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

**Answer:**

**re.compile function generates regex object.**

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

**Answer:**

raw strings are used so that we dont have to escape backslashes

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

**Answer:**

**It returns match object**

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

**Answer:**

**Group() function can be used to get the string**

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?

**Answer:**

**group 0 means entire match. group 2 means second parantheses and group 1 means first parantheses**

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?

**Answer:**

**parentheses \( and \) and periods \. are escaped with backslash.**

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

**Answer:**

**string list is returned when there is no regrex groups. string tuples are returned when the is regrex groups**

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

**Answer:**

**| means "or" condition between two groups**

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

**Answer:**

**? means matches zero or one of the preceding group**

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

**Answer:**

**+ matches one or more. \* matches zero or more**

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

**Answer:**

**{4} matches exactly 4 instances of the group.**

**{4,5} matches between 4 and 5 instances.**

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

**Answer:**

**\d,\w and \s matches a single digit, word and space**

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

**Answer:**

**\D,\W and \S matches that is not digit,word and space**

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

**Answer:**

**.\* means matches any character any number of times.**

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

**Answer:**

**[0-9a-z]**

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

**Answer:**

**pass re.IGNORECASE as the second argument to re.compile**

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

**Answer:**

**. matches any character except new line character. if re.DOTALL is passed as 2nd argument then it will match new line character**

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

**Answer:**

**'X drummers, X pipers, five rings, X hen'**

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

**Answer:**

**re.VERBOSE allows us to add whitespace and comments to the string passed to re.compile()**

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)

**Answer:**

**re.compile(r'^\d{1,3}(,\d{3})\*$')**

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)

**Answer:**

**re.compile(r'[A-Z][a-z]\*\sWatcnabe')**

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.'

**Answer:**

**re.compile(r'(Alice|Bob|Carol)\s(eats|pets|throws)\s(apples|cats|baseballs)\.', re.IGNORECASE)**