1. What are escape characters, and how do you use them?

**Ans;-** Escape characters in python are special characters that have a specific meaning when used with a string. They are represented by a backslash followed by a character or sequence of characters that represent the desired escape sequence.

Here are some of the most commonly used escape characters:-

1. \n :- Inserts a new line character
2. \t :- Inserts a tab character
3. “: Inserts a double quote character
4. ‘: Inserts a single quote character

2. What do the escape characters n and t stand for?

**Ans:-** The escape character “\n” represents a new line character, which is used to start a new line of text within a string.

The escape character “\t” represents a tab character, which is used to insert horizontal spacing between two pieces of text.

3. What is the way to include backslash characters in a string?

**Ans:-** To include a backslash character in a string, we need to use an escape character, which is a backslash itself, followed by the character you want to include. If you want to include backslash character in a string, you can use like this:

my\_string = "This is a backslash: \n"

print(my\_string)

4. The string "Howl's Moving Castle" is a correct value. Why isn't the single quote character in the word Howl's not escaped a problem?

**Ans:-** The string can be enclosed in either a single quote character or double quotes. In the string, “Howl’s Moving Castle”, the single quote character is enclosed by a double quotes, that’s why it is not get considered as an end of the string, if the string were enclosed by a single quotes, then the single quote character in the word “Howl’s”would need to be escaped. However, since the string is enclosed in a double quotes, the single quote character can be used without being escaped.

5. How do you write a string of newlines if you don't want to use the n character?

**Ans:-** If you don’t want to use the “\n” escape character while writing a New lines of string, then we can use the “chr()” function along with the ASCII code for the new line character, which is 10.

6. What are the values of the given expressions?

'Hello, world!'[1]

'Hello, world!'[0:5]

'Hello, world!'[:5]

'Hello, world!'[3:]

**Ans:-** 'Hello, world!'[1], this expression return the character which is at index 1, so the output of this expression will be “e’.

'Hello, world!'[0:5] , This expression return a substring, which starts from index 0 and will go till index 4, so the output of this expression will be “Hello”.

'Hello, world!'[:5], this expression will return a subset of the string, which will starts from the beginning of the string and go till the index 4, so the output of this expression will be “Hello’.

'Hello, world!'[3:], This expression will return a subset of the string, which will starts at index 3 and will go till the end of the string, The output of the above expression will be “lo, world!”

7. What are the values of the following expressions?

'Hello'.upper()

'Hello'.upper().isupper()

'Hello'.upper().lower()

**Ans:-** 'Hello'.upper(), The output of this expression will be “HELLO”.

'Hello'.upper().isupper(), This expression will return ‘true’, because the string “Hello” will completely get converted into the uppercase letters with the help of upper() function.

'Hello'.upper().lower(), The output of the above expression will be “hello” because by calling “.lower()” function on the string “HELLO’, will convert all its letters completely to the lower case.

8. What are the values of the following expressions?

'Remember, remember, the fifth of July.'.split()

'-'.join('There can only one.'.split())

**Ans;-** 'Remember, remember, the fifth of July.'.split(), The split() function in this expression will split the string into a list of words based on the whitespace characters, and the output of this above expression will be ['Remember,', 'remember,', 'the', 'fifth', 'of', 'July.'].

'-'.join('There can only one.'.split()), The split() function in this expression will split the string into the list of words based on the whitespace characters, then it will join the words back together using the “-” dash symbol with the help of “-”.join function and the output of this code will be ['Remember,', 'remember,', 'the', 'fifth', 'of', 'July.'].

9. What are the methods for right-justifying, left-justifying, and centering a string?

**Ans;-** There are several ways for justifying right, left, and center. They are as follows:-

1. Right Justifying:- The ‘rjust()’ method is used to right justify the string text by adding a space to the left of the string until it reaches the specified width of characters.
2. Left Justifying:- The ‘ljust()’ method is used to left justifying the string text by adding space to the right of the string until it reaches the specified width of characters.
3. Centering:- The ‘center()’ method is used to center the string text by adding spaces to the both right and left of the string until it reaches the specified width of characters.

10. What is the best way to remove whitespace characters from the start or end?

**Ans:-** We can use the ‘strip()’ method to remove the whitespace characters from the start and end.

1. The ‘lstrip()’ method is used to remove whitespace characters from the start of the string text.
2. The ‘rstrip()’ method is used to remove the whitespace characters from the end of the string text.
3. ‘strip()’ method is used to remove the whitespace characters from the both start and end of the string text.