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

Ans: Regex objects are generated using re.compile().

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

Ans: Because to avoid considering backslash \ as escape charater.

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

Ans: search() value returns match objects.

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

Ans: Using 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: Group 0 covers entire match, group 1 covers first set of parentheses, and group 2 covers second set of parentheses.

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 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?

Ans: If the regex has no groups then string list is returned or else list of string tuples is returned.

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

Ans: It us used for matching either , or between two groups.

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

Ans: Chracters in re are used to specify the type of match to be performed. There are different set of characters like: + * *? which has different meanings.

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

Ans: * means that the preceding expression can match zero or more times it is like {0,} while the plus quantifier(+) indicate that the preceding expression must match at least one time or multiple times and it is the same as {1,} .

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

Ans: If used {4}: matches exactly 4 number of occurrences of preceding expression

If used {4,5}: Matches at least 4 and at most 5 occurrences of preceding expression .

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

Ans: \d : matches digits equivalent to [0-9].
\w : matches word characters.
\s : matches whitespace equivalent to [\t\n\r\f].

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

Ans:\D matches nondigits
\W matches nonword characters
\S matches nonwhitespace

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

Ans: .* is used to greedy match that is until last instance whereas .*? is non greedy match which matches until first instance is encountered.

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

Ans:[a-z0-9]

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

Ans: Either by using ?i or using the function re.CASEIGNORE

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 single character except newline, if re.DOTALL is passed then dot character will match 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: '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: The re. VERBOSE argument allows you to add whitespace and comments to the string passed to **re.**

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})*') – match this pattern.

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: By using the pattern :
re.compile(r'[A-Z][a-z]+\sWatanabe', re.I | re.VERBOSE)
to match string.

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