1. What is the benefit of regular expressions?

Ans: Regular Expressions, also known as regex or regexp, are used to match strings of text such as particular characters, words, or patterns of characters. We can match and extract any string pattern from the text with the help of regular expressions. it avoids multiple use of if/else statements.

2. Describe the difference between the effects of '(ab)c+' and 'a(bc)+' Which of these, if any, is the unqualified pattern 'abc+'?

Ans: (ab)c+ ab is group whereas in a(bc)+ bc is a group. Both are valid patterns.

3. How much do you need to use the following sentence while using regular expressions? import re

Ans: The statement is used to import the library for using regular expressions.

4. Which characters have special significance in square brackets when expressing a range, and under what circumstances?

Ans: . ^ $ + ? * ( ) [ ] { } | \ are characters that have special significance and using square brackets, you can specify which characters may meet at a specific position. The special symbols within square brackets lose their special meaning and are simply a symbol.

5. How does compiling a regular-expression object benefit you?

Ans: Regular expression pattern can be combined into pattern objects which can be used for pattern matching. They also help in searching a pattern without rewriting it.

6. What are some examples of how to use the match object returned by re.match and re.search?

Ans: The re.search() and re.match() return the first match of a substring found in the string, but re.match() searches only from the beginning of the string and return match object if found. But if a match of substring is found somewhere in the middle of the string, it returns none. While re.search() searches for the whole string even if the string contains multi-lines and tries to find a match of the substring in all the lines of the string.

7. What is the difference between using a vertical bar (|) as an alteration and using square brackets as a character set?

Ans: When | is used, the patterns searches for or option. the first occurance of matched string will be returned as the Match Object. Using | in square Brackets searches for all the character set in the square bracket and returns a match if.

8. In regular-expression search patterns, why is it necessary to use the raw-string indicator (r)? In replacement strings?

Ans: Raw Strings are used in the regular-expression search patterns, so that blackslashes don't have to be escaped.