Q1. Does assigning a value to a string's indexed character violate Python's string immutability?

Ans:  **No, it doesn’t violate the Python string immutability.**

Q2. Does using the += operator to concatenate strings violate Python's string immutability? Why or why not?

**Ans: an object is mutable when we can change the value held in the memory location without changing the memory location itself. So, the strings are still immutable as we can’t assign a different character of a string to the same memory location. However using the concatenating operator on the variable doesn’t prove the immutability of the string as it starts to point to a different string all together as it is behaving as a pointer.**

Q3. In Python, how many different ways are there to index a character?

**Ans: through indexing: with positive index and negative index**

Q4. What is the relationship between indexing and slicing?

Ans: **indexing is used to retrieve a single character and slicing is used to get a sequence of characters. In indexing, we provide only single element’s index location whereas, slicing requires you to enter the start and end point of the string from where a substring to be retrieved.**

Q5. What is an indexed character's exact data type? What is the data form of a slicing-generated substring?

Ans: **The data type for both of them is Str.**

Q6. What is the relationship between string and character "types" in Python?

**Ans: Python doesn’t have a character data type. A single character is simply a string in python.**

Q7. Identify at least two operators and one method that allow you to combine one or more smaller strings to create a larger string.

Ans: **Operator: + and \***

**Method: join() method can be used to combing smaller strings into a larger string**

Q8. What is the benefit of first checking the target string with in or not in before using the index method to find a substring?

Ans : **index method is a longer way to find a substring in a string. So it is easier and efficient to use the ‘in’ or ‘not in’ before using the index method.**

Q9. Which operators and built-in string methods produce simple Boolean (true/false) results?

**Ans: IN operator produces the Boolean results and string.isalpha() helps you figure out if all the elements are characters or not.**