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1. What is the output when following code is executed ?
names = ['Amir', 'Bear', 'Charlton', 'Daman']
print(names[-1][-1])
a) A
b) Daman
c) Error
d) n

2. Suppose list1 = [0.5 * x for x in range(0, 4)], list1 is :
a) [0, 1, 2, 3]
b) [0, 1, 2, 3, 4]
c) [0.0, 0.5, 1.0, 1.5]
d) [0.0, 0.5, 1.0, 1.5, 2.0]

3. To add a new element to a list we use which command ?
a) list1.add(5)
b) list1.append(5)
c) list1.addLast(5)
d) list1.addEnd(5)

4. To insert 5 to the third position in list1, we use which command ?
a) list1.insert(3, 5)
b) list1.insert(2, 5)
c) list1.add(3, 5)
d) list1.append(3, 5)

5. Suppose list1 is [3, 4, 5, 20, 5, 25, 1, 3], what is list1 after list1.reverse() ?
a) [3, 4, 5, 20, 5, 25, 1, 3]
b) [1, 3, 3, 4, 5, 5, 20, 25]
c) [25, 20, 5, 5, 4, 3, 3, 1]
d) [3, 1, 25, 5, 20, 5, 4, 3]

6. What is the output when the following code is executed ?
>>>"Welcome to Python".split()
a) ["Welcome", "to", "Python"]
b) ("Welcome", "to", "Python")
c) {"Welcome", "to", "Python"}
d) "Welcome", "to", "Python"

7. What is the output when following code is executed ?
>>>list("a#b#c#d".split('#'))

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a) ['a', 'b', 'c', 'd']
b) ['a b c d']
c) ['a#b#c#d']
d) ['abcd']

8. What is the output when following code is executed ?
```
def f(values):
   values[0] = 44
v = [1, 2, 3]
f(v)
print(v)
```

a) [1, 44]
b) [1, 2, 3, 44]
c) [44, 2, 3]
d) [1, 2, 3]

9.What will be the output?
names1 = ['Amir', 'Bala', 'Chales']
```
if 'amir' in names1:
    print(1)
else:
   print(2)
```
a) None
b) 1
c 2
d) Error

10. What will be the output?
```
m = [[x, x + 1, x + 2] for x in range(0, 3)]
```
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]

11. How many elements are in m?
```
m = [[x, y] for x in range(0, 4) for y in range(0, 4)]
```

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a) 8
b) 12
c) 16
d) 32

12. What will be the output?
```
data = [[[1, 2], [3, 4]], [[5, 6], [7, 8]]]
print(data[1][0][0])
```
a) 1
b) 2
c) 4
d) 5

13. What will be the output?
```
points = [[1, 2], [3, 1.5], [0.5, 0.5]]
points.sort()
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]]

14. What is the output of the following code?
```
a=[10,23,56,[78]]
b=list(a)
a[3][0]=95
a[1]=34
print(b)
```
a) [10,34,56,[95]]
b) [10,23,56,[78]]
c) [10,23,56,[95]]
d) [10,34,56,[78]]

15. What is the output of the following code?
```
lst=[3,4,6,1,2]
lst[1:2]=[7,8]
```

```
print(lst)
```
a) [3, 7, 8, 6, 1, 2]
b) Syntax error
c) [3,[7,8],6,1,2]
d) [3,4,6,7,8]

16. What is the output of the following code?
```
a=["Apple","Ball","Cobra"]
a.sort(key=len)
print(a)
```
a) ['Apple', 'Ball', 'Cobra']
b) ['Ball', 'Apple', 'Cobra']
c) ['Cobra', 'Apple', 'Ball']
d) Invalid syntax for sort()

17. What is the out put of the code
print(list(map(lambda x: x**-1, [1, 2, 3])))
a) [1.0, 0.5, 0.3333333333333333]
b) None
c) [0.3333333333333333,1.0, 0.5]
d) error

18. Suppose t = (1, 2, 4, 3), which of the following is incorrect?
a) print(t[3])
b) t[3] = 45
c) print(max(t))
d) print(len(t))

19.What is the output of the following piece of code when executed in Python shell?
```
a=(1,2)
b=(3,4)
c=a+b
print(c)
```
a) (4,6)
b) (1,2,3,4)
c) Error as tuples are immutable
d) None

20. What is the output of the following piece of code?
```
a=[(2,4),(1,2),(3,9)]
```

```
a.sort()
print(a)
```
a) [(1, 2), (2, 4), (3, 9)]
b) [(2,4),(1,2),(3,9)]
c) Error because tuples are immutable
d) Error, tuple has no sort attribute

21. What is the output of the following code?
```
a={4,5,6}
b={2,8,6}
print(a+b)
```
a) {4,5,6,2,8}
b) {4,5,6,2,8,6}
c) Error as unsupported operand type for sets
d) Error as the duplicate item 6 is present in both sets

22. What is the output of the following piece of code?
```
a={5,6,7,8}
b={7,8,10,11}
print(a^b)
```

a) {5,6,7,8,10,11}
b) {7,8}
c) Error as unsupported operand type of set data type
d) {5,6,10,11}

23. What is the output of the following piece of code?
```
a={5,6,7,8}
b={7,5,6,8}
print(a==b)
```

a)True
b)False
c)None
d)Error

24. Is the following piece of code valid?
```
a={3,4,{7,5}}
print(a[2][0])
```

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a) Yes, 7 is printed
b) Error, elements of a set can't be printed
c) Error, unhashable type: 'set'
d) Yes, {7,5} is printed

25. What is the output of the following piece of code?
a={1,2,3}
b=a.copy()
b.add(4)
print(a)

a) {1,2,3}
b) Error, invalid syntax for add
c) {1,2,3,4}
d) Error, copying of sets isn't allowed

26. What is the output of the following piece of code?
a={1,2,3}
b={1,2,3}
c=a.issubset(b)
print(c)

a) True
b) Error, no method called issubset() exists
c) Syntax error for issubset() method
d) False

27. Set makes use of _____
Dictionary makes use of _____
a) keys, keys
b) key values, keys
c) keys, key values
d) key values, key values

28. Write a list comprehension for number and its cube for:
l=[1, 2, 3, 4, 5, 6, 7, 8, 9]

a) [x**3 for x in l]
b) [x^3 for x in l]

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c) [x**3 in l]
d) [x^3 in l]

29. What is the output of the code shown below?
```
for x in set('pqr'):
    print(x*2,end="")
```
a) pp, rr, qq
b) pqr, pqr
c) ppqqrr
d) pqrpqr

30. What is the output of the code shown below?
```
s1={1, 2, 3}
s2={3, 4, 5, 6}
print(s1.difference(s2))
print(s2.difference(s1))
```

a) {1, 2}
 {4, 5, 6}
b) {1, 2}
 {1, 2}
c) {4, 5, 6}
 {1, 2}
d) {4, 5, 6}
 {4, 5, 6}