



# Test

## Basics of Python List

### Section 1: Multiple Choice Questions (MCQs)

1. Which of the following correctly creates a list in Python?
  - a) list = {1, 2, 3, 4}
  - b) list = (1, 2, 3, 4)
  - c) list = [1, 2, 3, 4]
  - d) list = <1, 2, 3, 4>
2. What will be the output of the following code?

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

- a) 1
  - b) 2
  - c) 3
  - d) 4
3. Which method is used to add an element to the end of a list?
    - a) insert()
    - b) append()
    - c) extend()
    - d) add()
  4. What will be the output of the following code?

```
my_list = [1, 2, 3]
my_list.append([4, 5])
print(my_list)
```

- a) [1, 2, 3, 4, 5]
  - b) [1, 2, 3, [4, 5]]
  - c) [1, 2, 3, 4], [5]
  - d) Error
5. How do you remove an element from a specific index in a list?
- a) remove()
  - b) pop()
  - c) delete()
  - d) discard()

## Section 2: Practical Questions

1. **List Creation:** Write a Python program to create a list of 5 numbers and print the list.
  2. **Accessing Elements:** Given the list `my_list = ['apple', 'banana', 'cherry', 'date']`, write code to print the second element from the list.
  3. **List Modification:** Write a Python program to replace the third element of a list with the value `100`.
  4. **List Operations:** Write a Python program to add the elements of two lists `list1 = [1, 2, 3]` and `list2 = [4, 5, 6]` into a single list.
  5. **List Slicing:** Given the list `numbers = [10, 20, 30, 40, 50, 60, 70]`, write code to print only the first four elements using slicing.
  6. **List Sorting:** Write a Python program to sort a list of numbers in ascending order.
  7. **List Filtering:** Write a Python program that takes a list of numbers and prints only the even numbers.
  8. **Finding Maximum and Minimum:** Write a Python program to find the maximum and minimum values in a list of integers.
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