

# Python Practice Questions (Chapters 1–5)

1. Write a Python program that imports the math module and prints the square root of 144.
2. Install an external module (e.g., pyjokes) using pip and display one random joke.
3. Use Python as a calculator to compute  $((12+5) * 3) / 7$ .
4. Create a program that prints today's date using the datetime module.
5. Write a program with both single-line and multi-line comments explaining its steps.
6. Take two numbers as input from the user and display their product and quotient.
7. Write a program to check whether a user-entered number is odd or even.
8. Demonstrate typecasting by converting a string '123.45' into a float and then into an integer.
9. Create a variable to store your age and check if you are eligible to vote ( $\geq 18$ ).
10. Write a program to calculate the simple interest given P, R, T entered by the user.
11. Write a program that takes a user's full name as input and prints only the initials (e.g., 'Harry Potter'  $\rightarrow$  'H.P.').
12. Ask the user to input a sentence and count the number of vowels in it.
13. Replace all occurrences of 'Python' with 'Java' in a given string.
14. Check if a given string is a palindrome (e.g., 'madam', 'racecar').
15. Write a program that formats the following message with escape sequences: Dear , Welcome to Python Learning! Regards,
16. Take 5 integers as input from the user, store them in a list, and print the maximum and minimum values.
17. Write a program to reverse a list without using the built-in reverse() method.
18. Create a tuple containing 10 numbers and print only the even numbers.
19. Write a program to merge two lists and remove duplicate values.
20. Count how many times the value 5 appears in a tuple (5, 3, 7, 5, 9, 5, 1).
21. Create a dictionary to store names of 3 students as keys and their marks as values. Print the student with the highest marks.
22. Write a program to update a dictionary with a new key–value pair and then print all keys separately.
23. Create a dictionary of 5 fruits with their colors. Ask the user to enter a fruit name and print its color (if present).
24. Make a set of numbers {1,2,3,4,5} and demonstrate union, intersection, and difference with another set {4,5,6,7}.
25. Write a program to remove duplicates from the list [2,4,6,2,8,4,10] using a set.
26. Create a dictionary with 4 friends' names as keys and their favorite programming language as values. If two friends enter the same language, does the dictionary allow it? Print the dictionary.
27. Write a program to check whether the key 'Python' exists in a given dictionary.

28. Create an empty set. Add 5 numbers entered by the user and then print the length of the set.

29. Can a set contain both 25 (int) and '25' (string)? Write a small program to check and print the result.

30. Write a Python program that asks the user to enter 5 numbers and stores only unique numbers using a set. Finally, display the set.