1. ***What does an empty dictionary's code look like?***
   Ans:- An empty dictionary's code look like two curly brackets: {}

2. ***What is the value of a dictionary value with the key 'foo' and the value 42?***
   Ans:- The value of a dictionary value with the key 'foo' and the value 42 is {'foo': 42}

   ```
   dic = {'foo' : 42}
   ```

3. ***What is the most significant distinction between a dictionary and a list?***
   Ans:- The key distinctions between a dictionary and a list are:

   - **Order:** Lists maintain the order of elements, while dictionaries do not have a specific order.

   - **Accessing data:** Lists are accessed by index, while dictionaries are accessed by keys.

   - **Element uniqueness:** List elements can be repeated, whereas dictionary keys must be unique.

   - **Data organization:** Lists organize data in a sequential manner, while dictionaries provide a mapping between keys and values.

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

   ```
   spam = {'bar': 100}
   spam['foo']
   ```

   We will get a KeyError error.

5. ***If a dictionary is stored in spam, what is the difference between the expressions 'cat' in spam and 'cat' in spam.keys()?***
   Ans:- There is no difference. The in operator checks whether a value exists as a key in the dictionary.

   'cat' in spam and 'cat' in spam.keys() are equivalent and will give the same result. They check if the key 'cat' exists in the 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()?***
   Ans:-
   - **'cat' in spam:** This expression checks if the key 'cat' exists in the dictionary 'spam'.

   - **'cat' in spam.values():** This expression checks if the value 'cat' exists in any of the values of the dictionary 'spam'.

7. What is a shortcut for the following code?

if 'color' not in spam:

spam['color'] = 'black'

Ans:-

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

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

Ans:- pprint.pprint()

```
import pprint

my_dict = {'name': 'John Doe', 'age': 30, 'city': 'New York'}

pprint.pprint(my_dict)
```

Output:

```
{'age': 30,

 'city': 'New York',

 'name': 'John Doe'}
```