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**NPTEL** (<https://swayam.gov.in/explorer?ncCode=NPTEL>) » **Python for Data Science (course)**

 Announcements (announcements)    **About the Course** ([https://swayam.gov.in/nd1\\_noc20\\_cs36/preview](https://swayam.gov.in/nd1_noc20_cs36/preview))

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## Unit 4 - Week 2

### Course outline

#### How does an NPTEL online course work?

#### Week 0

#### Week 1

#### Week 2

- Jupyter setup (unit? unit=2&lesson=73)
- Sequence\_data\_part\_1 (unit? unit=2&lesson=74)
- Sequence\_data\_part\_2 (unit? unit=2&lesson=75)
- Sequence\_data\_part\_3 (unit? unit=2&lesson=76)
- Sequence\_data\_part\_4 (unit?)

## Assignment 2

 The due date for submitting this assignment has passed. **Due on 2020-02-12, 23:59 IST.**

Assignment submitted on 2020-02-10, 23:51 IST

**MCQ/MSQ** – questions can have 1 or more correct answers.

1) Which of the following sequence data type is defined by enclosing the elements in parentheses '(')?

**1 point**

- ☐ Lists
- ☐ Arrays
- ☒ Tuples
- ☐ Dictionary

Yes, the answer is correct.

Score: 1

Accepted Answers:

*Tuples*

 2) Which of the following statement is not valid about Numpy '**Arrays**'?

**1 point**

- ☐ The type of items in the array is specified by a separate data-type object (dtype)
- ☒ numpy arrays are immutable
- ☐ numpy arrays can support multidimensional data
- ☐ ndarray.shape attribute returns a tuple consisting of array dimensions

unit=2&lesson=77)

• Numpy (unit?  
unit=2&lesson=78)

• Week 2 :  
Lecture slides  
(unit?  
unit=2&lesson=90)

• Quiz : Practice  
Assignment 2  
(assessment?  
name=67)

• Quiz :  
**Assignment 2**  
(assessment?  
name=83)

• Week 2 - FAQs  
(unit?  
unit=2&lesson=91)

• Week 2  
Feedback (unit?  
unit=2&lesson=85)

• Solution :  
Assignment 2  
(unit?  
unit=2&lesson=97)

### Week 3

### Week 4

### Supporting material for Week 4

### Download Videos

Yes, the answer is correct.  
Score: 1

Accepted Answers:  
*numpy arrays are immutable*

3) The command to access the last element from the array “a” is\_\_

1 point

```
import array as arr
a = arr.array('d', [2.5, 3.5, 4.5])
```

- ☐ print (a[0])
- ☐ print (a[3])
- ☒ print (a[-1])
- ☐ print (a)

Yes, the answer is correct.  
Score: 1

Accepted Answers:  
*print (a[-1])*

4) Create an array ‘x’ with values 0 to 9 and find what is the command to extract the elements in the following sequence - **array ([5,3,1])**? 1 point

- ☐ x = np.arange(10); x[5,3,1]
- ☐ x = np.arange(10); x[-5::2]
- ☒ x = np.arange(10); x[5:-2]
- ☐ x = np.arange(10); x[5::-2]

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*x = np.arange(10); x[5::-2]*

5) What will be the output after executing the following codes?

1 point

```
x=(0,8,9,15,17,18)
y=slice(1,-2)
x[y]
```

- ☐ 0,8,9,15
- ☐ 8,9,15,17
- ☒ 8,9,15
- ☐ IndexError

Yes, the answer is correct.  
Score: 1

Accepted Answers:  
*8,9,15*

6) The method used to increase the length of the list by number of elements in its argument.

1 point

- ☐ add ()

- ☐ insert ()
- ☒ extend ()
- ☐ pop ()

Yes, the answer is correct.

Score: 1

Accepted Answers:

*extend ()*

7) The function that returns the indices of the sorted elements.

**1 point**

- ☒ np.argsort ()
- ☐ np.sort ()
- ☐ np.bogosort ()
- ☐ np.selectionsort ()

Yes, the answer is correct.

Score: 1

Accepted Answers:

*np.argsort ()*

8) Create two tuples

**1 point**

```
tuple=(2,4,6,3,7)
tuple1 =(1,2,3)
```

Find out which of the following code does not work on a tuple

- ☐ tuple+tuple1
- ☐ sum(tuple)
- ☒ tuple[3] = 45
- ☐ len(tuple)

Yes, the answer is correct.

Score: 1

Accepted Answers:

*tuple[3] = 45*

9) The command to find the number of elements in the following array “N” is

**1 point**

```
N=np.array([24, None, 29, 'str', np.nan, 23, 20, (), [], ...])
```

- ☒ len(N)
- ☐ N.count()
- ☒ np.size(N)
- ☐ N.size()

Yes, the answer is correct.

Score: 1

Accepted Answers:

*len(N)*

`np.size(N)`

10) Which of the following is not a valid syntax for creating a **Set 'M'** in Python?

1 point

- ☐ `M = set ([11,12,12,13,14,15])`
- ☒ `M = {11,12,13,14}`
- ☐ `M = set ([11,12],[13,14],[14,15])`
- ☐ `M = set ((11,12,13,14))`

No, the answer is incorrect.

Score: 0

Accepted Answers:

`M = set ([11,12],[13,14],[14,15])`

11) What will be the output after executing the following codes?

1 point

```
S={12,13,14,15}
S.intersection_update({17,13,14,16}); print (S)
```

- ☐ Error, object has no attribute `intersection_update`
- ☐ `S={12,13,14,15,16, 17}`
- ☐ `S={12,13,14,15}`
- ☒ `S={13,14}`

Yes, the answer is correct.

Score: 1

Accepted Answers:

`S={13,14}`

12) Which of the following command returns the set of all elements from both sets, **a** and **b**?

1 point

- ☒ `a ^ b`
- ☐ `a & b`
- ☐ `a | b`
- ☐ `a - b`

No, the answer is incorrect.

Score: 0

Accepted Answers:

`a | b`

13) What will be the output of **ndarray.ndim** attribute?

1 point

- ☐ Gives the size of each element of the array in bytes
- ☒ Gives the number of axes or dimensions of the array
- ☐ Gives the buffer containing the actual elements of the array
- ☐ Gives an object describing the type of the elements in the array

Yes, the answer is correct.

Score: 1

Accepted Answers:

*Gives the number of axes or dimensions of the array*

14 For dictionary `d = {"plum ":0.66, "pears ":1.25,"oranges ":0.50, "apple":0.75 }`, which of the following statement correctly updates the price of oranges to 0.90? **1 point**

- ☐ `d[2] = 0.90`
- ☐ `d[0.50] = 0.90`
- ☒ `d["oranges "] = 0.90`
- ☐ `d["plum "] = 0.90`

Yes, the answer is correct.

Score: 1

Accepted Answers:

`d["oranges "] = 0.90`

15 Which of the following command(s) is/are used to join arrays? **1 point**

- ☒ `np.concatenate`
- ☐ `np.hstack`
- ☐ `np.vstack`
- ☐ all of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

*all of the above*

16 What will be the output of the dictionary 'c'? **1 point**

```
c={}
c[1]=1
c['1']=2
c[1] +=1
print(c)
```

- ☐ `{ 1: 1 }`
- ☒ `{ 1: 2, '1': 2 }`
- ☐ `{ 1: 0; '1': 2 }`
- ☐ `{ 1: 1, '1': 2 }`

Yes, the answer is correct.

Score: 1

Accepted Answers:

`{ 1: 2, '1': 2 }`

17 The output of the code given below is **1 point**

```
n = [x*x for x in range(4)]
print(n)
```

- ☐ `[1, 4, 9]`
- ☐ `[1, 4, 9, 16]`
- ☒ `[0, 1, 4, 9]`
- ☐ `[0, 1, 4, 9, 16]`

Yes, the answer is correct.

Score: 1

Accepted Answers:

[0, 1, 4, 9]

18) The output of the code given below is

1 point

```
list = [2, 4, 6, 8]
a = (x**3 for x in list)
print(next(a))
```

- ☐ 4
- ☐ 6
- ☒ 8
- ☐ 64

Yes, the answer is correct.

Score: 1

Accepted Answers:

8

19) Which of the following is not possible in sequence datatypes?

1 point

- ☐ Create a tuple inside a set
- ☒ Create a list inside a set
- ☐ Create a list inside a tuple
- ☐ Create a set inside a list

Yes, the answer is correct.

Score: 1

Accepted Answers:

Create a list inside a set

20) Which of the following commands will give you a new numpy array with Boolean values?

1 point

- ☐ np.ones((3,3),True)
- ☐ np.zeros((3,3),False)
- ☐ np.arange((3,3),False)
- ☒ np.full((3,3),True)

Yes, the answer is correct.

Score: 1

Accepted Answers:

np.full((3,3), True)

