Q1. What is the benefit of regular expressions?

Ans A Regular Expression is used for identifying a search pattern in a text string. It also helps in finding out the correctness of the data and even operations such as finding, replacing and formatting the data is possible using Regular Expressions.

Q2. Describe the difference between the effects of "(ab)c+" and "a(bc)+." Which of these, if any, is the unqualified pattern "abc+"?

Ans Both are valid patterns

import re

text= "a(bc)+"

print(text)

rexobj=re.compile(r'\w+\(\w+\)\+')

mtobj=rexobj.search(text)

print("First pattern:",mtobj.group(0))

text1= "(ab)c+"

print(text1)

rexobj1=re.compile(r'\(\w+\w\)\w\+')

mtobj1=rexobj1.search(text1)

print("Second pattern:",mtobj1.group(0))

OUTPUT

a(bc)+

First pattern: a(bc)+

(ab)c+

Second pattern: (ab)c+

Q3. How much do you need to use the following sentence while using regular expressions?

Ans One has to import re to using the regular expressions

Example

import re

Q4. Which characters have special significance in square brackets when expressing a range, and under what circumstances?

Ans The characters ., \*, ?, ^ or () have special significance when used in square brackets. They need not be escacped by '\' as in case of patterns texts in raw string.

e.g.

import re

text = "Hello world 123456^"

regobj=re.compile(r'[1-5^]')

matobj=regobj.findall(text)

print(matobj)

Q5. How does compiling a regular-expression object benefit you?

Ans To combine a regular expression pattern into pattern objects, which can be used for pattern matching. It also helps to search a pattern

again without rewriting it.

Q6. What are some examples of how to use the match object returned by re.match and re.search?

Ans 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 string. It returns the first occurrence or match of search substring

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.It also returns a first occurrence or match of search substring.

Q7. 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 pattern searches for 'or' option i.e <str1>|<str2> means it searches for as <str1> or <str2>. When both <str1> and <str2> occur in the searched string, the first occurrence of matching

Text will be returned as the Match object

Using character set in square brackets is used, it searches for all the character set in the square bracket and if match found it returns it

Q8. 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 regular expression search patterns, so that backslashes do not have to be escaped.