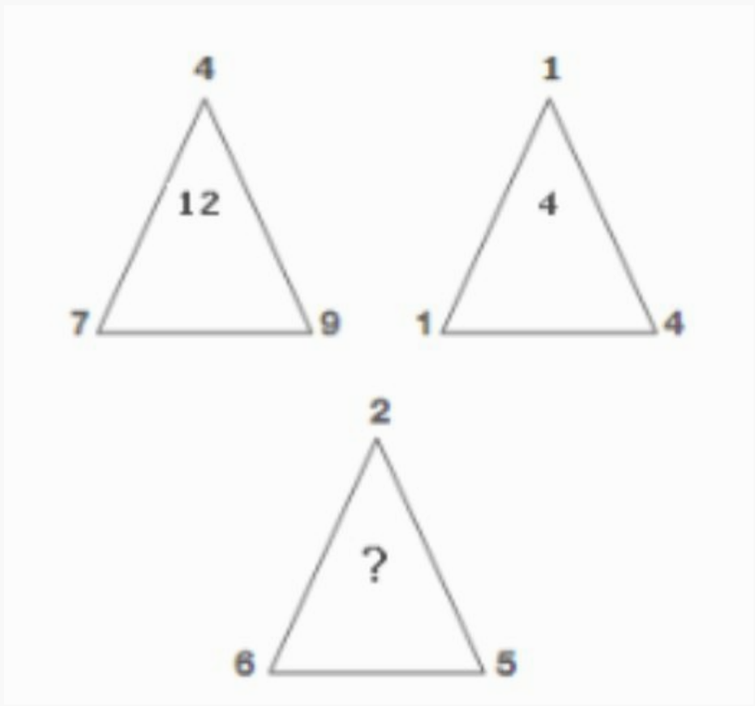
- 2520
- 1260
- 5040
- 3780
- None of the above

8	Find Age		NA	**0.0 / 50**	**Wrong Answer**

Akash is twice as old as Aman was when Akash was as old as Aman is now. The combined age of Akash and Aman is 112 years. How old are Akash and Aman now?

- Akash: 62 Aman: 50
- Akash: 64 Aman: 48
- Akash: 60 Aman: 52
- Akash: 63 Aman: 49

9	Replace Number		NA	**0.0 / 50**	**Wrong Answer**



Which number replaces the question mark?

- 1
- 8
- 9
- 4

10	Selection Probability		NA	**0.0 / 50**	**Wrong Answer**

5 candidates are applying for a job interview. Probability of getting selected is 1/ 2 for each candidate. What is the probability that atleast two candidates are selected ?

- 13/16
- 1/2
- 1/32
- 11/32
- None of the above

11	Time Complexity - 4 - II		NA	**0.0 / 50**	**Wrong Answer**

What is the time complexity of the following code snippet:

- C++
- Java

```
set < int > s;
for (int i = 1; i <= n; i++) {
    s.insert(i);
}
for (int i = 1; i <= n; i++) {
    for (int j = i; j <= n; j += i) {
        s.insert(j);
    }
}
```

```
TreeSet < Integer > s = new TreeSet < > ();
for (int i = 1; i <= n; i++) {
    s.add(i);
}
for (int i = 1; i <= n; i++) {
    for (int j = 1; j <= n; j += i) {
        s.add(j);
    }
}
```

- O(n)

- O(n^2)
- O(nlogn)
- O(n log^2(n))
- None of the above

12	Time Complexity - 5 - II		NA	**0.0 / 50**	**Wrong Answer**

Find time complexity of the following function:

- C++

```
void func(vector & amp; A, vector & amp; B) {
    A.swap(B);
}
```

NOTE: Length of A = Length of B = n

- O(1)
- O(n)
- o(logn)
- o(n^2)
- None of the above

13	Time Complexity - 6 - II		NA	**50.0 / 50**	**Solved**

What is the time complexity of the following:

- C++
- Java
- Python

```
unordered_set s;
for (int j = 0; j < n; j++) {
    s.insert(j);
}
```

```
HashSet < Integer > s = new HashSet < Integer > ();
for (int j = 0; j < n; j++)
    s.add(j);
```

```
s = set()
for j in range(n):
    s.add(j)
```

- O(n)
- O(logn)
- O(nlogn)
- O(n^2)
- None of the above

14	Coding Comprehension Question 8		NA	**50.0 / 50**	**Solved**

Predict the output of the following code:

- C++
- Java
- Python
- C#
- JS

```
int fun(int A, int B) {
    if (B == 0)
        return A;
    else
        return fun(B, A % B);
```

```
}
int main() {
    int ans = fun(100, 2000);
    printf("%d", ans);
    return 0;
}
```

```
public int fun(int A, int B) {
    if (B == 0)
        return A;
    else
        return fun(B, A % B);
}
public void main() {
    int ans = fun(100, 2000);
    System.out.println(ans);
}
```

```
def fun(A, B):
    if (B == 0):
        return A
    else:
        return fun(B, A % B)

ans = fun(100, 2000)
print(ans)
```

```
public int fun(int A, int B) {
    if (B == 0)
        return A;
    else
        return fun(B, A % B);
}
public void main() {
    int ans = fun(100, 2000);
    Console.Write(ans);
}
```

```
function fun(A, B) {
  if (B == 0)
    return A;
  return fun(B, A % B);
}
var ans = fun(100, 2000);
console.log(ans);
```

- Compile time error
- 100
- Depends on the compiler
- 2000

15	Fibonacci Output		NA	**0.0 / 50**	**Wrong Answer**

What will be the output from the following code for **n = 6** :

- C++
- Java
- Python
- C#
- JS

```
int fib(int n) {
    if (n <= 1)
        return n;
    return fib(n - 1) + fib(n - 2);
}
```

```
public int fib(int n) {
    if (n <= 1)
        return n;
    return fib(n - 1) + fib(n - 2);
}
```

```
def fib(n):
    if (n <= 1):
        return n
    else:
        return fib(n - 1) + fib(n - 2)
```

```
public int fib(int n) {
```

```
    if (n <= 1)
        return n;
    return fib(n - 1) + fib(n - 2);
}
```

```
function fib(n) {
  if (n <= 1 )
    return n;
  return fib(n - 1) + fib(n - 2);
}
```

- 8
- 7
- 6
- 5

16	Coding Comprehension Output 12		NA	**50.0 / 50**	**Solved**

What will be the output from the following code for **n = 6** :

- C++
- Java
- Python
- C#
- JS

```
int printTribRec(int n) {
    if (n == 0 || n == 1 || n == 2)
        return 0;
    if (n == 3)
        return 1;
    else
        return printTribRec(n - 1) + printTribRec(n - 2) + printTribRec(n - 3);
}
void printTrib(int n) {
    for (int i = 1; i < n; i++)
        cout << printTribRec(i) << "  ";
}
```

```
static int printTribRec(int n) {
    if (n == 0 || n == 1 || n == 2)
        return 0;
    if (n == 3)
        return 1;
    else
        return printTribRec(n - 1) + printTribRec(n - 2) + printTribRec(n - 3);
}

static void printTrib(int n) {
    for (int i = 1; i < n; i++)
       System.out.print(printTribRec(i)+" ");
}
```

```
def printTribRec(n):
    if (n == 0 or n == 1 or n == 2):
        return 0
    if (n == 3):
        return 1
    else:
        return printTribRec(n - 1) + printTribRec(n - 2) + printTribRec(n - 3)

def printTrib(n):
    for x in range(1, n):
        print(printTribRec(x))
```

```
static int printTribRec(int n) {
    if (n == 0 || n == 1 || n == 2)
        return 0;
    if (n == 3)
        return 1;
    else
        return printTribRec(n - 1) + printTribRec(n - 2) + printTribRec(n - 3);
}

static void printTrib(int n) {
    for (int i = 1; i < n; i++)
       Console.Write(printTribRec(i)+" ");
}
```

```
function printTribRec(n) {
    if (n == 0 || n == 1 || n == 2)
```

```
        return 0;
    if (n == 3)
        return 1;
    else
        return printTribRec(n - 1) + printTribRec(n - 2) + printTribRec(n - 3);
}
function printTrib(n) {
    var ans = 0;
    for (var i = 1; i < n; i++) {
       ans = ans + printTribRec(i) + " ";
    }
    console.log(ans);
}
```

- 0 0 1 1 2
- 0 0 0 1 0
- 1 2 3 4 5
- 0 0 0 1 1 2

17	Entrance Test User Survey Question 1		NA	**0.0 / 0**	**Solved**

Please answer this question and help us customize the program and community for you. Note that this question will not have any impact on your entrance score.

Can you write codes involving if/else, loops, and functions without taking any external help?

- Yes
- No

18	Entrance Test User Survey Question 2		NA	**0.0 / 0**	**Solved**

Please answer this question and help us customize the program and community for you. Note that this question will not have any impact on your entrance score.

Can you write codes involving recursion, the usage of sorting function and hashmap?

- Yes
- No

Restricted Events

Time	Event Name	IP Address