

# 31st Jan quiz

10 out of 10 correct

1. Which of the following data types can be stored in a list?

1. int, float, complex
2. str, list, tuple, set
3. dict, NoneType, bytes
4. bool, frozenset, range

- ☐ 1 and 2 are correct
- ☐ 1, 2 and 3 are correct
- ☒ 1, 2, 3 and 4 are correct
- ☐ None

**Explanation:** A list is a collection datatype in python. They can store multiple items of different datatypes in a single list variable. So all of the above are correct.

2. Which of the following is correct for a list?

1. List can be indexed.
2. Lists can be sliced.
3. Lists can be concatenated.
4. Lists items can be reassigned.

- ☐ 1 and 2 are correct
- ☐ 1, 2, and 3 are correct
- ☐ 1, 2, and 4 are correct

☒ All statements are correct.

**Explanation:** Lists can be indexed, sliced, or concatenated and item reassignment is possible. `L = [1,2,3,4,5,6,7,8]` Indexing: `L[4]` à 5 Slicing: `L[0:4]` à 1,2,3,4 Concatenation: `[1,2] + [3,4]` à [1,2,3,4] Reassignment: `L[0] = 'Hello'` à ['Hello', 2,3,4,5,6,7,8]

3. Which of the following is correct for a list?

1. List is unordered.
2. List is mutable.
3. List allows duplicate.
4. Lists allow users to store only a single data type.

☒ 2 and 3 are correct

☐ 1 and 4 are correct

☐ All statements are correct.

☐ None

**Explanation:** The list is ordered, mutable, and allows duplicate items. But a list can store multiple data types in a single variable.

4. Which of the following list methods definition is correct?

1. `append()`: Adds an element at the end of the list.
2. `extend()`: Add the elements of any iterable, to the end of the current list.
3. `remove()`: Removes the item with the specified value
4. `pop()`: Adds an element at the specified position

☐ 1, 2, and 4 are correct

☒ 1, 2, and 3 are correct.

☐ 1 and 2 are correct

☐ All statements are correct

**Explanation:** `append()`, `extend()`, and `remove()` are the list methods and their definition is correct. `Pop()` is also a list method, but its definition is incorrect. The given definition is of the `insert()` method. The correct definition for the `pop()` method is to remove the element at the specified position.

5. What will be the output of the following code:

```
list_out=[]  
for i in range(0,51,10):  
    list_out.append(str(i))  
print(list_out)
```

- ☐ [0, 10, 20, 30, 40]
- ☐ ['0', '10', '20', '30', '40']
- ☒ ['0', '10', '20', '30', '40', '50']
- ☐ [0, 10, 20, 30, 40, 50]

**Explanation:** The for loop runs over a range of 1 to 50 with a step size of 10. In each iteration, the value of `i` is converted to a string datatype and is appended to the `list_out` list.

6. Which of the following is correct for a tuple?

- 1. Tuple is ordered.
  - 2. Tuple is mutable.
  - 3. Tuple allows duplicate.
  - 4. The following is not a tuple: (45, )
- ☐ 1, and 2 are correct.
  - ☒ 1, and 3 are correct.
  - ☐ 1, 2, 3, and 4 are correct.
  - ☐ None

**Explanation:** The Tuple is ordered, immutable, and allows duplicate items. Also if the user will not assign a comma after adding a single item in the tuple, then that variable will not be a tuple. In this case, if the comma is removed then the data type of the variable thus created will be int.

7. Is Item assignment allowed in tuples?

- ☐ True
- ☒ False
- ☐ Insufficient data
- ☐ None

**Explanation:** Since by default a tuple is immutable, hence item assignment is not possible.

8. Select the correct option for the following code:

```
numbers = (1,2,3,4,5, 5,4,3,2,1)
list=[]
for number in numbers:
    list.append(number**2)
print(set(list))
```

- ☐ [1, 4, 9, 16, 25, 25, 16, 9, 4, 1]
- ☐ (1, 4, 9, 16, 25, 25, 16, 9, 4, 1)
- ☒ {1, 4, 9, 16, 25}
- ☐ {1, 4, 9, 16, 25, 25, 16, 9, 4, 1}

**Explanation:** In the above code for loop iterates in numbers tuple. Each number in every iteration is squared and appended to a list. This list is the typecasted to set and all the duplicate items are removed.

9. Which two methods are used to join the two sets?

- ☐ + and join()
- ☒ union() and update()
- ☐ append() and extend()
- ☐ None

**Explanation:** union() method returns a new set containing all the items from both sets after removing duplicates if any. update() method inserts all the items from one set to another after removing duplicates if any.

10. Which of the following methods are used for tuples and sets?

1. Tuples: count() and index()
  2. Tuples: append() and extend()
  3. Sets: add(), pop() and union()
  4. Sets: union(), update(), and index()
- ☐ 1, and 2 are correct.
- ☒ 1, and 3 are correct
- ☐ 1, 2, 3, and 4 are correct.
- ☐ 2, and 3 are correct.

**Explanation:** count() and index() are the only methods available for tuples. This is because tuples are immutable. add(), pop(), union(), and update() are methods for the set, but index() is used for lists and tuples.

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