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

Re.compile() generates RegEx objects.

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

As in regEx uses special symbols, raw string has to be used so that symbol interpretation cant be wrong.

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

It returns match object. If no of matched found then it returns first match

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

The group() method returns strings of the matched text.

**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 cover 3 digits, group 2 cover 4 digits and group 1 cover 3 digits

**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?**

It can be escaped by using ‘\’.

**7. 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 no groups, a list of strings is returned. If the regex has groups, a list of tuples of strings is returned

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

It mear or. It will return either character on either side of | symbol

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

It will check for zero or one occurrence.

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

\* is for any number of occurrences and + for one or more number of occurrences.

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

{4} matches exactly 4 occurrences and {4,5} matches occurrences between 4 and 5.

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

\d is for digits from 0 to 9,

\w is for words including A to Z, a to z, 0 to 9 and \_

\s matches any whitespace chatacter.

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

\D is for matched other than digits. E.g. [^0-9]

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

The . performs a greedy match, and the .? performs a nongreedy match.

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

[0-9a-z]

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

Passing Re.IGNORECASE as second argument will make regex as case insensitive

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

. will match any characters including digits and symbols.

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

re.VERBOSE argument allows 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)**

(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)**

‘[A-Z]\w\* 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.'**

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