

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

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.

Q3. Which collection datatypes in python do not allow duplicate items? Write a code using a set to remove duplicates from the given list.

```
List = [1, 1, 1, 2, 1, 3, 1, 4, 2, 1, 2, 2, 2, 3, 2, 4, 3, 1, 3, 2, 3, 3, 3, 4, 4, 1, 4, 2, 4, 3, 4, 4]
```

Q4. Explain the difference between the union() and update() methods for a set. Give an example of each method.

Q5. What is a dictionary? Give an example. Also, state whether a dictionary is ordered or unordered.

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

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'}
```

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']}
```

Note: Create your assignment in Jupyter notebook and upload it in GitHub & share that github repository link through your dashboard.