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

Ans. re.compile() function returns Regex objects.

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

Ans. Raw strings are used so that backslashes are not 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. We can use group() method 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-matches the entire text

group 1-matches the first set of parantheses(\d\d\d)

group2-matches the second set of parantheses(\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?

Ans. We can use backslash to escape periods and parantheses

for period- \.

for paranthese- \(, and \)

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 the regex has no groups,a list of strings is returned.If group is there, a list of tuples of strings is returned.

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

Ans. | character means matching "either, or" between two groups

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

the question is not clear what character is asked ..the character is not mentioned

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

Ans. + matches one or more from the group

\* matches zero or more from the group

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

Ans. {4} matches exactly four instances of the group to be matched and {4,5} matches between four and five instances

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

Ans. its a shorthand representation of character classes

\d matches a single digit

\w matches a word

\s matches a space character

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

Ans. \D, \W, \S matches a single character that is not a digit,word,or space respectively

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

Ans. \*? performs a non-greedy match and \* performs a 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 regax case insensitive?

Ans. Passing re.IGNORECASE or re.I as the second argument to re.compile() will make the matching 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. . character matches any character except the newline character. If re.DOTALL is passed as second argument to re.compile then the dot(.) will also match the newline character.

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 us to add whitespace and comments to the strings 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)

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.I)