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

**Ans: re.compile() function is used to return Regex objects. [re is the module that we need to import to use this feature]**

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

**Ans: They are used so that backslashes are not escaped.**

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

**Ans: search() returns Match objects.**

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

**Ans: We use group() object to return 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?

**Ans: Group zero covers the entire match, group 2 covers second set of parentheses and group 1 covers the first set of parenthesis.**

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?

**Ans: We can use backslash to escape the parentheses and periods.**

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

**Ans: If there are groups in the regular expression then findall() method will return list of tuples and if there are no groups in the regular expression then findall() method returns a list of strings.**

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

**Ans: It means “or” condition i.e. matching either group 1 or group 2.**

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

**Ans: It is used for optional matching that is match zero or one of the groups that precedes it.**

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

**Ans: The + is used to match one or more items whereas \* matches zero or more.**

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

**Ans: The {4} matches exactly 4 instances of the preceding group and {4,5} matches between 4 & 5 instances.**

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

**Ans: The \d matches a single character that is a Digit, \w matches a single character that is a word and \s matches a single character that is space character.**

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

**Ans: The \D matches a single character that is NOT a Digit, \W matches a single character that is NOT word and \S matches a single character that is NOT space character.**

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

**Ans: The .\* performs a greedy match whereas .\*? performs a non-greedy match.**

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

**Ans: The syntax is [0-9a-z]**

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

**Ans: We can pass re.IGNORECASE as the second argument to re.compile() method to make it case insensitive.**

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

**Ans: The . character matches any character except new line character. If we use re.DOTALL as the 2nd argument that the . character will search for new line also.**

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

**Ans: It 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?

**Ans.It allows to add whitespace and comments to the passed string 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)

**Ans: 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)

**Ans: re.compile(r’[A-Z][a-z]\*\sWatanabe’)**

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.'

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