40 Multiple-Choice Questions:

1. What is a Python list?
   a. Immutable collection of elements
   b. Ordered collection of elements
   c. Unordered collection of unique elements
   d. Key-value pair collection

Answer: b

2. How do you access the third element of a list in Python?
   a. `list(3)`
   b. `list[2]`
   c. `list(2)`
   d. `list[3]`

Answer: b

3. What is the purpose of the `append()` method for lists in Python?
   a. Remove an element
   b. Add an element to the end
   c. Sort the list
   d. Create a new list

Answer: b

4. Which of the following is an example of a set in Python?
   a. `[1, 2, 3]`
   b. `{1, 2, 3}`
   c. `{'a': 1, 'b': 2}`
   d. `("apple", "banana", "orange")`

Answer: b

5. How do you check if an element is in a set?
   a. `element in set`
   b. `set.contains(element)`
   c. `set.has(element)`
   d. `element.exist(set)`

Answer: a

6. What is the key characteristic of a tuple in Python?
   a. Mutable
   b. Unordered
   c. Immutable
   d. Unique

Answer: c

7. How do you sort a list in descending order?
   a. `list.sort(reverse=True)`
   b. `sorted(list, reverse=True)`
   c. `list.reverse()`
   d. `reverse(list)`

Answer: b

8. Which method is used for a shallow copy of a list in Python?
   a. `list.copy()`
   b. `copy(list)`
   c. `list.shallow_copy()`
   d. `list[:]`

Answer: a

9. In Python, what is the purpose of the `items()` method for dictionaries?
   a. Retrieve keys
   b. Retrieve values
   c. Retrieve key-value pairs
   d. Check existence

Answer: c

10. What is the result of the expression `my_dict.get('key', 'default')` if 'key' is not present in `my_dict`?
   a. Raises an error
   b. Returns `None`
   c. Returns `'default'`
   d. Returns `False`

Answer: c

11. Which of the following removes the last element from a list in Python?
   a. `list.pop(0)`
   b. `list.pop()`
   c. `list.remove(-1)`
   d. `list.delete(-1)`

Answer: b

12. What does the `union()` method do for sets in Python?
   a. Finds common elements
   b. Combines two sets
   c. Calculates the symmetric difference
   d. Returns a new set with common elements

Answer: b

13. How do you create a dictionary in Python?
   a. `my_dict = [1, 2, 3]`
   b. `my_dict = {1, 2, 3}`
   c. `my_dict = {'a': 1, 'b': 2}`
   d. `my_dict = (1, 2, 3)`

Answer: c

14. Which method is used for a deep copy of a dictionary in Python?
   a. `copy.deepcopy()`
   b. `dict.copy()`
   c. `copy.copy()`
   d. `dict.deepcopy()`

Answer: a

15. What does the `symmetric_difference()` method do for sets in Python?
   a. Finds common elements
   b. Combines two sets
   c. Calculates the symmetric difference
   d. Returns a new set with common elements

Answer: c

16. Which of the following is an example of a shallow copy of a list?
   a. `new_list = list.copy(original_list)`
   b. `new_list = original_list[:]`
   c. `new_list = copy.deepcopy(original_list)`
   d. `new_list = original_list.copy()`

Answer: b

17. How do you add a new key-value pair to a dictionary in Python?

   a. `my_dict.add('key', 'value')`
   b. `my_dict.append('key', 'value')`
   c. `my_dict['key'] = 'value'`
   d. `my_dict.insert('key', 'value')`

Answer: c

18. What is the purpose of the `count()` method for tuples in Python?
   a. Returns the number of elements
   b. Returns the sum of elements
   c. Returns the average of elements
   d. Returns the maximum element

Answer: a

19. How do you check if a key exists in a dictionary?
a. `key in my_dict`
b. `my_dict.contains(key)`
c. `my_dict.has_key(key)`
d. `key.exist(my_dict)`

Answer: a

20. What is the purpose of the `intersection()` method for sets in Python?
a. Finds common elements
b. Combines two sets
c. Calculates the symmetric difference
d. Returns a new set with common elements

Answer: a

21. Which of the following creates a copy of a set in Python?
a. `set.copy()`
b. `new_set = set`
c. `new_set = set[:]`
d. `set(new_set)`

Answer: a

22. How do you remove an element from a set in Python?
a. `set.remove(element)`
b. `set.discard(element)`
c. `set.delete(element)`
d. `set.pop(element)`

Answer: b

23. What does the `clear()` method do for dictionaries in Python?
a. Removes a specific key-value pair
b. Deletes the dictionary
c. Clears all elements from the dictionary
d. Creates a shallow copy

Answer: c

24. How do you check the length of a list in Python?
a. `len(list)`
b. `list.length()`
c. `list.size()`
d. `length(list)`

Answer: a

25. What is the purpose of the `values()` method for dictionaries in Python?
   a. Returns the list of keys
   b. Returns the list of values
   c. Returns the average of values
   d. Returns the maximum value

Answer: b

26. Which of the following is the correct way to create an empty list in Python?
   a. `new_list = list()`
   b. `new_list = []`
   c. `new_list = {}`
   d. `new_list = ()`

Answer: b

27. What does the `difference()` method do for sets in Python?
   a. Finds common elements
   b. Combines two sets
   c. Calculates the symmetric difference
   d. Returns a new set with elements not present in the other set

Answer: d

28. How do you update the value of a specific key in a dictionary in Python?
   a. `my_dict.update('key', 'new_value')`
   b. `my_dict['key'] = 'new_value'`
   c. `my_dict.replace('key', 'new_value')`
   d. `my_dict.modify('key', 'new_value')`

Answer: b

29. Which method is used for a shallow copy of a set in Python?
   a. `set.shallow_copy()`
   b. `copy(set)`
   c. `set.copy()`
   d. `set[:]`

Answer: c

30. What is the purpose of the `reverse()` method for lists in Python?
   a. Sorts the list in ascending order
   b. Reverses the order of elements in the list
   c. Removes duplicate elements
   d. Adds an element to the end

Answer: b

31. How do you remove an element from a list by its value in Python?
a. `list.remove(value)`
b. `list.delete(value)`
c. `list.pop(value)`
d. `list.erase(value)`

Answer: a

32. Which method is used for a deep copy of a set in Python?
a. `copy.deepcopy()`
b. `set.copy()`
c. `copy.copy()`
d. `set.deepcopy()`

Answer: c

33. What is the purpose of the `items()` method for lists in Python?
a. Returns the sum of elements
b. Returns the average of elements
c. Returns key-value pairs as tuples
d. Returns the maximum element

Answer: c

34. How do you add a new element to the end of a list in Python?
a. `list.add(element)`
b. `list.push(element)`
c. `list.append(element)`
d. `list.insert(element)`

Answer: c

35. What is the purpose of the `update()` method for dictionaries in Python?
a. Adds a new key-value pair
b. Updates the values of existing keys
c. Deletes a key-value pair
d. Creates a new dictionary

Answer: b

36. Which of the following removes the last element from a set in Python?
a. `set.pop()`
b. `set.remove(-1)`
c. `set.delete(-1)`
d. `set.pop(-1)`

Answer: a

37. How do you create a shallow copy of a tuple in Python?
a. `new_tuple = tuple.copy(original_tuple)`
b. `new_tuple = original_tuple.copy()`
c. `new_tuple = tuple(original_tuple)`
d. `new_tuple = copy(original_tuple)`

Answer: c

38. What is the purpose of the `pop()` method for dictionaries in Python?
a. Removes a specific key-value pair
b. Deletes the dictionary
c. Clears all elements from the dictionary
d. Removes the last key-value pair

Answer: a

39. How do you check if a set is a subset of another set in Python?
a. `set1.is_subset(set2)`
b. `set1.issuperset(set2)`
c. `set1.issubset(set2)`
d. `set1.subset(set2)`

Answer: c

40. What is the purpose of the `difference_update()` method for sets in Python?
a. Finds common elements
b. Combines two sets
c. Calculates the symmetric difference
d. Updates the set with elements not present in the other set

Answer: d