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

```
In [31]: d1={}    #empty dictionary
         print(type(d1))

         <class 'dict'>
```

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

```
In [33]: d1={'foo':42}
         print(d1)
         print(d1.values())
         print(d1.keys())

         {'foo': 42}
         dict_values([42])
         dict_keys(['foo'])
```

3. What is the most significant distinction between a dictionary and a list?
   ANSWER: The items stored in a dictionary are unordered, while the items in a list are ordered.

4. What happens if you try to access spam['foo'] if spam is {'bar': 100}?
   ANSWER: It will give key error.

```
In [35]: spam={'bar':42}
         print(spam['foo'])

---------------------------------------------------------------------------
KeyError                                  Traceback (most recent call last)
<ipython-input-35-332a22ced4ae> in <module>
      1 spam={'bar':42}
----> 2 print(spam['foo'])

KeyError: 'foo'
```

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

   ANSWER: There is no difference. The in operator checks whether a value exists as a key in the dictionary.

```
In [36]: spam={'cat':10}
         'cat' in spam

Out[36]: True

In [37]: 'cat' in spam.keys()

Out[37]: True
```

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

   ANSWER: 'cat' in spam checks whether there is a 'cat' key in the dictionary, while 'cat' in spam.values() checks whether there is a value 'cat' for one of the keys in spam.

```
In [36]: spam={'cat':10}
         'cat' in spam

Out[36]: True

In [38]: 'cat' in spam.values()

Out[38]: False
```

7. What is a shortcut for the following code?

if 'color' not in spam:

spam['color'] = 'black'

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

```
In [40]: spam={'cat':10}
         spam.setdefault('color','black')
         print(spam)

         {'cat': 10, 'color': 'black'}
```

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

```
In [42]: import pprint

         d=[
             {'name':"Tom", 'age': 20, 'city': 'Jaipur'},
             {'name':"Jai", 'age': 21, 'city': 'Pune'},
             {'name':"Om", 'age': 22, 'city': 'Delhi'}
         ]

         pprint.pprint(d)

         [{'age': 20, 'city': 'Jaipur', 'name': 'Tom'},
          {'age': 21, 'city': 'Pune', 'name': 'Jai'},
          {'age': 22, 'city': 'Delhi', 'name': 'Om'}]
```