Q1. What is the benefit of regular expressions? ¶

```
1  Regular expressions are a powerful tool for pattern matching and manipulation of
   strings.
```

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

```
1  (ab)c+": Matches "ab" followed by one or more "c" characters.
2  "a(bc)+": Matches "a" followed by one or more occurrences of the "bc" sequence.
3  "abc+": Matches "ab" followed by one or more "c" characters.
4
5
6  "abc+" , (ab)c+ are same
7
```

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

import re

```
1  with out the line import re we can do the any operation relerated to the regular
   expressions.
2  It contain all the methods  for pattern mathcing and other things on regular
   expression.
```

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

```
1  -,^,/
2
3  [a-z]:represents all lowercase letters from "a" to "z"
4  [a^z]:matches any character that is not a lowercase letter.
5  /: The backslash is used to escape special characters inside square bracket
```

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

```
1  It helps to find the patterns in a string very easy way.
```

```
2  this will help to perfor pattern finding operations with high performance
```

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

```
1  match = re.match(pattern, text)
2  match = re.search(pattern, text)
```

In [2]:

```
 1  import re
 2
 3
 4  t = "Hello, Ineuron!"
 5  pattern = r"Hello"
 6  match = re.match(pattern, t)
 7  second= re.search(pattern, t)
 8  if match:
 9      print(match.group())
10
11
12
13
```

```
Hello
```

In [3]:

```
1  if second:
2      print(second.start())
3      print(second.end())
4
```

```
0
5
```

Q7. What is the difference between using a vertical bar (|) as an alteration and using square brackets as a character set?

```
1  |:This is used as an alteration operator in regular expressions.
2  []:this is  used to define a character set or character class in regular
   expressions.
```

Q8. In regular-expression search patterns, why is it necessary to use the raw-string indicator (r)? In replacement strings?

In [ ]:

```
1  Using of raw string represent \ in esscpae sequence as seperate character
```