

Python Question Paper

Section A: Easy

1. What is Python? Mention two features of Python.
2. Write a Python program to print "Hello, World!".
3. How do you declare a variable in Python? Give an example.
4. Identify the datatype of the following: `x = 3.14`, `y = "Python"`, `z = True`.
5. What is the output of: `print(5 + 3 * 2)`?
6. Write a program to check if a number is positive or negative using if-else.
7. How do you take user input in Python? Write a line of code for it.
8. Create a list of 3 fruits and print the second fruit.
9. Define a tuple. How is it different from a list?
10. Write a program to check if the word "python" is present in a given string.

Section B: Medium

1. Write a Python program to swap two variables without using a third variable.
2. Explain the difference between `==` and `is` in Python with examples.
3. Write a program to check whether a given number is even or odd using a function.
4. Create a list of numbers and print only the even numbers using a for loop.
5. How do you slice a string in Python? Give an example.
6. Write a program to find the largest of three numbers using if-elif-else.
7. Write a program to count the number of vowels in a string.
8. Create a tuple with five elements. Try to change the second element. What happens?
9. Explain the difference between `append()` and `extend()` in lists with examples.
10. Use a while loop to print numbers from 10 down to 1.

Section C: Hard

1. Write a Python function that returns the factorial of a given number using recursion.
2. Given a list of integers, write a program to remove duplicates without using `set()`.
3. Write a Python program that takes a sentence and prints each word on a new line, sorted alphabetically.
4. Explain how memory is managed in Python.

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5. Write a program to reverse a string without using built-in functions.
6. Create a list of tuples, where each tuple contains a student name and their marks. Write a program to find the student with the highest marks.
7. Write a program to check if a string is a palindrome.
8. Implement a simple calculator using if-elif-else that can perform +, -, *, and / operations.
9. Write a program that prints the frequency of each character in a string.
10. Given a list of numbers, find the second largest number without using max() twice.