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

:- empty\_dict = {} Or empty\_dict = dict()

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

:- 42

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

:- dictionary uses keys to identify and access values, while a list uses indexes to identify and access items

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

:- will get a KeyError because the key 'foo' is not 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()?

:- The expression 'cat' in spam checks whether the string 'cat' is a key in the dictionary spam.

The expression 'cat' in spam.keys() first calls the keys() method on the dictionary spam to obtain a list of all the keys in the dictionary, and then checks whether the string 'cat' is in that list of keys.

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

:- The expression 'cat' in spam checks if the string 'cat' is a key in the dictionary spam.

The expression 'cat' in spam.values() checks if the string 'cat' is a value in the dictionary spam.

7. What is a shortcut for the following code?

if 'color' not in spam:

spam['color'] = 'black'

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

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

:- We can use the pprint module's pprint() function to print dictionary va;ues in readable format.