1. What does an empty dictionary's code look like?

**Ans)** The code of empty dictionary looks like **dict = { }** .

1. What is the value of a dictionary value with the key 'foo' and the value 42?

**Ans)** The value of a dictionary with the key 'foo' and the value 42 would simply be 42. In Python, dictionaries are data structures that store key-value pairs, where each key must be unique. To access the value associated with a specific key, you can use the key within square brackets to retrieve the corresponding value. In this case, accessing the value associated with the key 'foo' would yield 42.

1. What is the most significant distinction between a dictionary and a list?

**Ans)**  A dictionary is a data structure that stores data in the form of key value pairs where as a list stores data in the form of a continuous allocation of memory. The data in dictionary can be accessed by key. The data in list can be accessed by indexing.Lists are mutable where as dictionaries are immutable.

1. What happens if you try to access spam['foo'] if spam is {'bar': 100}?

**Ans)** It shows a key error. As the key ‘foo’ do not exist in the dictionary spam.

1. If a dictionary is stored in spam, what is the difference between the expressions 'cat' in spam and 'cat' in spam.keys()?

**Ans)** 'cat' in spam checks if the key 'cat' is present in the dictionary spam. It returns a boolean value (True or False) indicating whether the key exists in the dictionary. This operation directly checks if the key is present in the dictionary and does not involve extracting the keys explicitly.

'cat' in spam.keys() checks if the key 'cat' is present among the keys of the dictionary spam. The keys() method returns a view object that contains all the keys in the dictionary. By using 'cat' in spam.keys(), you are explicitly extracting the keys and then checking if the key 'cat' exists within that collection. It also returns a boolean value (True or False).

1. If a dictionary is stored in spam, what is the difference between the expressions 'cat' in spam and 'cat' in spam.values()?

**Ans)** 'cat' in spam checks if the key 'cat' is present in the dictionary spam. It returns a boolean value (True or False) indicating whether the key exists in the dictionary. This operation checks if the key is present in the dictionary.

'cat' in spam.values() checks if the value 'cat' is present among the values of the dictionary spam. The values() method returns a view object that contains all the values in the dictionary. By using 'cat' in spam.values(), you are explicitly extracting the values and then checking if the value 'cat' exists within that collection. It also returns a boolean value (True or False).

7. What is a shortcut for the following code?

if 'color' not in spam:

spam['color'] = 'black'

**Ans)** spam.setdefault(‘color’, ‘black’)

**Syntax :** dict\_name.setdefault(‘key’, ‘value’)

8. How do you "pretty print" dictionary values using which module and function?

**Ans)** To "pretty print" dictionary values in Python, you can make use of the pprint module and its **pprint()** function. The **pprint** module provides a way to format and display complex data structures, such as dictionaries, in a more readable and organized manner.