⌄ GATE PYQs - II

```python
# GATE 2016

def f(p: list, n: int)->int:
  if n<=1:
    return 0
  else:
    return max(f(p[1:], n-1), p[0]-p[1])

a = [3,5,2,6,4]
print(f(a,5))
```

```python
a = 1000

def f(x=a):
  z = 10
  y = x*z
  print(y)

a = 5

f()
```

```
10000
```

```python
# GATE 2015

x = 10

def f1():
  x = 25
  x += 1
  return x

def f2():
  x = 50
  def inner_f2():
    nonlocal x
    x += 1
    return x
  return inner_f2

def f3(y=x):
  z = y*10
  return z

x = 1
call_f2 = f2()

x += (f1()+call_f2()+f3()+call_f2())
print(x)
```

    230

```python
count = 0

def get(n: int)->None:
  global count
  count += 1
  if n<1:
    return
  get(n-1)
  get(n-3)

get(6)
print(count)
```

    25

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

fun(5)
```

```
51
```

```
a = "P"
b = "x"

c = ord(a and b) + ord("*")
d = ord(a or b) + ord("-")
e = ord(a)^ord(b)+ord("+")

print(c,d,e)
```

```
162 125 243
```

```
"P" and "x"
```

```
'x'
```

```
"P" or "x"
```

```
'P'
```

```
80^120
```

```
40
```