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

**Ans:-** In python, an empty dictionary is created using curly braces {} and using ‘dict()’ function.

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

**Ans:-** If a dictionary has a key ‘foo’ with the value ‘42’, then we can access the value by using a following code:-

my\_dict = {‘foo’:42}

print(my\_dict[‘foo’])

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

**Ans:-** A list is used to store an ordered collection of items, where each elements is assigned with an index number and you can access the elements of the list using there indexes and lists are denoted by square brackets [].

On the other hand, A dictionary is a un-ordered collection of key - value pairs, where each key is associated with a value. You can access the values of dictionary using ‘value()’ function, you can access the keys of the dictionary by using a ‘.keys()’ function and you can also list the whole key-value pair of a dictionary in a pair using the ‘.items()’ function and dictionary are denoted by using curly brackets {}.

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

**Ans:-** If we try to access to spam[‘foo’], where spam is {‘bar’:100}, then we will get a key error, because the key ‘foo’ is not present in the dictionary ‘spam’.

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

**Ans:-** The expressions ‘cat’ in spam and ‘cat’ in spam.keys() both the expression checks whether a key ‘cat’ is present in the dictionary ‘spam’ or not.

‘cat’ in spam will return ‘true’, if the key named ‘cat’ is present in the spam dictionary otherwise it will result in ‘false’. ‘cat’ in spam.keys() method checks if a ‘cat’ is a key in the dictionary or not and it also checks that key ‘cat’ is present in the dictionary spam or not. The keys() method on spam will lists all the keys present in spam dictionary and then the ‘in’ operator will check whether a key named ‘cat’ is present in the list of keys in the dictionary or not.

6. 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 will return ‘true’, if the key named ‘cat’ is present in the spam dictionary otherwise it will resulted in ‘false’ and ‘cat’ in spam.values() will check if the string ‘cat’ is a value in the spam dictionary, This expression will return true, if there will be a value named ‘cat’ inside a spam dictionary otherwise it will be resulted in false.

7. What is a shortcut for the following code?

if 'color' not in spam:

spam['color'] = 'black'

**Ans:-** One shortcut for the above code is to use the setdefault() method of dictionaries, which sets a default value for a key if it does not exist in the dictionary. The shortcut code of the above code are below;-

spam.setdefault('color', 'black')

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

**Ans:-** You can ‘pretty print’ dictionary values in python by using ‘pprint’ module’s ‘pprint()’ function. The ‘pprint()’ function prints dictionary values in a more human readable and formatted way, making it easier to understand the structure and contents of the dictionary.