

Python for Data Science

Week 2

1. Which of the following object does not support indexing? [1 mark]

- (a) tuple
- (b) list
- (c) dictionary
- (d) set

Answer: d

2. Given a NumPy array, `arr = np.array([[1, 2, 3], [4, 5, 6], [7, 8, 9]])`, what is the output of the command, `print(arr[0][1])`?

- (a) `[[1 2 3]`
`[4 5 6]`
`[7 8 9]]`
- (b) `[1 2 3]`
- (c) `[4 5 6]`
- (d) `[7 8 9]`

Answer: c

3. What is the output of the following code?

```
s = {1, 2, 4, 5}
l = []

for i in range(len(s)):
    l += [1+i]
print(l)
```

- (a) `[2, 3, 4, 5]`
- (b) `[0 1 2 3]`

(c) [1, 2, 3, 4]

(d) Will throw an error: Set objects are not iterable.

Answer: c

4. What is the output of the following code?

[1 mark]

```
import numpy as np  
  
arr = np.array(np.arange(0, 15))  
  
print(arr.reshape(3,5))
```

```
[[ 0  1  2  3]  
 [ 4  5  6  7]  
 [ 8  9 10 11]  
 [12 13 14 15]]
```

(a)

```
[[ 1  2  3  4  5]
 [ 6  7  8  9 10]
 [11 12 13 14 15]]
```

(b)

```
[[ 0  1  2  3  4]
 [ 5  6  7  8  9]
 [10 11 12 13 14]]
```

(c)

```
[[ 1  2  3  4]
 [ 5  6  7  8]
 [ 9 10 11 12]
 [13 14 15 16]]
```

(d)

Answer: c

5. Which of the following code gives output **My friend's house is in Chennai**? [1 mark]

```
place = 'Chennai'

print("My friend's house is in {}".format(place))
```

(a)

```
place = 'Chennai'

print('My friend's house is in {}'.format(place))
```

(b)

```
print('My friend's house is in {}'.format(place))
```

(c)

```
print("My friend's house is in {}".format("Chennai"))
```

(d)

Answer: a, d

6. Let $t1 = (1, 2, \text{"tuple"}, 4)$ and $t2 = (5, 6, 7)$. Which of the following will not give any error after the execution? [1 mark]

- (a) $t1.append(5)$
- (b) $x = t2[t1[1]]$
- (c) $t3 = t1 + t2$
- (d) $t3 = (t1, t2)$
- (e) $t3 = (list(t1), list(t2))$

Answer: (b, c, d, e)

7. Let $d = \{1 : \text{"Pyhton"}, 2 : [1, 2, 3]\}$. Which among the following will not give the error after the execution? [1 mark]

- (a) $d[2].append(4)$

- (b) $x = d[0]$
- (c) $d["one"] = 1$
- (d) $d.update({'one' : 2})$

Answer: (a, c, d)

8. Which of the following data type is immutable? [1 mark]

- (a) list
- (b) set
- (c) tuple
- (d) dictionary

Answer: (c)

9. `student = {'name': 'Jane', 'age': 25, 'courses': ['Math', 'Statistics']}`
Which among the following will return
`{'name': 'Jane', 'age': 26, 'courses': ['Math', 'Statistics'], 'phone': '123-456'}`

- (a) `student.update({'age': 26})`
- (b) `student.update({'age': 26, 'phone': '123-456'})`
- (c) `student['phone'] = '123-456'`
`student.update({'age': 26})`
- (d) None of the above

Answer: (b, c)

10. What is the output of the following code? [1 mark]

```
name = "Mahesh"
l = []

for i in name:
    l.append(i.capitalize())

print(l)
```

- (a) ['M', 'A', 'H', 'E', 'S', 'H']
- (b) ['m', 'a', 'h', 'e', 's', 'h']
- (c) ['M', 'a', 'h', 'e', 's', 'h']
- (d) ['m', 'A', 'H', 'E', 'S', 'H']

Answer: (a)