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

Ans: re.compile() generates Regex objects.

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

Ans: In order to use the backslashes raw strings are used or else backslashes would get escaped.

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

Ans: Match objects.

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

Ans: With the help of group() method.

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: Entire match is covered by the Group 0, Group 1 and Group 2 covers 1st set of parenthesis and 2nd set of parenthesis respectively.

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: Using a backslash, we can fir real parenthesis and periods in a regex. e.g. \(, \.

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: The string list is returned by findall() method if there is no group in regex. If it has regex, then findall() method will return list of string of tuples.

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

Ans: | signifies “either, or” between two groups in a standard expression.

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

Ans: The character in the regular expression can be alphabet, number or ‘\_’.

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

Ans: + matches one or more and \* matches zero or more

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

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

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

Ans: \d matches a single digit.

\w matches a single word.

\s matches space characters.

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

Ans: \D signify the non digit character.

\W signify the word and

\S signify spaces.

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

Ans: “.\*?” will return only one match while matching it with two. This is also called a non-greedy match. “.\*” will return the entire string as match, this is also called the greedy match.

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

Ans: Either [0-9a-z] or [a-z0-9]

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

Ans: Under re.compile() if we pass re.IGNORECASE or re.I as a second argument will make the regex case sensitive.

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

Ans: Except the newline character, . character matches every other character. When re.DOTALL is passed as 2nd argument in re.compile(), the dot will match newline character as well.

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

Ans: 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 string passed.

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)