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

It re. To import re in python import re

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

Backslash do not have to escape

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

Its return match object

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

Group() method to return a string of the actual match

5. 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 will cover whole number [(\d\d\d)-(\d\d\d-\d\d\d\d)]

Group 1 will cover only 1st part [(\d\d\d)]

Group2 will cover 2nd part [(\d\d\d-\d\d\d\d)]

6. 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?

Square bracket []

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

Its returns a list. Tuples are immutable. Can’t insert word one by one in tuple.

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

It or symbol

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

occurrence indicators

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

\* will match zero or more item where + will match one or more item. So \* can return zero match also. But + will return at last one match.

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

{4} means it match 4 or more times. Where {4,5} says its match at last 4 time but not more than 5 times.

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

\d matches any single digit (same as [0-9]). \w matches any single letter, number or underscore. (as same as [a-zA-Z0-9\_]. \s matches single whitespace

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

\D matches non digit matches single charter. \W matches non word character. \S matches non space matches single character.

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

(.\*?) matches any character (.) any number of times (\*), as few times as possible to make the regex match (?). You'll get a match on any string, but you'll only capture a blank string because of the question mark. This feature is much more useful when you have a more complicated regex. Here, the parser doesn't have to capture anything at all to get a match: the asterisk allows any number of characters in the capturing group, while the question mark makes the parser save as many as possible from the input text for later, resulting in nothing being captured.

(.\*)? captures a group zero or one times (?). That group consists of a run of any length (\*) of any character (.). This also will match anything, but it will capture the first line, since the dot matches anything except a newline.

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

[a-z0-9]

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

Use the (?i) and [optionally] (?-i) mode modifiers: (?i)G[a-b](?-i).\*

Put all the variations (i.e. lowercase and uppercase) in the regex - useful if mode modifiers are not supported: [gG][a-bA-B].\*

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

dot (.) matches any single character except newline.

then the dot will also match newline characters.

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

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

add whitespace and comments to the string passed to re. compile().

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

'42'

import re  
phoneNumRegex = re.compile(r'(\d\d)')  
mo = phoneNumRegex.search('My number is 42')  
print(mo.group(0))

'1,234'

testa='1,234'  
re.findall(pattern=r'[0-9],[0-9][0-9]',string=testa)

'6,368,745'

but not the following:

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

'1234' (which lacks commas)

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)

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.'