## A 8 POINTS

Full Name
Section \& Subsection
Roll \#
$\qquad$

1. ( $1 / 2$ point) What is printed?
```
xs = []
ys = [xs]
ys [0].append(1)
print(xs, ys)
```

A. Error
B. [1] [[1]]
C. [1] [1]
D. [] [[1]]
2. ( $1 / 2$ point) What is [] [0]?
A. [[]]
B. []
C. Error
D. 0
3. ( $1 / 2$ point) What is printed?

```
xs = [].extend([1, 2])
print(xs)
```

A. $[1,2]$
B. None
C. $[[1,2]]$
D. Error
4. ( $1 / 2$ point) What is printed?

```
x, y = 2, 3
if x <= y:
    x = x + y
if x <= y:
    x = x + y
else:
    x = x - y
print(x, y)
```

A. 53
B. Error
C. 23
D. 32
5. ( $1 / 2$ point) What is $\{1,2,3\}==\{2,1,3\}$ ?
A. False
B. None
C. True
D. Error
6. ( $1 / 2$ point) What is printed?

```
x, y = 2, 3
if x <= y:
    x = x + y
if x > y:
    x = x - y
print(x, y)
```

A. 23
B. Error
C. 53
D. 32
7. ( $1 / 2$ point) What is printed?

$$
\begin{gathered}
x, y=2,3 \\
\text { if } x<=y: \\
x=x+y \\
\text { elif } x>y: \\
x=x-y \\
\text { print }(x, y)
\end{gathered}
$$

A. 23
B. 32
C. 53
D. Error
8. ( $1 / 2$ point) What is $[1,2,3]==[2,1,3]$ ?
A. $[1,2,3]$
B. Error
C. True
D. False

```
x = 0
for y in range(1, 10):
    if y % 2 == 0:
        x = x + y
    else:
            x = x - y
print(x, y)
```

A. Error
B. -59
C. 459
D. 53
10. ( $1 / 2$ point) What is printed?
$\mathrm{xs}=\operatorname{list}($ range $(11,0,-1))$
ys $=\operatorname{map}(s t r, x s)$
zs = "".join(ys)
print(int(zs) \% 2)
A. 0
B. None
C. Error
D. 1
11. ( $1 / 2$ point) What is printed?
$\mathrm{x}, \mathrm{y}=0,1$ while $x<100:$
$\mathrm{x}, \mathrm{y}=\mathrm{y}, \mathrm{x}+\mathrm{y}$
print(x)
A. 233
B. 100
C. 89
D. 101
E. 144 F. 143
12. ( $1 / 2$ point) What is printed?

```
x = 4
def f(y):
    return x * x + 3
print(f(0) + f(1) + f(2))
```

A. 9
B. 7
C. 14
D. 57
13. ( $1 / 2$ point) What is printed assuming $\operatorname{succ}(\mathrm{n})$ return $\mathrm{n}+1$ ?

```
xs = list(range(100))
ys = map(succ, xs)
print(sum(ys) + sum(ys))
```

A. 0
B. 5050
C. Error
D. 10100
14. ( $1 / 2$ point) What is sum(range ( 1,20 ))?
A. 210
B. 190
C. 90
D. Error E. 45
15. ( $1 / 2$ point) What is printed?

```
def f(x):
        return x + x
def g(x):
    return x * x
print(f(g(3)))
```

A. Error
B. 12
C. 9
D. 36 E. 18
16. ( $1 / 2$ point) What is "hello world" $[20:-3:-2]$ ?
A. "d"
B. "dlr"
C. "rld"
D. None
E. Error
9. ( $1 / 2$ point) What is printed?

## B 8 POINTS

Full Name
Section \& Subsection
Roll \#

1. ( $1 / 2$ point) What is printed?
$\mathrm{x}=4$
def $f(y)$ :
return $\mathrm{x} * \mathrm{x}+3$
print (f(0) $+f(1)+f(2))$
A. 57
B. 14
C. 9
D. 7
2. ( $1 / 2$ point) What is printed?

$$
\begin{gathered}
\mathrm{x}, \mathrm{y}=2,3 \\
\text { if } \mathrm{x}<=\mathrm{y}: \\
\mathrm{x}=\mathrm{x}+\mathrm{y} \\
\text { if } \mathrm{x}>\mathrm{y}: \\
\mathrm{x}=\mathrm{x}-\mathrm{y} \\
\operatorname{print}(\mathrm{x}, \mathrm{y})
\end{gathered}
$$

A. 32
B. Error
C. 53
D. 23
3. ( $1 / 2$ point) What is $\{1,2,3\}==\{2,1,3\}$ ?
A. False
B. True
C. None
D. Error
4. ( $1 / 2$ point) What is printed?

```
x = 0
for y in range(1, 10):
        if y % 2 == 0:
        x = x + y
    else:
        x = x - y
print(x, y)
```

A. -59
B. 53
C. 459
D. Error
5. ( $1 / 2$ point) What is printed?

```
x, y = 2, 3
if x <= y:
    x = x + y
if x <= y:
    x = x + y
else:
    x = x - y
print(x, y)
```

A. 53
B. 32
C. Error
D. 23
6. ( $1 / 2$ point) What is printed?

```
x, y = 0, 1
while x < 100:
    x, y = y, x + y
print(x)
```

A. 144
B. 101
C. 233
D. 143
E. 89
F. 100
7. ( $1 / 2$ point) What is "hello world" $[20:-3:-2]$ ?
A. "rld"
B. "d"
C. Error
D. "dlr" E. None
8. ( $1 / 2$ point) What is printed?

```
def f(x):
    return x + x
def g(x):
    return x * x
print(f(g(3)))
```

A. 36
B. 18
C. 12
D. 9
E. Error
9. ( $1 / 2$ point $)$ What is $[1,2,3]==[2,1,3]$ ?
A. $[1,2,3]$
B. Error
C. False
D. True
10. ( $1 / 2$ point) What is printed assuming $\operatorname{succ}(\mathrm{n})$ return $\mathrm{n}+1$ ?

```
xs = list(range(100))
ys = map(succ, xs)
print(sum(ys) + sum(ys))
```

A. 5050
B. 0
C. Error
D. 10100
11. ( $1 / 2$ point) What is printed?
$\mathrm{x}, \mathrm{y}=2,3$
if $x<=y$ :
$\mathrm{x}=\mathrm{x}+\mathrm{y}$
elif $x$ > $y$ :
$x=x-y$
print (x, y)
A. 23
B. 53
C. 32
D. Error
12. ( $1 / 2$ point) What is printed?

```
xs = list(range(11, 0, -1))
ys = map(str, xs)
zs = "".join(ys)
print(int(zs) \% 2)
```

A. None
B. Error
C. 0
D. 1
13. ( $1 / 2$ point) What is [] [0]?
A. 0
B. []
C. Error
D. [[]]
14. ( $1 / 2$ point) What is printed?

```
xs = [].extend([1, 2])
print(xs)
```

A. None
B. Error
C. $[1,2]$
D. $[[1,2]]$
15. ( $1 / 2$ point) What is printed?
$\mathrm{xs}=[]$
$\mathrm{ys}=[\mathrm{xs}]$
ys [0]. append (1)
print(xs, ys)
A. Error
B. [1] [[1]]
C. [] [[1]]
D. [1] [1]
16. ( $1 / 2$ point) What is sum(range $(1,20)$ )?
A. Error
B. 45
C. 90
D. 190
E. 210

## C 8 Points

Full Name
Section \& Subsection
Roll \#

1. ( $1 / 2$ point) What is printed?
```
x, y = 2, 3
if }x<=y\mathrm{ :
    x = x + y
if x <= y:
    x = x + y
else:
    x = x - y
print(x, y)
```

A. 23
B. Error
C. 53
D. 32
2. ( $1 / 2$ point) What is [] [0]?
A. []
B. Error C. 0
D. [[]]
3. ( $1 / 2$ point) What is printed?

```
x, y = 2, 3
if x <= y:
    x = x + y
elif x > y:
    x = x - y
print(x, y)
```

A. 23
B. 32
C. Error
D. 53
4. ( $1 / 2$ point) What is printed?

```
x = 0
for y in range(1, 10):
    if y % 2 == 0:
        x = x + y
    else:
        x = x - y
print(x, y)
```

A. Error
B. -59
C. 53
D. 459
5. ( $1 / 2$ point) What is printed?

```
xs = list(range(11, 0, -1))
ys = map(str, xs)
zs = "".join(ys)
print(int(zs) % 2)
```

A. Error
B. 0
C. None
D. 1
6. ( $1 / 2$ point) What is printed?
$\mathrm{xs}=[]$. extend ([1, 2]) print(xs)
A. $[1,2]$
B. $[[1,2]]$
C. Error
D. None
7. ( $1 / 2$ point) What is $\{1,2,3\}==\{2,1,3\}$ ?
A. None
B. Error
C. False
D. True
8. ( $1 / 2$ point) What is printed?

```
xs = []
ys = [xs]
ys [0].append(1)
print(xs, ys)
```

A. [1] [1]
B. [] [[1]]
C. [1] [[1]]
D. Error
9. ( $1 / 2$ point) What is "hello world" $[20:-3:-2]$ ?
A. "d"
B. "dlr"
C. None
D. Error E. "rld"
10. ( $1 / 2$ point) What is sum(range ( 1,20 ))?
A. 210
B. Error
C. 190
D. 90 E. 45
11. ( $1 / 2$ point) What is $[1,2,3]==[2,1,3]$ ?
A. False
B. True
C. Error
D. $[1,2,3]$
12. ( $1 / 2$ point) What is printed?

```
x, y = 0, 1
while x < 100:
        x, y = y, x + y
print(x)
```

A. 100
B. 233
C. 143
D. 144
E. 101 F. 89
13. ( $1 / 2$ point) What is printed assuming succ ( n ) return $\mathrm{n}+1$ ?

```
xs = list(range(100))
ys = map(succ, xs)
print(sum(ys) + sum(ys))
```

A. Error
B. 0
C. 5050
D. 10100
14. ( $1 / 2$ point) What is printed?

```
x = 4
def f(y):
    return x * x + 3
print(f(0) + f(1) + f(2))
```

A. 9
B. 14
C. 7
D. 57
15. ( $1 / 2$ point) What is printed?

```
def f(x):
    return x + x
def g(x):
    return x * x
print(f(g(3)))
```

A. 36
B. 9
C. 12
D. Error
E. 18
16. ( $1 / 2$ point) What is printed?

```
x, y = 2, 3
if x <= y:
        x = x + y
if x > y:
        x = x - y
print(x, y)
```

A. 53
B. 23
C. Error
D. 32

## D 8 POINTS

Full Name
Section \& Subsection
Roll \#

1. ( $1 / 2$ point) What is printed?
```
\(\mathrm{x}, \mathrm{y}=2,3\)
if \(x<=y\) :
        \(\mathrm{x}=\mathrm{x}+\mathrm{y}\)
if \(x<=y:\)
        \(\mathrm{x}=\mathrm{x}+\mathrm{y}\)
else:
        \(x=x-y\)
print (x, y)
```

A. 53
B. 32
C. Error
D. 23
2. ( $1 / 2$ point) What is printed?
$\mathrm{x}=4$
def $f(y)$ :
return $\mathrm{x} * \mathrm{x}+3$
print (f(0) $+f(1)+f(2))$
A. 57
B. 7
C. 14
D. 9
3. ( $1 / 2$ point) What is printed?
$\mathrm{xs}=[] . \operatorname{extend}([1,2])$
print (xs)
A. Error
B. None
C. $[1,2]$
D. $[[1,2]]$
4. ( $1 / 2$ point) What is printed?

```
x, y = 0, 1
while x < 100:
    x, y = y, x + y
print(x)
```

A. 233
B. 100
C. 143
D. 101
E. 89 F. 144
5. ( $1 / 2$ point $)$ What is $[1,2,3]==[2,1,3]$ ?
A. False B. Error C. True D. [1, 2, 3]
6. ( $1 / 2$ point) What is printed?

```
x, y = 2, 3
if x <= y:
    x = x + y
elif x > y:
    x = x - y
print(x, y)
```

A. 32
B. 23
C. Error
D. 53
7. ( $1 / 2$ point) What is printed?

```
x = 0
for y in range(1, 10):
    if y % 2 == 0:
        x = x + y
    else:
        x = x - y
print(x, y)
```

A. 53
B. 459
C. Error
D. -59
8. ( $1 / 2$ point) What is sum (range $(1,20)$ )?
A. 190
B. Error
C. 210
D. 90 E. 45
9. ( $1 / 2$ point) What is printed assuming $\operatorname{succ}(\mathrm{n})$ return $\mathrm{n}+1$ ?
xs = list(range (100))
ys $=\operatorname{map}(s u c c, ~ x s)$
print (sum(ys) + sum(ys))
A. 10100
B. 5050
C. 0
D. Error
10. ( $1 / 2$ point) What is printed?
$\mathrm{xs}=[]$
$\mathrm{ys}=[\mathrm{xs}]$
ys [0]. append (1)
print (xs, ys)
A. [1] [[1]]
B. Error
C. [] [[1]]
D. [1] [1]
11. ( $1 / 2$ point) What is printed?

```
xs = list(range(11, 0, -1))
ys = map(str, xs)
zs = "".join(ys)
print(int(zs) % 2)
```

A. 1
B. 0
C. None
D. Error
12. ( $1 / 2$ point) What is "hello world" $[20:-3:-2]$ ?
A. Error
B. "dlr"
C. None
D. "rld" E. "d"
13. ( $1 / 2$ point) What is printed?

```
def f(x):
    return x + x
def g(x):
    return x * x
print(f(g(3)))
```

A. 36
B. 18
C. 9
D. 12
E. Error
14. ( $1 / 2$ point) What is printed?

```
x, y = 2, 3
if x <= y:
    x = x + y
if x > y:
    x = x - y
print(x, y)
```

A. Error
B. 23
C. 32
D. 53
15. ( $1 / 2$ point) What is $\{1,2,3\}==\{2,1,3\}$ ?
A. Error
B. True
C. None
D. False
16. ( $1 / 2$ point) What is [] [0]?
A. [[]]
B. Error
C. []
D. 0

## E 8 POINTS

Full Name
Section \& Subsection
Roll \#

1. ( $1 / 2$ point) What is "hello world" $[20:-3:-2]$ ?
A. None
B. "rld"
C. "dlr"
D. Error
E. "d"
2. ( $1 / 2$ point) What is printed?
```
xs = list(range(11, 0, -1))
ys = map(str, xs)
zs = "".join(ys)
print(int(zs) % 2)
```

A. None
B. 1
C. Error
D. 0
3. ( $1 / 2$ point) What is printed?

```
x = 4
def f(y):
    return x * x + 3
print(f(0) + f(1) + f(2))
```

A. 57
B. 14
C. 9
D. 7
4. ( $1 / 2$ point) What is printed?

```
x, y = 2, 3
if x <= y:
    x = x + y
if x > y:
    x = x - y
print(x, y)
```

A. 23
B. Error
C. 32
D. 53
5. ( $1 / 2$ point) What is $\{1,2,3\}==\{2,1,3\}$ ?
A. False
B. Error
C. None
D. True
6. ( $1 / 2$ point) What is printed?

```
xs = []
ys = [xs]
ys [0].append(1)
print(xs, ys)
```

A. [1] [1]
B. [1] [[1]]
C. [] [[1]]
D. Error
7. ( $1 / 2$ point) What is printed?

```
x, y = 0, 1
while x < 100:
    x, y = y, x + y
print(x)
```

A. 101
B. 233
C. 100
D. 143
E. 89
F. 144
8. ( $1 / 2$ point) What is printed?

```
def f(x):
    return x + x
def g(x):
    return x * x
print(f(g(3)))
```

A. 9
B. 18
C. Error
D. 36 E. 12
9. ( $1 / 2$ point) What is printed assuming $\operatorname{succ}(\mathrm{n})$ return $\mathrm{n}+1$ ?
xs = list(range(100))
$y s=\operatorname{map}(s u c c, x s)$
print(sum(ys) + sum(ys))
A. 10100
B. 0
C. 5050
D. Error
10. ( $1 / 2$ point) What is sum (range ( 1,20 ))?
A. 45
B. 90
C. 210
D. Error E. 190
11. ( $1 / 2$ point) What is [] [0]?
A. 0
B. Error
C. [[]]
D. []
12. ( $1 / 2$ point) What is printed?

```
x = 0
for y in range(1, 10):
    if y % 2 == 0:
        x = x + y
        else:
            x = x - y
print(x, y)
```

A. Error
B. 53
C. -59
D. 459
13. ( $1 / 2$ point) What is printed?
$\mathrm{x}, \mathrm{y}=2,3$
if $x<=y$ :
$\mathrm{x}=\mathrm{x}+\mathrm{y}$
elif $x$ > $y$ :
$x=x-y$
print (x, y)
A. 32
B. 23
C. 53
D. Error
14. ( $1 / 2$ point) What is printed?

```
xs = [].extend([1, 2])
print(xs)
```

A. $[[1,2]]$
B. $[1,2]$
C. None
D. Error
15. ( $1 / 2$ point) What is printed?

```
x, y = 2, 3
if x <= y:
    x = x + y
if x <= y:
    x = x + y
else:
    x = x - y
print(x, y)
```

A. 32
B. 53
C. 23
D. Error
16. ( $1 / 2$ point) What is $[1,2,3]==[2,1,3]$ ?
A. False
B. True
C. [1, 2, 3]
D. Error

## F 8 POINTS

Full Name
Section \& Subsection $\qquad$
Roll \#

1. ( $1 / 2$ point) What is printed?
```
def f(x):
    return x + x
def g(x):
    return x * x
print(f(g(3)))
```

A. Error
B. 12
C. 36
D. 18 E. 9
2. ( $1 / 2$ point) What is $[1,2,3]==[2,1,3]$ ?
A. Error
B. True
C. False
D. $[1,2,3]$
3. ( $1 / 2$ point) What is printed assuming $\operatorname{succ}(\mathrm{n})$ return $\mathrm{n}+1$ ?

```
xs = list(range(100))
ys = map(succ, xs)
print(sum(ys) + sum(ys))
```

A. 10100
B. Error
C. 0
D. 5050
4. ( $1 / 2$ point) What is printed?

```
x, y = 2, 3
if x <= y:
    x = x + y
elif x > y:
    x = x - y
print(x, y)
```

A. 32
B. 23
C. Error
D. 53
5. ( $1 / 2$ point) What is printed?

$$
\begin{aligned}
& x, y=2,3 \\
& \text { if } x<=y: \\
& x=x+y \\
& \text { if } x>y: \\
& x=x-y \\
& \text { print }(x, y)
\end{aligned}
$$

A. 53
B. 23
C. 32
D. Error
6. ( $1 / 2$ point) What is printed?

```
x = 0
for y in range(1, 10):
    if y % 2 == 0:
        x = x + y
    else:
        x = x - y
print(x, y)
```

A. 459
B. -59
C. Error
D. 53
7. ( $1 / 2$ point) What is printed?

```
x, y = 2, 3
if x <= y:
    x = x + y
if x <= y:
    x = x + y
else:
    x = x - y
print(x, y)
```

A. 32
B. 53
C. Error
D. 23
8. $(1 / 2$ point) What is printed?
$\mathrm{xs}=[]$. extend ([1, 2]) print(xs)
A. None
B. $[1,2]$
C. Error
D. $[[1,2]]$
9. ( $1 / 2$ point) What is $\{1,2,3\}==\{2,1,3\}$ ?
A. False
B. Error
C. None
D. True
10. ( $1 / 2$ point) What is printed?
$\mathrm{x}, \mathrm{y}=0,1$ while $x$ < 100:
$\mathrm{x}, \mathrm{y}=\mathrm{y}, \mathrm{x}+\mathrm{y}$
print(x)
A. 89
B. 100
C. 143
D. 233
E. 101
F. 144
11. ( $1 / 2$ point) What is printed?

```
xs = []
ys = [xs]
ys[0].append(1)
print(xs, ys)
```

A. [1] [[1]]
B. [1] [1]
C. [] [[1]]
D. Error
12. ( $1 / 2$ point) What is printed?

```
x = 4
def f(y):
    return x * x + 3
print(f(0) + f(1) + f(2))
```

A. 57
B. 7
C. 14
D. 9
13. ( $1 / 2$ point) What is [] [0]?
A. []
B. Error
C. [[]]
D. 0
14. ( $1 / 2$ point) What is printed?

```
xs = list(range(11, 0, -1))
ys = map(str, xs)
zs = "".join(ys)
print(int(zs) % 2)
```

A. Error
B. 0
C. 1
D. None
15. ( $1 / 2$ point) What is sum(range $(1,20)$ )?
A. 210
B. 45
C. 190
D. 90 E. Error
16. ( $1 / 2$ point) What is "hello world" [20:-3:-2]?
A. Error
B. None
C. "rld"
D. "dlr" E. "d"

Full Name
Section \& Subsection
Roll \#

1. ( $1 / 2$ point) What is [] [0]?
A. Error
B. [[]]
C. 0
D. []
2. ( $1 / 2$ point) What is printed?
```
def f(x):
    return x + x
def g(x):
    return x * x
print(f(g(3)))
```

A. 36
B. 9
C. Error
D. 12 E. 18
3. ( $1 / 2$ point) What is printed?

```
xs = [].extend([1, 2])
print(xs)
```

A. Error
B. $[1,2]$
C. None
D. $[[1,2]]$
4. ( $1 / 2$ point) What is printed?

$$
\begin{aligned}
& \mathrm{x}, \mathrm{y}=2,3 \\
& \text { if } \mathrm{x}<=\mathrm{y}: \\
& \mathrm{x}=\mathrm{x}+\mathrm{y} \\
& \text { if } \mathrm{x}>\mathrm{y}: \\
& \mathrm{x}=\mathrm{x}-\mathrm{y} \\
& \text { print }(\mathrm{x}, \mathrm{y})
\end{aligned}
$$

A. 53
B. 32
C. 23
D. Error
5. ( $1 / 2$ point) What is printed?

```
xs = []
ys = [xs]
ys [0]. append (1)
print(xs, ys)
```

A. Error
B. [] [[1]]
C. [1] [[1]]
D. [1] [1]
6. ( $1 / 2$ point) What is sum (range $(1,20)$ )?
A. 210
B. 90
C. 190
D. 45 E. Error
7. ( $1 / 2$ point) What is printed?

```
x, y = 0, 1
while x < 100:
    x, y = y, x + y
print(x)
```

A. 144
B. 101
C. 89
D. 143
E. 100
F. 233
8. ( $1 / 2$ point) What is printed?

```
```

x = 0

```
```

x = 0
for y in range(1, 10):
for y in range(1, 10):
if y % 2 == 0:
if y % 2 == 0:
x = x + y
x = x + y
else:
else:
x = x - y
x = x - y
print(x, y)

```
```

print(x, y)

```
```

A. -59
B. Error
C. 459
D. 53
9. ( $1 / 2$ point) What is printed?

```
x = 4
def f(y):
    return x * x + 3
print(f(0) + f(1) + f(2))
```

A. 14
B. 7
C. 9
D. 57
10. ( $1 / 2$ point) What is printed?

```
x, y = 2, 3
if x <= y:
    x = x + y
if x <= y:
    x = x + y
else:
    x = x - y
print(x, y)
```

A. 32
B. 53
C. Error
D. 23
11. ( $1 / 2$ point) What is printed assuming $\operatorname{succ}(n)$ return $n+1$ ?

```
xs = list(range(100))
ys = map(succ, xs)
print(sum(ys) + sum(ys))
```

A. Error
B. 10100
C. 5050
D. 0
12. ( $1 / 2$ point) What is printed?

```
x, y = 2, 3
if x <= y:
    x = x + y
elif x > y:
    x = x - y
print(x, y)
```

A. 53
B. 32
C. 23
D. Error
13. ( $1 / 2$ point) What is $[1,2,3]==[2,1,3]$ ?
A. Error
B. False
C. True
D. $[1,2,3]$
14. ( $1 / 2$ point) What is $\{1,2,3\}==\{2,1,3\}$ ?
A. False
B. None
C. True
D. Error
15. ( $1 / 2$ point) What is printed?

```
xs = list(range(11, 0, -1))
ys = map(str, xs)
zs = "".join(ys)
print(int(zs) % 2)
```

A. 1
B. 0
C. None
D. Error
16. ( $1 / 2$ point) What is "hello world" $[20:-3:-2]$ ?
A. None
B. "dlr"
C. "rld"
D. "d" E. Error

## H 8 POINTS

Full Name
Section \& Subsection
Roll \#

1. ( $1 / 2$ point) What is []$[0]$ ?
A. [ []]
B. 0
C. []
D. Error
2. ( $1 / 2$ point) What is printed?
```
x, y = 2, 3
if x <= y:
    x = x + y
elif x > y:
    x = x - y
print(x, y)
```

A. 23
B. 53
C. 32
D. Error
3. ( $1 / 2$ point) What is printed?

```
x = 4
def f(y):
    return x * x + 3
print(f(0) + f(1) + f(2))
```

A. 9
B. 57
C. 7
D. 14
4. ( $1 / 2$ point) What is sum(range $(1,20)$ )?
A. Error
B. 190
C. 45
D. 210 E. 90
5. ( $1 / 2$ point) What is printed?
xs = []
ys $=$ [xs]
ys [0]. append (1)
print(xs, ys)
A. [1] [[1]]
B. Error
C. [1] [1]
D. [] [[1]]
6. ( $1 / 2$ point) What is printed?

```
xs = list(range(11, 0, -1))
ys = map(str, xs)
zs = "".join(ys)
print(int(zs) % 2)
```

A. 0
B. Error
C. None
D. 1
7. ( $1 / 2$ point) What is printed?

```
x, y = 0, 1
while x < 100:
    x, y = y, x + y
print(x)
```

A. 101
B. 144
C. 89
D. 233 E. 143
F. 100
8. ( $1 / 2$ point) What is "hello world" $[20:-3:-2]$ ?
A. Error
B. None
C. "dlr"
D. "d" E. "rld"
9. ( $1 / 2$ point) What is printed assuming $\operatorname{succ}(\mathrm{n})$ return $\mathrm{n}+1$ ?

```
xs = list(range(100))
ys = map(succ, xs)
print(sum(ys) + sum(ys))
```

A. 5050
B. 10100
C. Error
D. 0
$\mathrm{x}, \mathrm{y}=2,3$
if $x$ <= $y$ :
$\mathrm{x}=\mathrm{x}+\mathrm{y}$
if $x>y$ :
$\mathrm{x}=\mathrm{x}-\mathrm{y}$
print (x, y)
A. 32
B. 53
C. 23
D. Error
11. ( $1 / 2$ point) What is printed?
xs = [].extend ([1, 2])
print(xs)
A. Error
B. None
C. $[1,2]$
D. [[1, 2]]
12. ( $1 / 2$ point) What is printed?
def $f(x)$ :
return $x+x$
def $g(x)$ :
return $x$ * $x$
print(f(g(3)))
A. 18
B. 12
C. 9
D. Error E. 36
13. ( $1 / 2$ point) What is $[1,2,3]==[2,1,3]$ ?
A. False
B. True
C. $[1,2,3]$
D. Error
14. ( $1 / 2$ point) What is printed?

```
x, y = 2, 3
if x <= y:
    x = x + y
if x <= y:
    x = x + y
else:
    x = x - y
print(x, y)
```

A. 23
B. 32
C. Error
D. 53
15. ( $1 / 2$ point) What is $\{1,2,3\}==\{2,1,3\}$ ?
A. True
B. False
C. Error
D. None
16. ( $1 / 2$ point) What is printed?

```
x = 0
for y in range(1, 10):
    if y % 2 == 0:
        x = x + y
        else:
            x = x - y
print(x, y)
```

A. 53
B. -59
C. 459
D. Error
10. ( $1 / 2$ point) What is printed?

## I 8 POINTS

Full Name
Section \& Subsection
Roll \#
$\qquad$

1. ( $1 / 2$ point) What is printed assuming $\operatorname{succ}(\mathrm{n})$ return $\mathrm{n}+1$ ?
```
xs = list(range(100))
ys = map(succ, xs)
print(sum(ys) + sum(ys))
```

A. 5050
B. Error
C. 10100
D. 0
2. ( $1 / 2$ point) What is $[1,2,3]==[2,1,3]$ ?
A. $[1,2,3]$
B. False
C. True
D. Error
3. ( $1 / 2$ point) What is printed?

```
x, y = 2, 3
if x <= y:
    x = x + y
if x > y:
    x = x - y
print(x, y)
```

A. 32
B. 53
C. Error
D. 23
4. ( $1 / 2$ point) What is printed?
$\mathrm{xs}=[]$
ys = [xs]
ys [0]. append (1)
print(xs, ys)
A. [1] [[1]]
B. [1] [1]
C. Error
D. [] [[1]]
5. ( $1 / 2$ point) What is $\{1,2,3\}==\{2,1,3\}$ ?
A. False
B. True
C. None
D. Error
6. ( $1 / 2$ point) What is [] [0]?
A. Error
B. [[]]
C. []
D. 0
7. ( $1 / 2$ point) What is printed?

```
x = 0
for y in range(1, 10):
    if y % 2 == 0:
        x = x + y
    else:
        x = x - y
print(x, y)
```

A. 459
B. 53
C. -59
D. Error
8. ( $1 / 2$ point) What is printed?

```
x, y = 0, 1
while x < 100:
    x, y = y, x + y
print(x)
```

A. 233
B. 100
C. 144
D. 143
E. 89
F. 101
9. ( $1 / 2$ point) What is printed?

```
xs = [].extend([1, 2])
print(xs)
```

A. $[1,2]$
B. Error
C. None
D. $[[1,2]]$
10. ( $1 / 2$ point) What is printed?

```
x, y = 2, 3
if x <= y:
    x = x + y
if x <= y:
    x = x + y
else:
    x = x - y
print(x, y)
```

A. Error
B. 23
C. 53
D. 32
11. ( $1 / 2$ point) What is sum (range $(1,20)$ )?
A. Error
B. 210
C. 45
D. 190 E. 90
12. ( $1 / 2$ point) What is printed?

```
x, y = 2, 3
if x <= y:
    x = x + y
elif x > y:
    x = x - y
print(x, y)
```

A. 23
B. 32
C. Error
D. 53
13. ( $1 / 2$ point) What is printed?

```
xs = list(range(11, 0, -1))
ys = map(str, xs)
zs = "".join(ys)
print(int(zs) % 2)
```

A. 0
B. Error
C. 1
D. None
14. ( $1 / 2$ point) What is printed?

```
def f(x):
    return x + x
def g(x):
    return x * x
print(f(g(3)))
```

A. 9
B. 12
C. 18
D. 36 E. Error
15. ( $1 / 2$ point) What is "hello world" $[20:-3:-2]$ ?
A. "d"
B. Error
C. "dlr"
D. None E. "rld"
16. ( $1 / 2$ point) What is printed?
$\mathrm{x}=4$
def $f(y)$ :
return $x * x+3$
print (f(0) $+f(1)+f(2))$
$\begin{array}{llll}\text { A. } 7 & \text { B. } 57 & \text { C. } 14 & \text { D. } 9\end{array}$

Full Name
Section \& Subsection
Roll \#

1. ( $1 / 2$ point) What is printed?
$\mathrm{xs}=[]$
$\mathrm{ys}=$ [xs]
ys [0]. append (1)
print(xs, ys)
A. [1] [1]
B. Error
C. [] [[1]]
D. [1] [[1]]
2. ( $1 / 2$ point) What is sum (range $(1,20)$ )?
A. 190
B. 210
C. Error
D. 45 E. 90
3. ( $1 / 2$ point) What is printed?

$$
\begin{gathered}
x, y=2,3 \\
\text { if } x<=y: \\
x=x+y \\
\text { if } x>y: \\
x=x-y \\
\text { print }(x, y)
\end{gathered}
$$

A. 53
B. 32
C. Error
D. 23
4. ( $1 / 2$ point) What is printed?

```
x, y = 2, 3
if x <= y:
    x = x + y
elif x > y:
    x = x - y
print(x, y)
```

A. 32 B. Error
C. 23
D. 53
5. ( $1 / 2$ point) What is [] [0]?
A. [[]]
B. 0
C. []
D. Error
6. ( $1 / 2$ point) What is printed?

```
def f(x):
    return x + x
def g(x):
    return x * x
print(f(g(3)))
```

A. Error
B. 18
C. 9
D. 36
E. 12
7. ( $1 / 2$ point) What is printed?

```
x = 0
for y in range(1, 10):
    if y % 2 == 0:
        x = x + y
    else:
        x = x - y
print(x, y)
```

A. 53
B. Error
C. -59
D. 459
A. 57
B. 7
C. 14
D. 9
9. ( $1 / 2$ point) What is "hello world" $[20:-3:-2]$ ?
A. Error
B. "d"
C. "dlr"
D. "rld"
E. None
10. ( $1 / 2$ point) What is printed assuming $\operatorname{succ}(\mathrm{n})$ return $\mathrm{n}+1$ ?

```
xs = list(range(100))
ys = map(succ, xs)
print(sum(ys) + sum(ys))
```

A. 0
B. Error
C. 5050
D. 10100
11. ( $1 / 2$ point) What is printed?

```
xs = [].extend([1, 2])
print(xs)
```

A. None
B. $[[1,2]]$
C. Error
D. $[1,2]$
12. ( $1 / 2$ point) What is printed?

```
x, y = 2, 3
if x <= y:
        x = x + y
if x <= y:
    x = x + y
else:
    x = x - y
print(x, y)
```

A. 53
B. 32
C. Error
D. 23
13. ( $1 / 2$ point) What is printed?

```
xs = list(range(11, 0, -1))
ys = map(str, xs)
zs = "".join(ys)
print(int(zs) % 2)
```

A. Error
B. 1
C. None
D. 0
14. ( $1 / 2$ point) What is $[1,2,3]==[2,1,3]$ ?
A. False
B. Error
C. True
D. $[1,2,3]$
15. ( $1 / 2$ point) What is printed?
$\mathrm{x}, \mathrm{y}=0,1$ while $x$ < 100:
$\mathrm{x}, \mathrm{y}=\mathrm{y}, \mathrm{x}+\mathrm{y}$
print (x)
A. 144
B. 100
C. 101
D. 143
E. 89 F. 233
16. ( $1 / 2$ point) What is $\{1,2,3\}==\{2,1,3\}$ ?
A. None
B. False
C. True
D. Error
8. ( $1 / 2$ point) What is printed?

```
x = 4
def f(y):
    return x * x + 3
print(f(0) + f(1) + f(2))
```


## K 8 POINTS

Full Name
Section \& Subsection
Roll \#

1. ( $1 / 2$ point) What is printed?
```
x = 4
def f(y):
    return x * x + 3
print(f(0) + f(1) + f(2))
```

A. 7
B. 14
C. 9
D. 57
2. ( $1 / 2$ point $)$ What is $[1,2,3]==[2,1,3]$ ?
A. False
B. $[1,2,3]$
C. Error
D. True
3. ( $1 / 2$ point) What is [] [0]?
A. []
B. Error
C. [[]]
D. 0
4. ( $1 / 2$ point) What is printed?

```
x, y = 0, 1
while x < 100:
    x, y = y, x + y
print(x)
```

A. 144
B. 89
C. 101
D. 233
E. 143
F. 100
5. ( $1 / 2$ point) What is printed?

```
x = 0
for y in range(1, 10):
    if y % 2 == 0:
        x = x + y
    else:
        x = x - y
print(x, y)
```

A. -59
B. 459 C. Error
D. 53
6. ( $1 / 2$ point) What is printed assuming $\operatorname{succ}(\mathrm{n})$ return $\mathrm{n}+1$ ?

```
xs = list(range(100))
ys = map(succ, xs)
print(sum(ys) + sum(ys))
```

A. Error
B. 5050
C. 10100
D. 0
7. ( $1 / 2$ point) What is sum (range $(1,20)$ )?
A. Error
B. 190
C. 90
D. 45
E. 210
8. ( $1 / 2$ point) What is printed?
$\mathrm{xs}=[]$. extend ([1, 2])
print(xs)
A. None
B. $[[1,2]]$
C. Error
D. $[1,2]$
9. ( $1 / 2$ point) What is printed?

```
xs = list(range(11, 0, -1))
ys = map(str, xs)
zs = "".join(ys)
print(int(zs) % 2)
```

A. 1
B. 0
C. None
D. Error
10. ( $1 / 2$ point) What is printed?
$\mathrm{x}, \mathrm{y}=2,3$
if $x<=y$ :
$\mathrm{x}=\mathrm{x}+\mathrm{y}$
if $x<=y:$ $x=x+y$
else: $x=x-y$
print (x, $y$ )
A. Error
B. 53
C. 23
D. 32
11. ( $1 / 2$ point) What is printed?
def $f(x)$ : return $x+x$
def $g(x)$ : return x * x
print (f(g(3)))
A. 9
B. 18
C. 12
D. 36
E. Error
12. ( $1 / 2$ point) What is printed?

```
x, y = 2, 3
if x <= y:
    x = x + y
if x > y:
    x = x - y
print(x, y)
```

A. Error
B. 32
C. 23
D. 53
13. ( $1 / 2$ point) What is "hello world" $[20:-3:-2]$ ?
A. "dlr"
B. None
C. "d"
D. "rld" E. Error
14. ( $1 / 2$ point) What is printed?

```
xs = []
ys = [xs]
ys [0].append(1)
print(xs, ys)
```

A. [1] [[1]]
B. [] [[1]]
C. [1] [1]
D. Error
15. ( $1 / 2$ point) What is printed?

```
x, y = 2, 3
if x <= y:
    x = x + y
elif x > y:
    x = x - y
print(x, y)
```

A. 53
B. 23
C. Error
D. 32
16. ( $1 / 2$ point) What is $\{1,2,3\}==\{2,1,3\}$ ?
A. True
B. False
C. Error
D. None

Full Name
Section \& Subsection
Roll \#

1. ( $1 / 2$ point) What is printed?
```
xs = []
ys = [xs]
ys[0].append(1)
print(xs, ys)
```

A. [1] [[1]]
B. [] [[1]]
C. Error
D. [1] [1]
2. ( $1 / 2$ point) What is "hello world" $[20:-3:-2]$ ?
A. Error
B. "d"
C. None
D. "rld"
E. "dlr"
3. ( $1 / 2$ point) What is printed?

```
x, y = 2, 3
if }x<=y\mathrm{ :
    x = x + y
if x <= y:
        x = x + y
else:
    x = x - y
print(x, y)
```

A. 32
B. 53
C. 23
D. Error
4. ( $1 / 2$ point) What is [] [0]?
A. [[]]
B. 0
C. Error
D. []
5. ( $1 / 2$ point) What is printed?

```
x = 0
for y in range(1, 10):
        if y % 2 == 0:
        x = x + y
        else:
            x = x - y
print(x, y)
```

A. 53
B. Error
C. -59
D. 459
6. ( $1 / 2$ point) What is printed?

```
x, y = 2, 3
if }\textrm{x}<=\textrm{y}
    x = x + y
if x > y:
    x = x - y
print(x, y)
```

A. 32
B. Error
C. 53
D. 23
7. ( $1 / 2$ point) What is sum (range $(1,20)$ )?
A. 210
B. 190
C. 90
D. Error
E. 45
8. ( $1 / 2$ point) What is printed?

```
xs = [].extend([1, 2])
print(xs)
```

A. None
B. $[[1,2]]$
C. $[1,2]$
D. Error
9. ( $1 / 2$ point) What is $\{1,2,3\}==\{2,1,3\}$ ?
A. True
B. False
C. Error
D. None
10. ( $1 / 2$ point) What is printed?

```
xs = list(range(11, 0, -1))
ys = map(str, xs)
zs = "".join(ys)
print(int(zs) % 2)
```

A. None
B. 0
C. 1
D. Error
11. ( $1 / 2$ point) What is printed?

```
x = 4
def f(y):
    return x * x + 3
print(f(0) + f(1) + f(2))
```

A. 14
B. 7
C. 9
D. 57
12. ( $1 / 2$ point) What is printed?

```
x, y = 2, 3
if x <= y:
    x = x + y
elif x > y:
    x = x - y
print(x, y)
```

A. Error
B. 23
C. 32
D. 53
13. ( $1 / 2$ point) What is printed?
$\mathrm{x}, \mathrm{y}=0,1$ while $x$ < 100:
$\mathrm{x}, \mathrm{y}=\mathrm{y}, \mathrm{x}+\mathrm{y}$
print( $x$ )
A. 144
B. 233
C. 100
D. 89
E. 143
F. 101
14. ( $1 / 2$ point) What is $[1,2,3]==[2,1,3]$ ?
A. False
B. Error C. [1, 2, 3]
D. True
15. ( $1 / 2$ point) What is printed?

```
def f(x):
    return x + x
def g(x):
    return x * x
print(f(g(3)))
```

A. 18
B. Error
C. 9
D. 36 E. 12
16. ( $1 / 2$ point) What is printed assuming $\operatorname{succ}(\mathrm{n})$ return $\mathrm{n}+1$ ?

```
xs = list(range(100))
ys = map(succ, xs)
print(sum(ys) + sum(ys))
```

A. 5050
B. 0
C. 10100
D. Error

## M 8 POINTS

Full Name
Section \& Subsection
Roll \#

1. ( $1 / 2$ point) What is $[1,2,3]==[2,1,3]$ ?
A. False
B. $[1,2,3]$
C. Error
D. True
2. ( $1 / 2$ point) What is printed?

$$
\begin{aligned}
& x, y=2,3 \\
& \text { if } x<=y: \\
& x=x+y \\
& \text { if } x>y: \\
& x=x-y \\
& \text { print }(x, y)
\end{aligned}
$$

A. Error
B. 32
C. 23
D. 53
3. ( $1 / 2$ point) What is "hello world" $[20:-3:-2]$ ?
A. "d"
B. Error
C. "rld"
D. None E. "dlr"
4. ( $1 / 2$ point) What is printed?

```
xs = []
ys = [xs]
ys [0].append (1)
print(xs, ys)
```

A. Error
B. [1] [1]
C. [] [[1]]
D. [1] [[1]]
5. ( $1 / 2$ point) What is printed assuming succ $(\mathrm{n})$ return $\mathrm{n}+1$ ?

```
xs = list(range(100))
ys = map(succ, xs)
print(sum(ys) + sum(ys))
```

A. 0
B. 5050
C. Error
D. 10100
6. ( $1 / 2$ point) What is printed?

```
x = 4
def f(y):
    return x * x + 3
print(f(0) + f(1) + f(2))
```

A. 7
B. 57
C. 14
D. 9
7. ( $1 / 2$ point) What is printed?

```
x = 0
for y in range(1, 10):
    if y % 2 == 0:
        x = x + y
    else:
        x = x - y
print(x, y)
```

A. Error
B. 53
C. -59
D. 459
8. ( $1 / 2$ point) What is $\{1,2,3\}==\{2,1,3\}$ ?
A. False
B. Error
C. True
D. None
9. ( $1 / 2$ point) What is [] [0]?
A. 0
B. []
C. [[]]
D. Error
$\mathrm{x}, \mathrm{y}=2,3$
if $x<=y$ :
$x=x+y$
elif $x$ > $y$ :
$x=x-y$
print (x, $y$ )
A. 53
B. Error
C. 32
D. 23
11. ( $1 / 2$ point) What is printed?

```
xs = list(range(11, 0, -1))
ys = map(str, xs)
zs = "".join(ys)
print(int(zs) % 2)
```

A. Error
B. None
C. 1
D. 0
12. ( $1 / 2$ point) What is sum(range (1, 20))?
A. Error
B. 190
C. 90
D. 210 E. 45
13. ( $1 / 2$ point) What is printed?

```
x, y = 2, 3
if x <= y:
    x = x + y
if x <= y:
    x = x + y
else:
    x = x - y
print(x, y)
```

A. 23
B. 53
C. 32
D. Error
14. ( $1 / 2$ point) What is printed?
$\mathrm{x}, \mathrm{y}=0,1$
while $x$ < 100:
$\mathrm{x}, \mathrm{y}=\mathrm{y}, \mathrm{x}+\mathrm{y}$
print(x)
A. 89
B. 144
C. 101
D. 143 E. 233 F. 100
15. ( $1 / 2$ point) What is printed?

```
xs = [].extend([1, 2])
print(xs)
```

A. Error
B. $[[1,2]]$
C. None
D. $[1,2]$
16. ( $1 / 2$ point) What is printed?

```
def f(x):
    return x + x
def g(x):
    return x * x
print(f(g(3)))
```

A. 12
B. 36
C. Error
D. 18 E. 9
10. ( $1 / 2$ point) What is printed?

Full Name
Section \& Subsection
Roll \#

1. ( $1 / 2$ point) What is printed?

$$
\begin{aligned}
& \mathrm{xs}=[] \\
& \mathrm{ys}=[\mathrm{xs}] \\
& \text { ys [0]. append (1) } \\
& \text { print(xs, ys) }
\end{aligned}
$$

A. [1] [1]
B. [1] [[1]]
C. Error
D. [] [[1]]
2. ( $1 / 2$ point) What is printed?

```
def f(x):
    return x + x
def g(x):
    return x * x
print(f(g(3)))
```

A. Error
B. 36
C. 12
D. 18 E. 9
3. ( $1 / 2$ point) What is $\{1,2,3\}==\{2,1,3\}$ ?
A. True
B. False
C. Error
D. None
4. ( $1 / 2$ point) What is "hello world" $[20:-3:-2]$ ?
A. "d"
B. "dlr"
C. None
D. Error E. "rld"
5. ( $1 / 2$ point) What is $[1,2,3]==[2,1,3]$ ?
A. Error
B. True
C. False
D. $[1,2,3]$
6. ( $1 / 2$ point) What is printed?

```
x = 4
def f(y):
    return x * x + 3
print(f(0) + f(1) + f(2))
```

A. 14
B. 9
C. 7
D. 57
7. ( $1 / 2$ point) What is printed?

```
xs = list(range(11, 0, -1))
ys = map(str, xs)
zs = "".join(ys)
print(int(zs) % 2)
```

A. 1
B. Error
C. 0
D. None
8. ( $1 / 2$ point) What is printed?

```
x, y = 2, 3
if x <= y:
    x = x + y
elif x > y:
    x = x - y
print(x, y)
```

A. Error
B. 53
C. 23
D. 32
9. ( $1 / 2$ point) What is printed assuming succ $(\mathrm{n})$ return $\mathrm{n}+1$ ?

```
xs = list(range(100))
ys = map(succ, xs)
print(sum(ys) + sum(ys))
```

A. Error
B. 10100
C. 5050
D. 0
10. ( $1 / 2$ point) What is printed?

```
x, y = 2, 3
if x <= y:
    x = x + y
if x <= y:
    x = x + y
else:
    x = x - y
print(x, y)
```

A. Error
B. 23
C. 32
D. 53
11. ( $1 / 2$ point) What is printed?

```
xs = [].extend([1, 2])
print(xs)
```

A. Error
B. $[[1,2]]$
C. $[1,2]$
D. None
12. ( $1 / 2$ point) What is printed?

```
x = 0
for y in range(1, 10):
    if y % 2 == 0:
        x = x + y
    else:
        x = x - y
print(x, y)
```

A. Error
B. 459
C. -59
D. 53
13. ( $1 / 2$ point) What is [] [0]?
A. []
B. Error
C. 0
D. [[]]
14. ( $1 / 2$ point) What is printed?

```
x, y = 0, 1
while x < 100:
    x, y = y, x + y
print(x)
```

A. 143
B. 89
C. 233
D. 101
E. 144
F. 100
15. ( $1 / 2$ point) What is sum (range $(1,20)$ )?
A. Error
B. 45
C. 210
D. 90 E. 190
16. ( $1 / 2$ point) What is printed?

```
x, y = 2, 3
if x <= y:
        x = x + y
if x > y:
    x = x - y
print(x, y)
```

A. 32
B. Error
C. 53
D. 23

