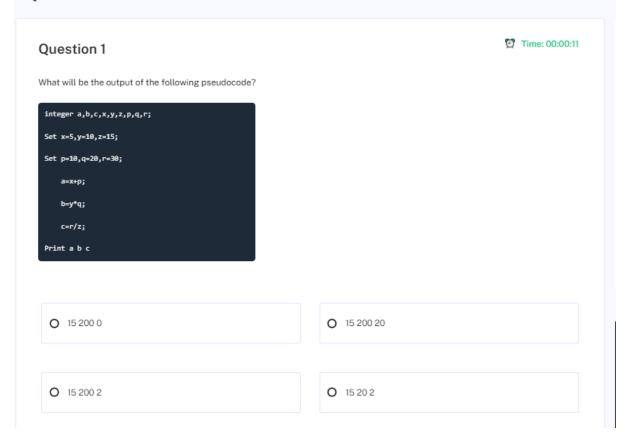
## Quiz-5



```
#include<stdio.h>
int main()
{
    int a,b,c,x,y,z,p,q,r;
    x=5,y=10,z=15;
    p=10,q=20,r=30;
    a=x+p;
    b=y*q;
    c=r/z;
    printf("%d %d %d", a,b,c);
}
```

The code performs simple mathematical calculations on numbers the value of a will be a=5+10=15 b will be  $b=10 \times 20=200$ 

Question 2 Time: 00:00:04

What will be the output of the following pseudo code when n=3?

```
Integer calc(Integer n);
if(n <- 0)
    return 0;
if(n < 1)
    return 1;

Print n
calc(n-1);

Print n</pre>
```

O 123

O 321123 O compiler error

Refer this code for the given pseudo code for better understanding the function calc()

```
#include<stdio.h>
int calc(int n)
{
    if(n <- 0)
    return 0;
    if(n < 1)
    return 1;
    printf("%d *,n);
    calc(n-1);
    printf("%d *,n);
}
int main()
{
    int n=3;
    calc(n);
}</pre>
```

In the following code, the second if condition will keep on executing until the value of n will become less than 1, once the value will become zero, all the values of n that are stored in the recursive stack will be printed, hence it will result out in the desired output

Question 3 Time: 00:00:13

What will be the output of the following code?

O 6	O 4
O 5	O compiler error

As x+y=9 and z=6

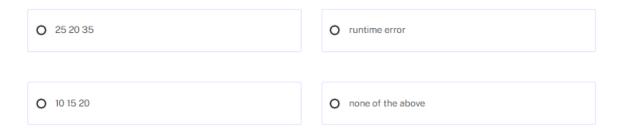
So, if(x+y>z) will be executed and as z>y so, if(z>y) will also be true. Now, y is greater than x, hence if(y>x) will be true and the value of x will be printed. Which is 4

Question 4 Time: 00:00:01

What will be the output of the following pseudocode?

```
#include <stdio.h>
int fun(int x,int y,int z)
{
    if(x>y && y>z)
    {
        return fun(y,x,z);
    }
    if(y>z && z>x)
    {
        return fun(z,y,x);
    }
    if(z>y && z>x)
    {
        return fun(x,y,z);
    }
}
```

```
int main()
{
   int a=10,b=15,c=20;
   a=a+b;
   b=a+c;
   c=b+c;
   fun(a,b,c);
}
```



The code will through a segmentation error, as there is no base condition for the recursion to stop, and hence it will keep on calling to itself.

Question 5 Time: 00:00:02

What will the output of the following code?

```
#include<stdio.h>
int fun(int i)
{
    if(i%2==0)
    return i;
    else
    return fun(i-1);
}
int main()
{
    int a=11;
    printf("%d",fun(a));
}
```



The first if condition in fun(int n) will be false, as value of i is 11, the compiler will execute the else condition which will make the value of i=10, and in the next call, the if condition will get executed and hence 10 will be printed

Question 6 Time: 00:00:05

What will be the output of the following code

```
#include<stdio.h>
int fun(int i)
{
    if(i==0)
    return 0;
    else if(i%2==0)
    return fun(i-1);
    else
    return fun(i-1);
}
int main()
{
    int a=11;
    printf("%d",fun(a));
}
```



In the following code the function fun(), will keep on calling itself, until the value of i will become zero, and once the value of i will become zero, the function will return 0, and hence that will be the output

What will be the necessary condition to get the desired element from a given array by using the following algorithms?



- O the elements should contain more than one element
- O The array should contain more than one element
- O The elements is an array should be in the sorted
- O No pre-condition is required for the algorithm to work

This is the algorithm for binary search, and it is a necessary condition for binary search that the entered data should be in a sorted form

Question 8 Time: 00:00:03

What will be the output of the following C code?

```
#include <stdio.h>
int main()
{
    int x = 12, y = 10, z = 13;
    x+y>z ? printf("%d", z);
}
```

O value of x	O value of y
O value of z	O none of the above

The ternary operator used in the code is not syntactically correct, there should be one more condition after the "?".

What will be the output of the following C code?

```
Set a=3; b=5;c=1;

a=a+b+c/2;

b=a+b/2;

if(a>b)

Print Prime Mock

else

Printf Prime Video
```

O Prime Video	O Prime Mock
O Error	O None of the above

On executing the following code, the value of a will be-3+5+1/2 = 8 b will be-8+5/2 = 10 now, since a<br/>b<br/>Prime Video will be printed

Question 10 Time: 00:00:01

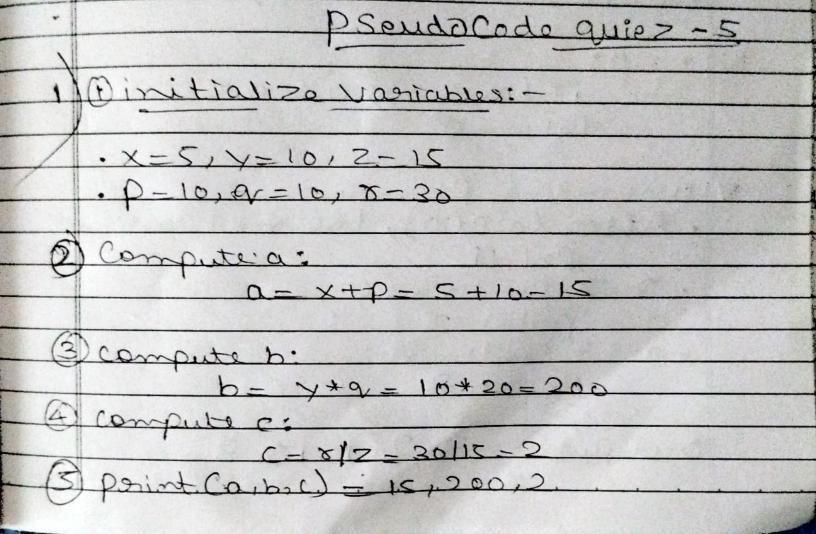
Consider the following given code and predict its output.

```
main()
int num[ ]={1,4,8,12,16};
int *a,*b;
int i;
    a=num;
    b=num+2;
    i=*a++;
    printf("%d, %d, %d\n",i,*a,*b);
```

O 1,4,8
O 2,1,8
O 4,4,8

When we have stored num in 'a' it means that we have stored num[0] i.e. 1 in 'a' and when we have stored num+2 in 'b', it means that we have stored num[2] i.e. 8 in 'b'.

Now in 'i', 1 will get stored and then a will get incremented. Now 'a'= num +1 i.e a++ so 4 will get stored in it and its previous value which is 1 will get overwritten



Date: 5/3/602:602 x-3:i if (n(=0): 3 <-0 is false if (n<1): 3 < 1 is false point 3 ( out put) calc (2) Consciusive call) if if (n<-0): > <- 0 is falle L'(nif (nx 1): D<1i2-halle Calcal Conscineral) iii) n= 1: if (n/2=0): 1<=0 is falle if (n<1): 1<1 is balle point 1 (out put) carc(0) (orocuesive (all) ivin=0: enct 210=20:(0-20) 7; V) unwinding Recursion: · After Calcoo, the nel continue Paints · n=2 Continues: perlat 2 on=3 continues: Paint 3 Dut Put: - 321193

3 i) initialize vaniable: X-A Y= 5 2=6 il) Tiest condition (x+x>2): 4+5>6 -> 9>6-> Tome in) Cecond condition (2>x): . 6>5 - Torus in Third condition (y>x): 5>4 Marce V) Noelse Execution: else is skipped 4/8teps'-First cau (3,2,1): if (3>>2 & 2>1) -> Terme Call fun (2,3, 1): ii Second Call (2,3,1): if (2,3) & & 3>1) JFalls if (3>1) && 1>2) -) Falle if (1>3) & & 1 >2) -> Falle No Condition matches, there's no Base lase Derotain Statement which results in intinite requision output - undopined Bano

in initialize : a = 10, b = 15, c = 20 Figure operation fa = atb): · Second openation (b-a+0: b-25+20-45 · Thind operation (C-b+0): · Function Call (fun Carbill):

- function Call (fun Carbill):

- funis called with argula 25,400 det offunisnot provided behavier putput - Juntine errory -SISteps:i) initial Call (funct) from main):

1-11 Coda)

11.10 2 == (-) else bled (execute)

functio) ii) Recond Call (fun (10)) i=10 (even) to:102== 0 -) if block execute Robarn 10. is unwinding Recursion: Jun (10) returns 10 to famile

6666666 Franklin of Enviolate Men 181217 oupput! pain(10) B) if 1x2 == 0 = ) ! Ci = 2 2 == 0; o=Inedeno mentero . For odd, new with? -1 - for even i, allo recursou itilal. - out put would alway boo. outputs Lompilation envordue tour delle variablexz De in the sorted Corns 8 Steps:i) Evaluate condition (x+x>=): Compute: X \* y: 12 x 10 = 120 Compano 120>13: Terre, execute printest atents. (E1) tring (=(5,000,0) tring) ting: (5 ("hors") frived & cck+ x Clause Codaisineaparate & 11 secult in

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