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

Ans1. re.compile() is the feature responsible for generating Regex objects.

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

Ans2. Raw strings often appear in Regex objects so that backslashes do not have to be escaped.

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

Ans3. The search() method returns a Match objects

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

Ans4. The group() method returns the actual strings that match the pattern.

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?

Ans5. Group zero will cover the entire match, Group 1 will cover the first set of braces and Group 2 will cover second set of braces

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?

Ans6. Parentheses and periods can be escaped using a \ . , \ (, 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?

Ans7. If the regex contains groups findall() method will return list of string tuples whereas if regex contains no group then findall() method will a string list.

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

Ans8. By example(The | character in A|B means matching either A or B .)

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

Ans9 . Incomplete Question in the assignment.

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

Ans10. The + character indicates one or more matches whereas \* character indicates zero or more matches.

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

Ans11. {4} matches 4 instances and {4,5} matches 4 to 5 or between 4 and 5 instances

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

Ans12. \d – matches single digit, \w – matches single word, \s – matches single space character.

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

Ans13. The above character matches a single character that is not a digit, word or space character.

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

Ans14 . .\*? is a nongreedy match and .\* is a greedy match.

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

Ans15 . [0-9a-z]

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

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

Ans17 . The .character normally matches any of the character except a new line . If re.DOTALL is passed as 2nd argument in re.compile the . character will also match the new line .

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

Ans18. It will give error as Regex in numRegex.sub not found, and if we correct numRegex to numReg it will give

'X drummers, X pipers, five rings, X hen'

19. What does passing re.VERBOSE as the 2nd argument to re.compile() allow to do?

Ans19. Re.VERBOSE will allow us to add spaces and comments to the string 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)

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)

Ans21. 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.'

Ans22. re.compile(r'(Alice|Bob|Carol)\s(eats|pets|throws)\s(apples|cats|baseballs)\.', re.IGNORECASE)