

## Python Practice Questions (40 Questions)

### A. Variables & Data Types — 10 Questions

1. Create a variable ``age`` with your age and print its data type.
2. Store the price of 1 kg apples in a float variable. Print it.
3. Create a string variable containing your full name. Print the first and last characters.
4. Create a list of 5 city names. Print the third city.
5. Create a tuple of 4 mobile brands. Print the last brand.
6. Create a set of 5 unique numbers. Print the set.
7. Create a dictionary representing a student with keys: name, age, grade. Print the value of "grade".
8. Store a boolean value indicating whether you are above 18. Print it.
9. Create three variables ``a``, ``b``, ``c`` in a single line with values 10, 20, 30. Print all.
10. Create a variable with value ``"100"`` and check its data type.

### B. Type Casting — 10 Questions

11. Convert the string ``"25"`` to an integer and add 10.
12. Convert the float ``35.8`` to an integer and print the result.
13. Convert the number ``100`` to a string and print its length.
14. Convert a list ``[1, 2, 3, 3]`` into a set. Print the result.
15. Convert a tuple ``(10, 20, 30)`` into a list.
16. Convert a list of characters ``['P', 'y', 't', 'h', 'o', 'n']`` into a string.
17. Convert boolean ``True`` into an integer and print it.
18. Convert integer ``0`` into boolean and print it.
19. Convert the string ``"3.14"`` into a float and multiply by 2.
20. Convert dictionary keys ``{"a": 1, "b": 2}`` into a list. Print the list.

### C. Arithmetic Operators — 8 Questions

21. Take two numbers and print their sum, difference, product, and division.
22. Using variables ``length`` and ``width``, calculate the area of a rectangle.
23. Calculate the remainder when 27 is divided by 4.
24. Using exponent operator, calculate  $5^3$ .
25. Print the floor division result of  $29 // 4$ .
26. Add 10 to a number using ``+=`` operator.

27. Multiply a number by 5 using `*` operator.

28. Calculate simple interest using  $P \times R \times T / 100$ .

#### D. Comparison Operators — 6 Questions

29. Compare if 10 is greater than 5.

30. Check if two strings `"Hello"` and `"hello"` are equal.

31. Check if the number of items in list `[1,2,3]` is equal to tuple `(1,2,3)`.

32. Check if 50 is not equal to 100.

33. Check if float `10.0` is equal to int `10`.

34. Compare two sets `{1,2,3}` and `{3,2,1}` for equality.

#### E. Logical Operators — 6 Questions

35. Check if a number is greater than 10 AND less than 20.

36. Check if `"apple"` exists in list `["apple", "banana", "grapes"]` AND length of list is 3.

37. Check if age is less than 18 OR `is_student=True`.

38. Check NOT operation on a boolean variable.

39. Check if a value is NOT present in a set.

40. Check if a number is between 1 and 100 (inclusive) using logical operators.