1. What is the result of the following lines of code? **1 / 1 point**

```
a=np.array([0,1])
b=np.array([1,0])
np.dot(a,b)
```

- (●) 0
- ( ) 1
- ( ) array([1,1])

Correct
correct

2. What is the value of Z after the following code is run? **1 / 1 point**

```

X=np.array([[1,0],[0,1]])
Y=np.array([[0,1],[1,0]])
Z=X+Y

```

- (●) array([[1,1],[1,1]])
- ( ) array([[1,0],[0,1]])
- ( ) array([[0,1],[1,1]])

Correct
correct, the '+' corresponds to matrix addition

3. What values does the variable **out** take if the following lines of code are run? **1 / 1 point**

```

X=np.array([[1,0,1],[2,2,2]])
out=X[0,1:3]
out

```

- ( ) array([2,2])
- ( ) array([1,0,1])
- (●) array([0,1])

Correct
correct, the first index corresponds to the rows the second index corresponds to the columns

4. What is the value of **Z** after the following code is run? **1 / 1 point**

```
X=np.array([[1,0],[0,1]])
Y=np.array([[2,1],[1,2]])
Z=np.dot(X,Y)
```

- (●) array([[2,1],[1,2]])
- ( ) array([[2,0],[1,0]])
- ( ) array([[3,1],[1,3]])

Correct
correct, the dot function corresponds to matrix multiplication

5. Consider the following text file: **Example1.txt**: **0 / 1 point**

This is line 1

This is line 2

This is line 3

What is the output of the following lines of code?

```
with open("Example1.txt","r") as file1:

    FileContent=file1.read()

    print(FileContent)
```

6. Consider the following line of code: 1 / 1 point

```
with open(example1,"r") as file1:
```

What mode is the file object in?

- (•) read
- ( ) write
- ( ) append

Correct
Correct, the mode is set to r for read.

7. What do the following lines of code do? 1 / 1 point

```
with open("Example.txt","a") as writefile:

  writefile.write("This is line A\n")
  writefile.write("This is line B\n")
```

- ( ) Write to the file “Example.txt”
- (•) Append the file "Example.txt"
- ( ) Read the file "Example.txt"

Correct
Correct.

8. What task do the following lines of code perform? **1 / 1 point**

```
with open('Example2.txt','r') as readfile:
    with open('Example3.txt','w') as writefile:
        for line in readfile:
            writefile.write(line)
```

- ○ Check the mode of the open function for each file object.
- ◉ Copy the text from Example2.txt to Example3.txt.
- ○ Print out the content of Example2.txt.

✓ **Correct**
Correct.

9. Consider the dataframe **df**. How would you access the element in the 2nd row and 1st column? **1 / 1 point**

- ◉ df.iloc[1,0]
- ○ df.iloc[2,1]
- ○ df.iloc[0,1]

✓ **Correct**
correct

10. In the lab, you learned you can also obtain a series from a dataframe **df**, select the correct way to assign the column with the header Length to a pandas series to the variable **x**. **1 / 1 point**

- ◉ x=df['Length']
- ○ x=df[['Length']]
- ○ x=df.[['Length']]

✓ **Correct**
correct