

Python Questions and Answers – Lists – 5

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This set of Python Question Paper focuses on “Lists”.

1. What will be the output of the following Python code?

```
0          0, 1, 2  
1. >>>m = [[x, x + 1, x + 2] for x in range(0, 3)]
```

- B a) [[1, 2, 3], [4, 5, 6], [7, 8, 9]]
b) [[0, 1, 2], [1, 2, 3], [2, 3, 4]]
c) [1, 2, 3, 4, 5, 6, 7, 8, 9]
d) [0, 1, 2, 1, 2, 3, 2, 3, 4]

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1. `m = [[x, y] for x in range(0, 4) for y in range(0, 4)]`

- a) 8
 b) 12
 C. c) 16
 d) 32

$x = 0, 1, 2, 3$

$y = 0, 1, 2, 3$

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3. What will be the output of the following Python code?

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```
1. values = [[3, 4, 5, 1], [33, 6, 1, 2]]           [3, 4, 5, 1]
2. 
3. v = values[0][0]          ↗
4. for row in range(0, len(values)):      ↗
5.     for column in range(0, len(values[row])): 
6.         if v < values[row][column]: 
7.             v = values[row][column]
8. 
9. print(v)           → 33.
```

- a) 3



d) 33

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4. What will be the output of the following Python code?

```

1. values = [[3, 4, 5, 1], [33, 6, 1, 2]]
2.
3. v = values[0][0]      = 3.
4. for lst in values:
5.     for element in lst:
6.         if v > element:      3 > 4 ?
7.             v = element
8.
9. print(v)

```

- A.
- a) 1
 - b) 3
 - c) 5
 - d) 6

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5. What will be the output of the following Python code?

```

1. values = [[3, 4, 5, 1], [33, 6, 1, 2]]
2.
3. for row in values:

```



- a) The program prints two rows 3 4 5 1 followed by 33 6 1 2
- b) The program prints on row 3 4 5 1 33 6 1 2
- c) The program prints two rows 3 4 5 1 followed by 33 6 1 2
- d) The program prints two rows 1 3 4 5 followed by 1 2 6 33

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6. What will be the output of the following Python code?

```

1. matrix = [[1, 2, 3, 4],
2.             [4, 5, 6, 7],
3.             [8, 9, 10, 11],
4.             [12, 13, 14, 15]]
5.
6. for i in range(0, 4):
7.     print(matrix[i][1], end = " ")

```

- a) 1 2 3 4
- b) 4 5 6 7
- c) 1 3 8 12
- d) 2 5 9 13

D

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7. What will be the output of the following Python code?

```

1. def m(list):
2.     v = list[0]
3.     for e in list:
4.         if v < e: v = e
5.     return v
6.                                         3<4: v=4   4<5. v=5.
7. values = [[3, 4, 5, 1], [33, 6, 1, 2]]
8.
9. for row in values:
10.    print(m(row), end = " ")

```

- a) 3 33
- b) 1 1
- c) 5 6
- d) 5 33

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8. What will be the output of the following Python code?



```
3. print(data[1][0][0])
```

- a) 1
- b) 2
- c) 4
- d) 5

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9. What will be the output of the following Python code?

```
1. data = [[[1, 2], [3, 4]], [[5, 6], [7, 8]]]
2.
3. def ttt(m):
4.     v = m[0][0]           v= 1.      [1, 2]
5.     for row in m:         [3, 4]
6.         for element in row: [5, 6]
7.             if v < element: v = element [7, 8]
8.
9.
10.    return v
11.
12. print(ttt(data[0]))
```

- a) 1
- b) 2
- c) 4
- d) 5

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10. What will be the output of the following Python code?

```
1. points = [[1, 2], [3, 1.5], [0.5, 0.5]]
2. points.sort()
3. print(points)
```

- a) [[1, 2], [3, 1.5], [0.5, 0.5]]
- b) [[3, 1.5], [1, 2], [0.5, 0.5]]
- c) [[0.5, 0.5], [1, 2], [3, 1.5]]
- d) [[0.5, 0.5], [3, 1.5], [1, 2]]

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Python Questions and Answers – Lists – 6

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This set of Python Multiple Choice Questions & Answers (MCQs) focuses on “Lists-6”.

1. What will be the output of the following Python code?

```
a=[10,23,56,[78]]
b=list(a)
a[3][0]=95
a[1]=34 ✗
print(b)
```

*b= [[10, 23, 56, 78],
 ↗ 95
shallow copy.
only changes made in sublist
is reflected in the copied list.*

a) [10,34,56,[95]]
 b) [10,23,56,[78]]
 C. c) [10,23,56,[95]]
 d) [10,34,56,[78]]

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2. What will be the output of the following Python code?

```
print(list(zip((1,2,3),('a'),('xxx','yyy'))))      → t(1, 'a', 'xxx')]  
print(list(zip((2,4),('b','c'),('yy','xx'))))      → t(2, 'b', 'yy'), t(4, 'c', 'xx'))]
```

- a) *zip function combines the individual attributes of the lists into a list of tuples.*

`[(1,2,3),('a'),('xxx','yyy')]
[(2,4),('b','c'),('yy','xx')]`

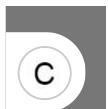
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b)

`[(1, 'a', 'xxx'),(2,'','yyy'),(3,'','')]
[(2, 'b', 'yy'), (4, 'c', 'xx')]`

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- c) Syntax error
d)



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3. What will be the output of the following Python code?

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```
import copy
a=[10,23,56,[78]]
b=copy.deepcopy(a)      → Any change made in the original
a[3][0]=95             list isn't reflected.
a[1]=34
print(b)
```

- B. b) [10,23,56,[78]]
 c) [10,23,56,[95]]
 d) [10,34,56,[78]]

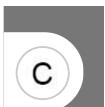
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4. What will be the output of the following Python code?

[‘a’, ‘@’, ‘b@c@d’]
[‘a’, ‘b’, ‘c’, ‘d’].

```
s="a@b@c@d"
a=list(s.partition("@"))
print(a)
b=list(s.split("@",3))
print(b)
```

- partition function:
 → only splits for the 1st parameter along with the separator
- split:
 splits for the number of times given in the 2nd argument but without the separator.



['a','b','c','d']
['a','b','c','d']

Q6.

```
a="hello"
b=list((x.upper(),len(x)) for x in a)
print(b)
```

b)

['a','@','b','@','c','@','d']
['a','b','c','d']

- a) [('H', 1), ('E', 1), ('L', 1), ('L', 1), ('O', 1)]
 b) [('HELLO', 5)]
 c) [('H', 5), ('E', 5), ('L', 5), ('L', 5), ('O', 5)]
 d) Syntax error

variable *x* iterates over each letter
 in string *a*, hence *len* of each letter is 1.

c)

Q10.

['a','@','b@c@d']
['a','b','c','d']

```
lst=[3,4,6,1,2]
lst[1:2]=[7,8] → slice
print(lst)
```

the sliced list is replaced

by the assigned elements in
 the list.

d)

['a','@','b@c@d']
['a','@','b','@','c','@','d']

- A. a) [3, 7, 8, 6, 1, 2]
 b) Syntax error
 c) [3,[7,8],6,1,2]
 d) [3,4,6,7,8]

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5. What will be the output of the following Python code?

sum

```
a=[1,2,3,4]
b=[sum(a[0:x+1]) for x in range(0,len(a))] → returns the cumulative sum
print(b)
```

4
 0, 1, 2, 3

of the elements in a list.

a) 10

x=0.

b) [1,3,5,7]

b0 = sum(1) = 1

c) 4

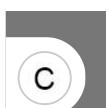
b1 = sum(1+2) = 3,

D d) [1,3,6,10]

b2 = sum(1+2+3) = 6.

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6. What will be the output of the following Python code?



- a) [('H', 1), ('E', 1), ('L', 1), ('L', 1), ('O', 1)]
- b) [('HELLO', 5)]
- c) [(('H', 5), ('E', 5), ('L', 5), ('L', 5), ('O', 5))]
- d) Syntax error

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7. What will be the output of the following Python code?

```
a=[1,2,3,4]
b=[sum(a[0:x+1]) for x in range(0,len(a))]
print(b)
```

- a) 10
- b) [1,3,5,7]
- c) 4
- D. d) [1,3,6,10]

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8. What will be the output of the following Python code?

*a=[]*3 → creates multiple reference copies of sublist.*
a[1].append(7) → When 7 is appended,
print(a) it gets appended to all the sublists.

- a) Syntax error
- B. b) [[7], [7], [7]]
- c) [[7], [], []]
- d) [[], 7, [], []]

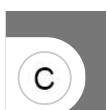
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9. What will be the output of the following Python code?

```
b=[2,3,4,5]
a=list(filter(lambda x:x%2,b))
print(a)
```

- a) [2,4] *filter, gives value from the list b*
- b) []
- C. c) [3,5] *for which the condition is true → x%2 == 1.*
- d) Invalid arguments for filter function

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Python Questions and Answers – Lists – 7

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This set of Python Multiple Choice Questions & Answers (MCQs) focuses on “Lists-7”.

1. What will be the output of the following Python code?

a=[1,2,3] → append function on list does not return anything. Thus the value of b is None.
b=a.append(4)
print(a) → a: [1, 2, 3, 4]
print(b) → b: None

a)

[1,2,3,4]
[1,2,3,4]

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b)

[1, 2, 3, 4]

None

c) Syntax error

d)

[1,2,3]

[1,2,3,4]

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2. What will be the output of the following Python code?

```
>>> a=[14, 52, 7]
>>> b=a.copy() → list b is just a copy of
>>> b is a           the original list.
```

- a) True
b) False

Any copy made in list b will
not be reflected in list a.

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3. What will be the output of the following Python code?

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```
a=[13, 56, 17]
a.append([87]) → append: simply adds its arguments to the list
a.extend([45, 67]) → extend: extends its arguments and later appends it.
print(a)
```

- A. a) [13, 56, 17, [87], 45, 67]
 b) [13, 56, 17, 87, 45, 67]
 c) [13, 56, 17, 87,[45, 67]]
 d) [13, 56, 17, [87], [45, 67]]

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

```
(45): is an int
(45,): is a tuple of 1 element.
a=list((45,)*4) → (45, 45, 45, 45)
print((45)*4) → (45, 45, 45, 45)
print(a) → [45, 45, 45, 45].
```

- a) Thus when a tuple is multiplied.
 it created references of itself which
 is later converted to a list.

180



(45,45,45)
[45,45,45]

c)

180
[45,45,45]

d) Syntax error

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5. What will be the output of the following Python code?

```
lst=[[1,2],[3,4]]  
print(sum(lst,[]))
```

↳ flatten list.

- a) [[3],[7]]
- b) [1,2,3,4]
- c) Error
- d) [10]

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6. What will be the output of the following Python code?

```
word1="Apple"  
word2="Apple"  
list1=[1,2,3]  
list2=[1,2,3]  
print(word1 is word2) T  
print(list1 is list2) F
```

both the lists are equivalent
but not identical, as they have different objects.

a)

True
True

b)



c)

False
False

d)

True
False

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7. What will be the output of the following Python code?

```
def unpack(a,b,c,d):
    print(a+d)
x = [1,2,3,4]
unpack(*x) → unpack the list into the separate
               variable,
```

- a) Error
b) [1,4]

D.

- c) [5]
d) 5

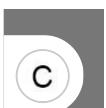
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8. What will be the output of the following Python code?

```
places = ['Bangalore', 'Mumbai', 'Delhi'] • place 1
<br class="blank" />places1 = places → is an alias of the list places
places2 = places[:] ← Hence any change made to place1 is
<br class="blank" />places1[1] = "Pune" reflected in places.
places2[2] = "Hyderabad"
print(places)
```

- a) ['Bangalore', 'Pune', 'Hyderabad']
B b) ['Bangalore', 'Pune', 'Delhi']
c) ['Bangalore', 'Mumbai', 'Delhi']

• place 2 is a copy of the list places.
Thus Any change made to place2
isn't reflected in place1.



9. What will be the output of the following Python code?

```
x=[[1],[2]]
print(" ".join(list(map(str,x))))
```

A (1) [1] [2]

b) [49] [50]

c) Syntax error

d) [[1]] [[2]]

*elements 1 & 2 are first put into separate lists
and then combined with a space in between
using the join attribute.*

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10. What will be the output of the following Python code?

```
a=165
b=sum(list(map(int,str(a))))
print(b)
```

a) 561

b) 5

C (c) 12

d) Syntax error

- ① map : converts the number to string
- ② list : places the individual digits in a list
- ③ sum : find the sum of the digits in the number.

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11. What will be the output of the following Python code?

```
a= [1, 2, 3, 4, 5]
for i in range(1, 5):
    a[i-1] = a[i]
for i in range(0, 5):
    print(a[i],end = " ")
```

- ① the items having indexes from 1 to 4 are shifted forward by one index due to the 1st loop.
- ② the item of index four is printed again

a) 5 5 1 2 3

b) 5 1 2 3 4

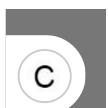
c) 2 3 4 5 1

D (d) 2 3 4 5 5

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12. What will be the output of the following Python code?

```
def change(var, lst):
    var = 1
    lst[0] = 44
```



print(k)
print(a)

Q12

a)

3
[44, 2, 3]

b)

1
[1,2,3]

c)

3
[1,2,3]

d)

1
[44,2,3]

```
def change(var, lst):
    var = 1
    lst[0] = 44
    k = 3
    a = [1, 2, 3]
    change(k, a)
    print(k) → 3
    print(a) → [44, 2, 3]
```

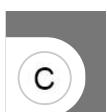
A list is mutable,
hence its value changes after
function call.

However, integer isn't mutable.
Thus its value doesn't change.

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13. What will be the output of the following Python code?

```
a = [1, 5, 7, 9, 9, 1]           b=a[0] = 1
<br class="blank" />b=a[0]          x=0,
<br class="blank" />x= 0            x=1,
for x in range(1, len(a)):      print the index of the largest
    if a[x] > b:               element in the list.
        b = a[x]
        b= x
print(b) → 4.
```



d) 0

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14. What will be the output of the following Python code?

```
a=["Apple", "Ball", "Cobra"]
<br class="blank" />a.sort(key=len)
print(a)
```

↳ the list is sorted according to
the length of the string.

- a) ['Apple', 'Ball', 'Cobra']
- B** b) ['Ball', 'Apple', 'Cobra']
- c) ['Cobra', 'Apple', 'Ball']
- d) Invalid syntax for sort()

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15. What will be the output of the following Python code?

```
num = ['One', 'Two', 'Three']
for i, x in enumerate(num):
    print('{}: {}'.format(i, x), end=" ")
```

enumerate (iterator, start=0) is a built-in function which returns:
(0, lst[0]), (1, lst[1]), ...
the lst is a list iterator)

- a) 1: 2: 3:
- b) Exception is thrown
- c) One Two Three
- D** d) 0: One 1: Two 2: Three

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