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

dict={}

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

42

dict = {'foo': 42}  
value = dict['foo']  
print(value) # Output: 42

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

Dictionary is unordered key-value paired collection. List is an ordered collection.

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

Will throw “KeyError”

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

Only syntactic difference. Both works same i.e. checking if ‘cat’ key exists in dictionary spam.

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

* ‘cat’ in spam: checks if any key ‘cat’ exists in dictionary
* ‘cat’ in spam.values(): check if any value ‘cat’ exist in dictionary. Does not check the key in this case rather check value.

7. What is a shortcut for the following code?

if 'color' not in spam:

spam['color'] = 'black'

spam['color'] = spam.get('color', 'black')

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

import pprint  
  
# Dictionary to pretty print  
my\_dict = {'name': 'John', 'age': 30, 'city': 'New York'}  
  
# Pretty print the dictionary  
pprint.pprint(my\_dict)

using pprint module and pprint.pprint() function