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

re.compile()

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

Raw strings are used to keep the code clear and confusion free as without them every backslash would have to be prefixed with another one which can cause problems inn understanding of the code

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

Returns an re.match type object

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

Using the re.findall() function

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 0 convers the entire match

Group 1 covers the first parenthesis criteria and group 2 ahs the second parenthesis criteria

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?

Using the raw string syntax

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

findall() returns a list of matching strings. The list can contain tuples in case we give multiple criteria for matching

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

OR

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

Either or

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

+ denotes Zero or more occurrences

\* is for one or more occurrences of a search criteria in a string

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

{4} specifies validation for exactly 4 occurrences

{4,5} specifies validation for length of occurrences to be within 4 to 5

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

\d is for matching strings containing digits i.e., 0-9

\w is for matching any characters from a-z,A-Z,or digits 0-9 and underscore

\s is for matching where string contains whitespaces

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

The capital notations return where the string does not match the search criteria

\D for no digits, \W for no word characters & \S for no whitespaces as a match

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

Without the dot there has to be specified the desired characters whereas with “.” It can be any characters before the criteria for ?

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

[0-9][a-z]

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

We can use \w or [a-z][A-Z] notation

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

“.” character normally matches any character except a newline character

re.DOTALL will include the newline character

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 allows passing a multiline string in match criteria than can help in writing a more readable code by visually separating the logical sections of the code

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)

(^\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)+\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.'

(r'(?:Alice|Bob|Carol)\s(?:eats|pets|throws)\s(?:apples|cats|baseballs)\.')