

Functions, Recursion in Python

Q1 The return value of below function fun(5,1,9) is _____

```
def fun(x,y,z):
    if x==y or y==z or x==z:
        return x-y+z
    elif x>y:
        return x+fun(x-1,y,z+2)
    elif y>z:
        return y+fun(x+1,y-1,z)
    else:
        return z+fun(x,y,z-1)
```

Q2 The output of below code segment is _____

```
def f(x):
    if x>20:
        return x-1
    else:
        return x+f(f(x+2))
print(f(10))
```

Q3 The output printed by below code is _____

```
def fun(i,j):
    if i==j:
        print(i+j,end=" ")
    else:
        print(i-1,j,end=" ")
        fun(i-2,j+2)
fun(12,0)
```

- (A) 12 0 10 2 8 4 12
- (B) 11 1 9 3 7 5 12
- (C) 11 0 9 2 7 4 12
- (D) 12 1 10 3 8 5 12

Q4 Consider the below code:

```
def f(i):
    count=1
    if i<=0:
        return
    for x in range(i):
        k=count+g(x+1)
        count=count+x
```

return k

```
def g(i):
    j=1
    if i<1:
        return i+1
    for x in range(i+1):
        j=j+x
    return j
```

The return value of f(5) is _____

Q5 The output printed by below code is _____

```
def f(i):
    if len(i)==0:
        return
    else:
        i[-1]=i[0]
        j=i[:-2]
        print(j)
        f(j[3:])
a=[11,23,34,45,56]
f(a)
(A) [11,23]
(B) [11,23,34]
(C) [11,23,34,45]
(D) [11,23,34,45,56]
```

Q6 def fun(n):

```
x = 1
if n == 1:
    return x
for k in range(1, n):
    x += fun(k) * fun(n - k)
return x
```

The return value of above code on f(3) call is _____

Q7 The output printed is _____

```
def foo(n: int, r: int):
    if n > 0:
        return (n % r) + foo(n // r, r)
    else:
```



```

    return 0
print(foo(513,2))

```

- (A) 0 (B) 1
(C) 2 (D) 9

Q8 The output of below python code segment is _____

```

def fun(x):
    if x > 0:
        x=x-1
        fun(x)
        print(x, end='')
        fun(x)
        x=x-1

```

fun(3)

- (A) 0102010 (B) 2012010
(C) 1010202 (D) 0101010

Q9 What will be printed by below Code Segment?

```

for i in range(10):

```

```

    print(i & 1, end=' ')

```

- (A) 1 1 1 1 1 1 1 1 1 1
(B) 0 1 0 1 0 1 0 1 0 1
(C) 1 0 1 0 1 0 1 0 1 0
(D) 0 1 0 1 1 0 1 0 0 1

Q10 The return value of fun(8) is _____

```

def fun(x):
    if x<=0:
        return x+1
    elif x<=2:
        return x+fun(x-2)
    else:
        return fun(x-1)+ fun(x-3)

```

- (A) 21 (B) 23
(C) 24 (D) 25



Answer Key

Q1 31
Q2 105
Q3 C
Q4 23
Q5 B

Q6 5
Q7 C
Q8 A
Q9 B
Q10 D



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Hints & Solutions

Note: scan the QR code to watch video solution

Q1 Text Solution:

31

Q2 Text Solution:

105

Q3 Text Solution:

C

Q4 Text Solution:

23

Q5 Text Solution:

B

Q6 Text Solution:

5

Q7 Text Solution:

C

Q8 Text Solution:

A

Q9 Text Solution:

B

Q10 Text Solution:

D



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