

1. What is the output of the following snippet?

```
l1 = [1,2]
for v in range(2):
    l1.insert(-1, l1[v])
print(l1)
```

- (a) [1, 2, 2, 2]
- (b) [1, 1, 1, 2]
- (c) [1, 2, 1, 2]
- (d) [1, 1, 2, 2]

2. The meaning of a positional argument is determined by:

- (a) the argument's name specified along with its value
- (b) its connection with existing variables
- (c) its value
- (d) its position within the argument list

3. Which of the following sentences are true? Choose all that apply.

```
nums = [1,2,3]
vals = nums
```

- (a) vals is longer than nums
- (b) nums is longer than vals
- (c) nums and vals are different names of the same list
- (d) nums and vals are different lists

4. An operator able to check whether two values are not equal is coded as:

- (a) not ==
- (b) <>
- (c) !=
- (d) /=

5. The following snippet:

```
def func1(a):  
    return None  
def func2(a):  
    return func1(a)*func1(a)  
print(func2(2))
```

- (a) will output 2
- (b) will cause a runtime error
- (c) will output 4
- (d) will output 16

6. The result of the following division:

```
1 // 2
```

- (a) cannot be predicted
- (b) is equal to 0.5
- (c) is equal to 0.0
- (d) is equal to 0

7. The following snippet:

```
def func(a,b):  
    return b ** a  
print(func(b=2,2))
```

- (a) will output 4
- (b) is erroneous
- (c) will return None
- (d) will output 2

8. What value will be assigned to the x variable?

```
z = 0  
y = 10  
x = y < z and z > y or y > z and z < y
```

- (a) 0
- (b) False
- (c) 1
- (d) True

9. One of the following variables' names is illegal – which one?

- (a) in_
- (b) IN
- (c) in
- (d) In

10. What is the output of the following snippet?

```
list = [x*x for x in range(5)]  
def fun(L):  
    del L[L[2]]  
    return L  
print(fun(list))
```

- (a) [0, 1, 4, 16]
- (b) [1, 4, 9, 16]
- (c) [0, 1, 4, 16]
- (d) [0, 1, 4, 9]

11. What is the output of the following piece of code?

```
x=1  
y=2  
x, y, z = x, x, y  
z, y, z = x, y, z  
print(x,y,z)
```

- (a) 1 1 2
- (b) 1 2 2
- (c) 2 1 2
- (d) 1 2 1

12. What will the output of the following snippet?

```
a = 1  
b = 0  
a = a ^ b  
b = a ^ b  
a = a ^ b  
print(a,b)
```

- (a) 0 1

- (b) 1 0
- (c) 0 0
- (d) 1 1

13. What is the output of the following snippet?

```
def fun(x):  
    if x % 2 == 0:  
        return 1  
    else:  
        return 2  
print(fun(fun(2)))
```

- (a) None
- (b) 1
- (c) the code will cause a run-time error
- (d) 2

14. Take a look at the snippet and choose the true statement:

```
nums = [1,2,3]  
vals = nums  
del vals[:]
```

- (a) nums and vals are different names of the same list
- (b) vals is longer than nums
- (c) the snippet will cause a runtime error
- (d) nums and vals are different lists

15. What is the output of the following piece of code if the user enters two lines containing 3 and 2 respectively?

```
x=int(input())  
y=int(input())  
x = x % y  
x = x % y  
y = y % x  
print(y)
```

- (a) 2
- (b) 1
- (c) 0
- (d) 3

16. What is the output of the following piece of code if the user enters two lines containing 3 and 6 respectively?

```
y=input()  
x=input()  
print(x+y)
```

- (a) 6
- (b) 3
- (c) 36
- (d) 63

17. What is the output of the following piece of code?

```
print("a","b","c",sep="sep")
```

- (a) abc
- (b) asepbsepcsep
- (c) asepbsepc
- (d) a b c

18. What is the output of the following piece of code?

```
X = 1 // 5 + 1 / 5  
print(X)
```

- (a) 0.4
- (b) 0.0
- (c) 0.2
- (d) 0

19. Assuming that the tuple is a correctly created tuple, the fact that tuples are immutable means that the following instruction:

```
tuple[1] = tuple[1] + tuple[0]
```

- (a) is fully correct
- (b) is illegal
- (c) may be illegal if the tuple contains strings
- (d) can be executed if and only if the tuple contains at least two elements

20. What is the output of the following piece of code if the user enters two lines containing 2 and 4 respectively?

```
x=float(input())
y=float(input())
print(y ** (1/x))
```

- (a) 4.0
- (b) 2.0
- (c) 1.0
- (d) 0.0

21. What is the output of the following snippet?

```
dct = { 'one':'two', 'three':'one', 'two':'three' }
v = dct['three']
for k in range(len(dct)):
    v = dct[v]
print(v)
```

- (a) two
- (b) three
- (c) one
- (d) ('one', 'two', 'three')

22. How many elements does the L list contain?

```
L = [i for i in range(-1,-2)]
```

- (a) 1
- (b) 2
- (c) 0
- (d) 3

23. Which of the following lines improperly invokes the function defined as:

```
def fun(a,b,c=0)
```

Choose all that apply.

- (a) fun(b=1):
- (b) fun(a=1,b=0,c=0):
- (c) fun(a=0,b=0):

(d) fun(0,1,2):

24. What is the output of the following snippet?

```
def fun(x,y):  
    if x == y:  
        return x  
    else:  
        return fun(x,y-1)  
print(fun(0,3))
```

- (a) 0
- (b) 1
- (c) the snippet will cause a runtime error
- (d) 2

25. How many stars will the following snippet send to the console?

```
i = 0  
while i < i + 2 :  
    i += 1  
    print("*")  
else:  
    print("*")
```

- (a) the snippet will enter an infinite loop
- (b) zero
- (c) one
- (d) two

26. What is the output of the following snippet?

```
tup = (1, 2, 4, 8)  
tup = tup[-2:-1]  
tup = tup[-1]  
print(tup)
```

- (a) 4
- (b) (4)
- (c) 44
- (d) (4,)

27. What is the output of the following snippet?

```
dd = { "1":"0", "0":"1" }  
for x in dd.values():  
    print(x,end="")
```

- (a) 1 0
- (b) the code is erroneous
- (c) 0 0
- (d) 0 1

28. What is the output of the following snippet?

```
dct = {}  
dct['1'] = (1,2)  
dct['2'] = (2,1)  
for x in dct.keys():  
    print(dct[x][1],end="")
```

- (a) 21
- (b) (1,2)
- (c) (2,1)
- (d) 12

29. What is the output of the following snippet?

```
def fun(inp=2,out=3):  
    return inp * out  
print(fun(out=2))
```

- (a) 2
- (b) the snippet is erroneous
- (c) 6
- (d) 4

30. How many hashes will the following snippet send to the console?

```
lst = [[x for x in range(3)]  
        for y in range(3)]
```



```
for r in range(3):
    for c in range(3):
        if lst[r][c] % 2 != 0:
            print("#")
```

- (a) zero
- (b) three
- (c) nine
- (d) six