

PYTHON – WORKSHEET 9 (PANDAS)

Q1 to Q8 have only one correct answer. Choose the correct option to answer your question.

- Which among the following options can be used to create a DataFrame in Pandas?
A) An ndarray
B) a python dictionary
C) A scalar value
➡ D) All of the above
- A series is a one-dimensional array which is labelled and can hold any data type.
A) True
- Which of the following operation works with the same syntax as the analogous dictionary operations?
A) Getting columns
B) setting columns
C) deleting columns
➡ D) All of the above
- `pandas.NA == pandas.NA`, will give which of the following result?
A) `<NA>`
- A panel is a _____ container of data in pandas?
C) 3 dimensional
- What will be the output of the following lines of code?

```
import pandas as pd
import numpy as np
s = pd.Series(np.random.randn(4))
print(s.ndim)
```


D) 1
- Which of the following indexing capabilities is used as a concise means of selecting data from a pandas object??
C) ix
- All pandas data structures are ____ mutable but not always _____.mutable.
B) value, size

Q9 and Q10 have multiple correct answers. Choose all the correct options to answer your question.

9. Select the correct statements from the following.
- B) Series can be passed into most NumPy methods expecting an ndarray.
 - C) A key difference between Series and ndarray is that operations between Series automatically align the data based on label
 - D) In pandas, Index values must be unique
10. Which of the following file formats are allowed for input output in pandas?
- A) JSON
 - B) HTML
 - C) CSV
 - D) TXT

Q11 to Q15 are programming questions. Answer them in Jupyter Notebook.

11. Write a Pandas program to create and display a DataFrame from the following dictionary data and labels:
- ```
exam_data = {'name': ['Anastasia', 'Dima', 'Katherine', 'James', 'Emily', 'Michael', 'Matthew', 'Laura', 'Kevin',
 'Jonas'],
 'score': [12.5, 9, 16.5, np.nan, 9, 20, 14.5, np.nan, 8, 19],
 'attempts': [1, 3, 2, 3, 2, 3, 1, 1, 2, 1],
 'qualify': ['yes', 'no', 'yes', 'no', 'no', 'yes', 'yes', 'no', 'no', 'yes']}
```
- 

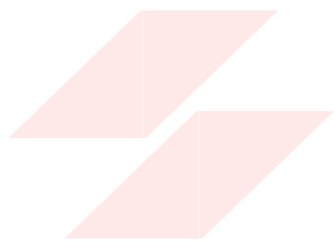


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```
labels = ['I', 'II', 'III', 'IV', 'V', 'VI', 'VII', 'VIII', 'IX', 'X']
```

12. Write a Pandas program to get the first 5 rows of the DataFrame created in Q11.
13. Write a Pandas program to select the 'name' and 'score' columns of the DataFrame created in Q11.
14. Write a Pandas program to select 'name' and 'score' columns in row indexes 3, 5, 6, 8 from the DataFrame created in Q11.

15. Write a Pandas program to select the rows where the score is between 15 and 20 (inclusive) from the DataFrame created in Q11.



**FLIP ROBO**

