1. What is the name of the feature responsible for generating Regex objects?

re.compile() function returns the regex object

1. Why do raw strings often appear in Regex objects?

Raw strings are used so that the back slashes do not escape.

1. What is the return value of the search() method?

It gives the matched value of given value.

1. From a Match item, how do you get the actual strings that match the pattern?

Group method returns the actual strings that match the pattern.

1. In the regex which created from the r'(\d\d\d)-(\d\d\d-\d\d\d\d)', what does group zero cover? Group 2? Group 1?

Group zero returns the entire match of the values, group 1 returns the match of the first parentheses, group returns the match of the second parentheses.

1. In standard expression syntax, parentheses and intervals have distinct meanings. How can you tell a regex that you want it to fit real parentheses and periods?

Parentheses and periods can be escaped through a backslash.

1. The findall() method returns a string list or a list of string tuples. What causes it to return one of the two options?

If the regex has groups a list of tuples are returned, if the regex has no groups a list of strings are returned.

1. In standard expressions, what does the | character mean?

| character means matching of either, or between the groups.

1. In regular expressions, what does the character stand for?

Incorrect question.

10.In regular expressions, what is the difference between the + and \* characters?

The \* matches zero or more characters, whereas, + matches one or more characters.

1. What is the difference between {4} and {4,5} in regular expression?

{n} returns the nth index whereas {n,m} returns the indexes between the nth and mth, excluding the mth index. But in this case both returns the same index [4] as there is no difference in index values

12. What do you mean by the \d, \w, and \s shorthand character classes signify in regular expressions?

\d signifies the single digit character, \w returns the word character and \s signifies the space character.

13. What do means by \D, \W, and \S shorthand character classes signify in regular expressions?

These shorthand characters are completely opposite to \d,\w and \s shorthand characters, here \D signifies not a digit character, \W signifies not a word character and \S signifies not a space character.

14. What is the difference between .\*? and .\*?

.\*? gives the shortest of string that meets the condition, so performs non-greedy match. whereas .\* gives the longest string that meets the condition, so performs greedy match.

15. What is the syntax for matching both numbers and lowercase letters with a character class?

The syntax for matching both numbers and lowercase letters with a character class is either [a-z0-9] or [0-9a-z]

16. What is the procedure for making a normal expression in regax case insensitive?

To re.compile() if we pass re.IGNORECASE or re.I will make the matching case insensitive.

17. What does the . character normally match? What does it match if re.DOTALL is passed as 2nd argument in re.compile()?

The . character matches any character except the newline character. If we pass re.DOTALL is passed to re.compile() as 2nd argument it will also match the newline character.

18. If numReg = re.compile(r'\d+'), what will numRegex.sub('X', '11 drummers, 10 pipers, five rings, 4 hen') return?

The numRegex.sub('X', '11 drummers, 10 pipers, five rings, 4 hen') will return:

‘X drummers, X pipers, five rings, X hen’

19. What does passing re.VERBOSE as the 2nd argument to re.compile() allow to do?

If re.VERBOSE is added to re.compile() it allows us to add whitespace and comments.

20. How would you write a regex that match a number with comma for every three digits? It must match the given following:

'42'

'1,234'

'6,368,745'

but not the following:

'12,34,567' (which has only two digits between the commas)

'1234' (which lacks commas)

The re.compile(r'^\d{1,3}(,\d{3})\*$') will create this regex, but if we try to remove ^ and $ from it will match the “34,567” in '12,34,567'.

21. How would you write a regex that matches the full name of someone whose last name is Watanabe? You can assume that the first name that comes before it will always be one word that begins with a capital letter. The regex must match the following:

'Haruto Watanabe'

'Alice Watanabe'

'RoboCop Watanabe'

but not the following:

'haruto Watanabe' (where the first name is not capitalized)

'Mr. Watanabe' (where the preceding word has a nonletter character)

'Watanabe' (which has no first name)

'Haruto watanabe' (where Watanabe is not capitalized)

re.compile(r '[A-Z][a-z]\*\sWatanabe') will return all the regex that matches Watanabe.

22. How would you write a regex that matches a sentence where the first word is either Alice, Bob, or Carol; the second word is either eats, pets, or throws; the third word is apples, cats, or baseballs; and the sentence ends with a period? This regex should be case-insensitive. It must match the following:

'Alice eats apples.'

'Bob pets cats.'

'Carol throws baseballs.'

'Alice throws Apples.'

'BOB EATS CATS.'

but not the following:

'RoboCop eats apples.'

'ALICE THROWS FOOTBALLS.'

'Carol eats 7 cats.'

The regex can be return by re.compile(r'(Alice|Bob|Carol)\s(eats|pets|throws)\s(apples|cats |baseballs)\.', re.IGNORECASE)