Q1. What are the characteristics of the tuples? Is tuple immutable?

Ans: - Tuple objet is immutable, once we are declared the contests of a tuple, we are not able modify the contests of that tuple.

The characteristics of the tuples are ordered, unchangeable and allows duplicate values. And tuples contests are indexed

Q2. What are the two tuple methods in python? Give an example of each method. Give a reason why tuples have only two in-built methods as compared to Lists.

Ans: - The two tuple methods are 1.count and 2.index
*.Examples are in python coded file

Reasons of only two in-built methods
1. Tuples use for different data types and lists for same data types.
2. Tuples are immutable and list is mutable.
Tuples are more memory efficient than the lists.

Q3. ----?
Ans is in python code file.

Q4. ----?
Ans is in python file.

Q5. What is a dictionary? Give an example. Also, state whether a dictionary is ordered or unordered.
Ans: - DICTIONARY is an unordered collection that contains key: value, and separated by commas inside the curly brackets.
Example: - code

```
d1 = {'name': 'Avi', 'age': 27, 'marks': 60, 'course': 'Mechanical Engg'}
d1.keys()
result(['name', 'age', 'marks', 'course'])
d1.values()
RESULT(['Avi', 21, 60, 'Mechanical Engg'])
```

Basically dictionary is unordered.
When we say that dictionaries are ordered, it means that the items have a defined order, and that order will not change.
Unordered means that the items does not have a defined order, you cannot refer to an item by using an index.

Q6. Can we create a nested dictionary? If so, please give an example by creating a simple one-level nested dictionary.
Ans: - yes we can create a nested dictionary.

{1: {'name': 'John', 'age': '27', 'sex': 'Male'}, 2: {'name': 'Marie', 'age': '22', 'sex': 'Female'}}

Q7.Using setdefault() method, create key named topics in the given dictionary and also add the value of the key as this list ['Python', 'Machine Learning', 'Deep Learning']
dict1 = {'language' : 'Python', 'course': 'Data Science Masters'}

Ans :-

Q8. What are the three view objects in dictionaries? Use the three in-built methods in python to display these three view objects for the given dictionary.
dict1 = {'Sport': 'Cricket' , 'Teams': ['India', 'Australia', 'England', 'South Africa', 'Sri Lanka', 'New Zealand']}