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

Sol: dictionary = {}

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

Sol: The value of a dictionary value with the key ‘foo’ and the value 42 is 42.

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

Sol: in a dictionary data is stored and accessed based on keys instead of indicies. In a list data is stored and accessed based on it’s position or index in the list.

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

Sol: raises ‘keyerror’ because the key ‘foo’ does not exist in the ‘spam’ dictionary.

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

Sol: The main difference between these two expressions is that the first expression(‘cat’ in spam) checks whether the key is present in the dictionary itself, while the second expression(‘cat’ in spam.keys()) first retrieves of keys from dictionary and then checks whether the key is present in that list.

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

Sol: the expression(‘cat’ in spam)checks whether the kay ‘cat’ is present in the dictionary ‘spam’. On the other hand ,the expression('cat' in spam.values()) checks whether the value ‘cat’ is present in any of the values in the dictionary ‘spam’.

7. What is a shortcut for the following code?

if 'color' not in spam:

spam['color'] = 'black'

sol: spam.setdefault(‘color’,’black’)

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

Sol: you can use the built-in ‘json’ module to pretty print dictionary values using the ‘json.dumps()’ function with the ‘indent’ parameter set to a non-negative integer

import json

my\_dict = {'name': 'John', 'age': 30, 'city': 'New York'}

print(json.dumps(my\_dict, indent=4))