40 Questions to test your skill in Python for Data Science

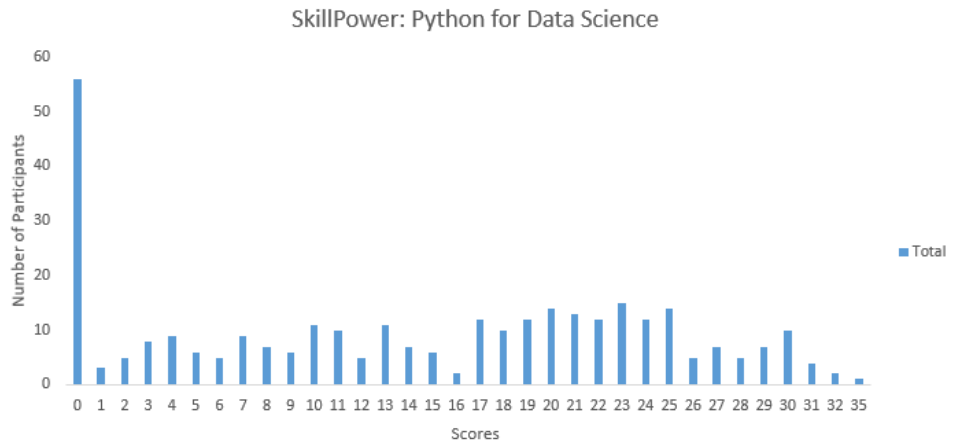
BEGINNER CAREER MACHINE LEARNING PYTHON SKILLTEST

Python is increasingly becoming popular among data science enthusiasts, and for right reasons. It brings the entire ecosystem of a general programming language. So you can not only transform and manipulate data, but you can also create strong pipelines and machine learning workflows in a single ecosystem.

At Analytics Vidhya, we love Python. Most of us use Python as our preferred tool for machine learning. Not only this, if you want to learn Deep Learning, Python clearly has the most mature ecosystem among all other languages.

If you are learning Python for Data Science, this test was created to help you assess your skill in Python. This test was conducted as part of DataFest 2017. Close to 1,300 people participated in the test with more than 300 people taking this test.

Below are the distribution scores of the people who took the test:



You can access the final scores here. Here are a few statistics about the distribution.

Mean Score: 14.16

Median Score: 15

Mode Score: 0

Questions & Answers

Question Context 1

You must have seen the show “How I met your mother”. Do you remember the game where they played, in which each person drinks a shot whenever someone says “but, um”. I thought of adding a twist to the game. What if you could use your technical skills to play this game?

To identify how many shots a person is having in the entire game, you are supposed to write a code.

Below is the subtitle sample script.

Note: Python regular expression library has been imported as re.

```
txt = '''450 00:17:53,457 --> 00:17:56,175 Okay, but, um, thanks for being with us. 451 00:17:56,175 --> 00:17:58,616 But, um, if there's any college kids watching, 452 00:17:58,616 --> 00:18:01,610 But, um, but, um, but, um, but, um, but, um, 453 00:18:01,610 --> 00:18:03,656 We have to drink, professor.


454 00:18:03,656 --> 00:18:07,507 It's the rules. She said "But, um" 455 00:18:09,788 --> 00:18:12,515 But, um, but, um, but, um... god help us all. '''
```

1) Which of the following codes would be appropriate for this task?

A) len(re.findall(‘But, um’, txt))

B) re.search(‘But, um’, txt).count()

C) len(re.findall(‘[B,b]ut, um’, txt))

D) re.search(‘[B,b]ut, um’, txt)).count()

Solution: (C)

You have to find both capital and small versions of “but” So option C is correct.

Question Context 2

Suppose you are given the below string

str = “””Email_Address,Nickname,Group_Status,Join_Year
aa@aaa.com,aa,Owner,2014
bb@bbb.com,bb,Member,2015
cc@ccc.com,cc,Member,2017
dd@ddd.com,dd,Member,2016
ee@eee.com,ee,Member,2020
“””

In order to extract only the domain names from the email addresses from the above string (for eg. “aaa”, “bbb”..) you write the following code:

```
for i in re.finditer('([a-zA-Z]+)@([a-zA-Z]+).(com)', str):     print i.group(__)
```

2) What number should be mentioned instead of “__” to index only the domains?

Note: Python regular expression library has been imported as re.

A) 0

B) 1

C) 2

D) 3

Solution: (C)

Read syntax of regular expression re.

Question Context 3

Your friend has a hypothesis – *"All those people who have names ending with the sound of "y" (Eg: Hollie) are intelligent people."* Please note: The name should end with the sound of 'y' but not end with alphabet 'y'.

Now you being a data freak, challenge the hypothesis by scraping data from your college's website. Here's data you have collected.

Name	Marks
Andy	0
Mandi	10
Sandy	20
Hollie	18
Molly	19
Dollie	15

You want to make a list of all people who fall in this category. You write following code do to the same:

```
temp = [] for i in re.finditer(pattern, str):     temp.append(i.group(1))
```

3) What should be the value of "pattern" in regular expression?

Note: Python regular expression library has been imported as re.

A) pattern = '(i|ie)(,)'

B) pattern = '(i$|ie$)(,)'

C) pattern = '([a-zA-Z]+i|[a-zA-Z]+ie)(,)'

D) None of these

Solution: (B)

You have to find the pattern the end in either "i" or "ie". So option B is correct.

Question Context 4

Assume, you are given two lists:

a = [1,2,3,4,5]

b = [6,7,8,9]

The task is to create a list which has all the elements of a and b in one dimension.

Output:

a = [1,2,3,4,5,6,7,8,9]

4) Which of the following option would you choose?

A) a.append(b)

B) a.extend(b)

C) Any of the above

D) None of these

Solution: (B)

Option B is correct

5) You have built a machine learning model which you wish to freeze now and use later. Which of the following command can perform this task for you?

Note: Pickle library has been imported as pkl.

A) push(model, “file”)

B) save(model, “file”)

C) dump(model, “file”)

D) freeze(model, “file”)

Solution: (C)

Option C is correct

Question Context 6

We want to convert the below string in date-time value:

```
import time str = '21/01/2017' datetime_value = time.strptime(str,date_format)
```

6) To convert the above string, what should be written in place of *date_format*?

A) “%d/%m/%y”

B) “%D/%M/%Y”

C) “%d/%M/%y”

D) “%d/%m/%Y”

Solution: (D)

Option D is correct

Question Context 7

I have built a simple neural network for an image recognition problem. Now, I want to test if I have assigned the weights & biases for the hidden layer correctly. To perform this action, I am giving an identity matrix as input. Below is my identity matrix:

A = [1, 0, 0
0, 1, 0
0, 0, 1]

7) How would you create this identity matrix in python?

Note: Library numpy has been imported as np.

A) np.eye(3)

B) identity(3)

C) np.array([1, 0, 0], [0, 1, 0], [0, 0, 1])

D) All of these

Solution: (A)

Option B does not exist (it should be np.identity()). And option C is wrong, because the syntax is incorrect. So the answer is option A

8) To check whether the two arrays occupy same space, what would you do?

I have two numpy arrays “e” and “f”.

You get the following output when you print “e” & “f”

```
print e [1, 2, 3, 2, 3, 4, 4, 5, 6] print f [[1, 2, 3], [2, 3, 4], [4, 5, 6]]
```

When you change the values of the first array, the values for the second array also changes. This creates a problem while processing the data.

For example, if you set the first 5 values of e as 0; i.e.

```
print e[:5] 0
```

the final values of e and f are

```
print e [0, 0, 0, 0, 0, 4, 4, 5, 6] print f [[0, 0, 0], [0, 0, 4], [4, 5, 6]]
```

You surmise that the two arrays must have the same space allocated.

A) Check memory of both arrays, if they match that means the arrays are same.

B) Do “np.array_equal(e, f)” and if the output is “True” then they both are same

C) Print flags of both arrays by e.flags and f.flags; check the flag “OWNDATA”. If one of them is False, then both the arrays have same space allocated.

D) None of these

Solution: (C)

Option C is correct

Question Context 9

Suppose you want to join train and test dataset (both are two numpy arrays train_set and test_set) into a resulting array (resulting_set) to do data processing on it simultaneously. This is as follows:

```
train_set = np.array([1, 2, 3]) test_set = np.array([[0, 1, 2], [1, 2, 3]]) resulting_set --> [[1, 2, 3], [0, 1, 2], [1, 2, 3]]
```

9) How would you join the two arrays?

Note: Numpy library has been imported as np

A) resulting_set = train_set.append(test_set)

B) resulting_set = np.concatenate([train_set, test_set])

C) resulting_set = np.vstack([train_set, test_set])

D) None of these

Solution: (C)

Both option A and B would do horizontal stacking, but we would like to have vertical stacking. So option C is correct

Question Context 10

Suppose you are tuning hyperparameters of a random forest classifier for the Iris dataset.

Sepal_length	Sepal_width	Petal_length	Petal_width	Species
4.6	3.2	1.4	0.2	Iris-setosa
5.3	3.7	1.5	0.2	Iris-setosa
5.0	3.3	1.4	0.2	Iris-setosa
7.0	3.2	4.7	1.4	Iris-versicolor
6.4	3.2	4.5	1.5	Iris-versicolor

10) What would be the best value for “random_state (Seed value)”?

A) np.random.seed(1)

B) np.random.seed(40)

C) np.random.seed(32)

D) Can’t say

Solution: (D)

There is no best value for seed. It depends on the data.

Question 11

While reading a csv file with numpy, you want to automatically fill missing values of column "Date_Of_Joining" with date "01/01/2010".

Name	Age	Date_Of_Joining	Total_Experience
Andy	20	01/02/2013	0
Mandy	30	01/05/2014	10
Sandy	10		0
Bandy	40	01/10/2009	20

11) Which command will be appropriate to fill missing value while reading the file with numpy?

Note: numpy has been imported as np

A) filling_values = ("-", 0, 01/01/2010, 0)
temp = np.genfromtxt(filename, filling_values=filling_values)

B) filling_values = ("-", 0, 01/01/2010, 0)
temp = np.loadtxt(filename, filling_values=filling_values)

C) filling_values = ("-", 0, 01/01/2010, 0)
temp = np.gentxt(filename, filling_values=filling_values)

D) None of these

Solution: (A)

Option A is correct

12) How would you import a decision tree classifier in sklearn?

A) from sklearn.decision_tree import DecisionTreeClassifier

B) from sklearn.ensemble import DecisionTreeClassifier

C) from sklearn.tree import DecisionTreeClassifier

D) None of these

Solution: (C)

Option C is correct

13) You have uploaded the dataset in csv format on google spreadsheet and shared it publicly. You want to access it in python, how can you do this?

Note: Library StringIO has been imported as StringIO.

```
A) link = https://docs.google.com/spreadsheets/d/...source = StringIO.StringIO(requests.get(link).content))
data = pd.read_csv(source)
```

```
B) link = https://docs.google.com/spreadsheets/d/...source = StringIO(request.get(link).content)) data =
pd.read_csv(source)
```

C)

```
link = https://docs.google.com/spreadsheets/d/...source = StringIO(requests.get(link).content)) data = pd.read_csv(source)
```

D) None of these

Solution: (A)

Option A is correct

Question Context 14

Imagine, you have a dataframe train file with 2 columns & 3 rows, which is loaded in pandas.

import pandas as pd

```
train  = pd.DataFrame({'id':[1,2,4],'features':[["A","B","C"],["A","D","E"],["C","D","F"]]})
```

Now you want to apply a lambda function on "features" column:

```
train['features_t'] = train["features"].apply(lambda x: " ".join(["_".join(i.split(" ")) for i in x]))
```

14) What will be the output of following print command?

```
print train['features_t']
```

A)

0 A B C
1 A D E
2 C D F

B)

0 AB

1 ADE

2 CDF

C) Error
D) None of these

Solution: (A)

Option A is correct

Question Context 15

We have a multi-class classification problem for predicting quality of wine on the basis of its attributes. The data is loaded in a dataframe "df"

	fixed acidity	volatile acidity	citric acid	residual sugar	chlorides	free sulfur dioxide	total sulfur dioxide	density	pH	sulphates	Alcohol	quality
0	7.4	0.70	0.00	1.9	0.076	11	34	0.9978	3.51	0.56	9.4	5
1	7.8	0.88	0.00	2.6	0.098	25	67	0.9968	3.20	0.68	9.8	5
2	7.8	0.76	0.04	2.3	0.092	15	54	0.9970	3.26	0.65	9.8	5
3	11.2	0.28	0.56	1.9	0.075	17	60	0.9980	3.16	0.58	9.8	6
4	7.4	0.70	0.00	1.9	0.076	11	34	0.9978	3.51	0.56	9.4	5

The quality column currently has values 1 to 10, but we want to substitute this by a binary classification problem. You want to keep the threshold for classification to 5, such that if the class is greater than 5, the output should be 1, else output should be 0.

15) Which of the following codes would help you perform this task?

Note: Numpy has been imported as np and dataframe is set as df.

A)

```
Y = df[quality].values Y = np.array([1 if y >= 6 else 0 for y in Y])
```

B)

```
Y = df[quality].values() Y = np.array([0 if y >= 6 else 1 for y in Y])
```

C)

```
Y = df[quality] Y = np.array([0 if y >= 6 else 1 for y in Y])
```

D)None of these

Solution: (A)

Option A is correct

Question Context 16

Suppose we make a dataframe as

```
df = pd.DataFrame(['ff', 'gg', 'hh', 'yy'],              [24, 12, 48, 30],              columns = ['Name', 'Age'])
```

16) What is the difference between the two data series given below?

1. **df['Name'] and**
2. **df.loc[:, 'Name']**

Note: Pandas has been imported as pd

A) 1 is view of original dataframe and 2 is a copy of original dataframe.

B) 2 is view of original dataframe and 1 is a copy of original dataframe.

C) Both are copies of original dataframe.

D) Both are views of original dataframe

Solution: (B)

Option B is correct. Refer the official docs of pandas library.

Question Context 17

Consider a function “fun” which is defined below:

```
def fun(x):     x[0] = 5     return x
```

Now you define a list which has three numbers in it.

g = [10,11,12]

17) Which of the following will be the output of the given print statement:

```
print  fun(g), g
```

A) [5, 11, 12] [5, 11, 12]

B) [5, 11, 12] [10, 11, 12]

C) [10, 11, 12] [10, 11, 12]

D) [10, 11, 12] [5, 11, 12]

Solution: (A)

Option A is correct

Question Context 18

Sigmoid function is usually used for creating a neural network activation function. A sigmoid function is denoted as

```
def sigmoid(x):   return (1 / (1 + math.exp(-x)))
```

18) It is necessary to know how to find the derivatives of sigmoid, as it would be essential for backpropagation. Select the option for finding derivative?

A)

```
import scipy Dv = scipy.misc.derive(sigmoid)
```

B)

```
from sympy import * x = symbol(x) y = sigmoid(x) Dv = y.differentiate(x)
```

C)

```
Dv = sigmoid(x) * (1 - sigmoid(x))
```

D) None of these

Solution: (C)

Option C is correct

Question Context 19

Suppose you are given a monthly data and you have to convert it to daily data.

For example,

ID	Electricity_Usage	Month
1	2000	1
2	20	2
3	4000	3
4	40	4

ID	Electricity_Usage	Date	Month
1	100	1	1
1	100	2	1
1	100	3	1
1	100	4	1
1	100	5	1

For this, first you have to expand the data for every month (considering that every month has 30 days)

19) Which of the following code would do this?

Note: Numpy has been imported as np and dataframe is set as df.

A) new_df = pd.concat([df]*30, index = False)

B) new_df = pd.concat([df]*30, ignore_index=True)

C) new_df = pd.concat([df]*30, ignore_index=False)

D) None of these

Solution: (B)

Option B is correct

Context: 20-22

Suppose you are given a dataframe df.

```
df = pd.DataFrame({'Click_Id':['A','B','C','D','E'],'Count':[100,200,300,400,250]})
```

20) Now you want to change the name of the column 'Count' in df to 'Click_Count'. So, for performing that action you have written the following code.

```
df.rename(columns = {'Count':'Click_Count'})
```

What will be the output of print statement below?

```
print df.columns
```

Note: Pandas library has been imported as pd.

A) ['Click_Id', 'Click_Count']

B) ['Click_Id', 'Count']

C) Error

D) None of these

Solution: (B)

Option B is correct

Context: 20-22

Suppose you are given a data frame df.

```
df = pd.DataFrame({'Click_Id':['A','B','C','D','E'],'Count':[100,200,300,400,250]})
```

21) In many data science projects, you are required to convert a dataframe into a dictionary. Suppose you want to convert "df" into a dictionary such that 'Click_Id' will be the key and 'Count' will be the value for each key. Which of the following options will give you the desired result?

Note: Pandas library has been imported as pd

A) set_index('Click_Id')['Count'].to_dict()

B) set_index('Count')['Click_Id'].to_dict()

C) We cannot perform this task since dataframe and dictionary are different data structures

D) None of these

Solution: (A)

Option A is correct

22) In above dataframe df. Suppose you want to assign a df to df1, so that you can recover original content of df in future using df1 as below.

```
df1 = df
```

Now you want to change some values of "Count" column in df.

```
df.loc[df.Click_Id == 'A', 'Count'] += 100
```

Which of the following will be the right output for the below print statement?

```
print df.Count.values,df1.Count.values
```

Note: Pandas library has been imported as pd.

A) [200 200 300 400 250] [200 200 300 400 250]

B) [100 200 300 400 250] [100 200 300 400 250]

C) [200 200 300 400 250] [100 200 300 400 250]

D) None of these

Solution: (A)

Option A is correct

23) You write a code for preprocessing data, and you notice it is taking a lot of time. To amend this, you put a bookmark in the code so that you come to know how much time is spent on each code line. To perform this task, which of the following actions you would take?

1. **You put bookmark as time.sleep() so that you would know how much the code has "slept" literally**
2. **You put bookmark as time.time() and check how much time elapses in each code line**
3. **You put bookmark as datetime.timedelta(), so that you would find out differences of execution times**
4. **You copy whole code in an Ipython / Jupyter notebook, with each code line as a separate block and write magic function %%timeit in each block**

A) 1 & 2

B) 1,2 & 3

C) 1,2 & 4

D) All of the above

Solution: (C)

Option C is correct

24) How would you read data from the file using pandas by skipping the first three lines?

Note: pandas library has been imported as pd In the given file (email.csv), the first three records are empty.

```
,,, ,,, ,,, Email_Address,Nickname,Group_Status,Join_Year aa@aaa.com,aa,Owner,2014 bb@bbb.com,bb,Member,2015
cc@ccc.com,cc,Member,2017 dd@ddd.com,dd,Member,2016
```

A) read_csv('email.csv', skip_rows=3)

B) read_csv('email.csv', skiprows=3)

C) read_csv('email.csv', skip=3)

D) None of these

Solution: (B)

Option B is correct

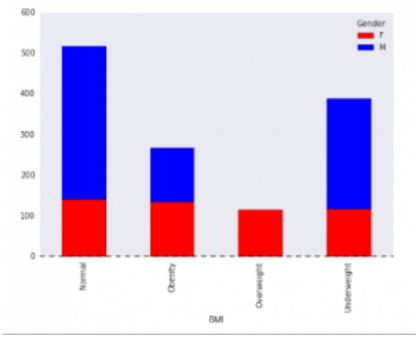
25) What should be written in-place of "method" to produce the desired outcome?

Given below is dataframe "df":

EMPID	Gender	Age	Sales	BMI	Income
E001	M	34	123	Normal	350
E002	F	40	114	Overweight	450
E003	F	37	135	Obesity	169
E004	M	30	139	Underweight	189
E005	F	44	117	Underweight	183
E006	M	36	121	Normal	80
E007	M	32	133	Obesity	166
E008	F	26	140	Normal	120
E009	M	32	133	Normal	75
E010	M	36	133	Underweight	40

Now, you want to know whether BMI and Gender would influence the sales.

For this, you want to plot a bar graph as shown below:



The code for this is:

```
var = df.groupby(['BMI','Gender']).Sales.sum() var.unstack().plot(kind='bar', method,  color=['red','blue'], grid=False)
```

A) stacked=True

B) stacked=False

C) stack=False

D) None of these

Solution: (A)

It's a stacked bar chart.

26) Suppose, you are given 2 list – City_A and City_B.

City_A = [‘1',’2',’3',’4’]

City_B = [‘2',’3',’4',’5’]

In both cities, some values are common. Which of the following code will find the name of all cities which are present in “City_A” but not in “City_B”.

A) [i for i in City_A if i not in City_B]

B) [i for i in City_B if i not in City_A]

C) [i for i in City_A if i in City_B]

D) None of these

Solution: (A)

Option A is correct

Question Context 27

Suppose you are trying to read a file “temp.csv” using pandas and you get the following error.

```
Traceback (most recent call last): File "<input>", line 1, in<module> UnicodeEncodeError: 'ascii' codec can't encode character.
```

27) Which of the following would likely correct this error?

Note: pandas has been imported as pd

A) pd.read_csv(“temp.csv”, compression=’gzip’)

B) pd.read_csv(“temp.csv”, dialect=’str’)

C) pd.read_csv(“temp.csv”, encoding=’utf-8')

D) None of these

Solution: (C)

Option C is correct, because encoding should be ‘utf-8’

28) Suppose you are defining a tuple given below:

tup = (1, 2, 3, 4, 5)

Now, you want to update the value of this tuple at 2nd index to 10. Which of the following option will you choose?

A) tup(2) = 10

B) tup[2] = 10

C) tup{2} = 10

D) None of these

Solution: (D)

A tuple cannot be updated.

29) You want to read a website which has url as “www.abcd.org”. Which of the following options will perform this task?

A) urllib2.urlopen(www.abcd.org)

B) requests.get(www.abcd.org)

C) Both A and B

D) None of these

Solution: (C)

Option C is correct

Question Context 30

Suppose you are given the below web page

```
html_doc = “”” <!DOCTYPE html> <htmllang="en"> <head> <metacharset="utf-8"> <metaname="viewport" content="width=device-width"> <title>udacity/deep-learning: Repo for the Deep Learning Nanodegree Foundations program.</title> <linkrel="search" type="application/opensearchdescription+xml" href="/opensearch.xml" title="GitHub"> <linkrel="fluid-icon" href="https://github.com/fluidicon.png" title="GitHub"> <metaproperty="fb:app_id" content="1401488693436528"> <linkrel="assets" href="https://assets-cdn.github.com/"> ... “””
```

30) To read the title of the webpage you are using BeautifulSoup. What is the code for this?

Hint: You have to extract text in title tag

A. from bs4 import BeautifulSoup
soup =BeautifulSoup(html_doc,’html.parser’)
print soup.title.name

B. from bs4 import BeautifulSoup
soup =BeautifulSoup(html_doc,’html.parser’)
print soup.title.string

C. from bs4 import BeautifulSoup
soup=BeautifulSoup(html_doc,’html.parser’)
print soup.title.get_text

D. None of these

Solution: (B)

Option B is correct

Question Context 31

Imagine, you are given a list of items in a DataFrame as below.

D = [‘A’,’B’,’C’,’D’,’E’,’AA’,’AB’]

Now, you want to apply label encoding on this list for importing and transforming, using LabelEncoder.

```
from sklearn.preprocessing import LabelEncoder le = LabelEncoder()
```

31) What will be the output of the print statement below ?

```
print le.fit_transform(D)
```

A. array([0, 2, 3, 4, 5, 6, 1])

B. array([0, 3, 4, 5, 6, 1, 2])

C. array([0, 2, 3, 4, 5, 1, 6])

D. Any of the above

Solution: (D)

Option D is correct

32) Which of the following will be the output of the below print statement?

```
print df.val == np.nan
```

Assume, you have defined a data frame which has 2 columns.

```
import numpy as np df = pd.DataFrame({'Id':[1,2,3,4],'val':[2,5,np.nan,6]})
```

A) 0 False
1 False
2 False
3 False

B) 0 False
1 False
2 True
3 False

C) 0 True
1 True
2 True
3 True

D) None of these

Solution: (A)

Option A is correct

33) Suppose the data is stored in HDFS format and you want to find how the data is structured. For this, which of the following command would help you find out the names of HDFS keys?

Note: HDFS file has been loaded by h5py as hf.

A) hf.key()

B) hf.key

C) hf.keys()

D) None of these

Solution: (C)

Option C is correct

Question Context 34

You are given reviews for movies below:

reviews = [‘movie is unwatchable no matter how decent the first half is . ‘, ‘somewhat funny and well paced action thriller that has jamie foxx as a hapless fast talking hoodlum who is chosen by an overly demanding’, ‘morse is okay as the agent who comes up with the ingenious plan to get whoever did it at all cost .’]

Your task is to find sentiments from the review above. For this, you first write a code to find count of individual words in all the sentences.

```
counts = Counter() for i in range(len(reviews)): for word in reviews[i].split(value): counts[word] += 1
```

34)What value should we split on to get individual words?

A. ‘ ‘

B. ‘,’

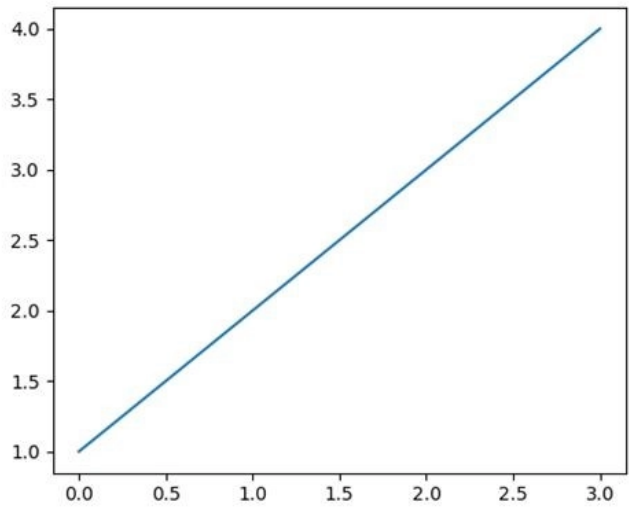
C. ‘.’

D. None of these

Solution: (A)

Option A is correct

35) How to set a line width in the plot given below?



For the above graph, the code for producing the plot was

```
import matplotlib.pyplot as plt plt.plot([1,2,3,4]) plt.show()
```

A. In line two, write plt.plot([1,2,3,4], width=3)

B. In line two, write plt.plot([1,2,3,4], line_width=3

C. In line two, write plt.plot([1,2,3,4], lw=3)

D. None of these

Solution: (C)

Option C is correct

36) How would you reset the index of a dataframe to a given list? The new index is given as:

new_index=['Safari','Iceweasel','Comodo Dragon','IE10','Chrome']

Note: df is a pandas dataframe

	http_status	response_time
Firefox	200	0.04
Chrome	200	0.02
Safari	404	0.07
IE10	404	0.08
Konqueror	301	1.00

A) df.reset_index(new_index,)

B) df.reindex(new_index,)

C) df.reindex_like(new_index,)

D) None of these

Solution: (A)

Option A is correct

37) Determine the proportion of passengers survived based on their passenger class.

	PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket	Fare	Cabin	Embarked
0	1	0	3	Braund, Mr. Owen Harris	male	22.0	1	0	A/5 21171	7.2500	NaN	S
1	2	1	1	Cumings, Mrs. John Bradley (Florence Briggs Th…	female	38.0	1	0	PC 17599	71.2833	C85	C
2	3	1	3	Heikkinen, Miss. Laina	female	26.0	0	0	STON/O2. 3101282	7.9250	NaN	S
3	4	1	1	Futrelle, Mrs. Jacques Heath (Lily May Peel)	female	35.0	1	0	113803	53.1000	C123	S
4	5	0	3	Allen, Mr. William Henry	male	35.0	0	0	373450	8.0500	NaN	S

A. crosstab(df_train['Pclass'], df_train['Survived'])

B. proportion(df_train['Pclass'], df_train['Survived'])

C. crosstab(df_train['Survived'], df_train['Pclass'])

D. None of these

Solution: (A)

Option A is correct

38) You want to write a generic code to calculate n-gram of the text. The 2-gram of this sentence would be [[“this, “is”], [“is”, “a”], [“a, “sample”], [“sample”, “text”]]

Which of the following code would be correct?

For a given a sentence:
‘this is a sample text’.

A. def generate_ngrams(text, n):
words = text.split(‘\n’)
output = [] for i in range(len(words)-n+1):
append(words[i+1:i+n])
return output

B. def generate_ngrams(text, n):
words = text.split()
output = [] for i in range(len(words)-n+1):
append(words[i:i+n])
return output

C. def generate_ngrams(text, n):
words = text.split()
output = [] for i in range(len(words)-n+1):
append(words[i+1:i+n])
return output

D. None of these

Solution: (B)

Option B is correct

39) Which of the following code will export dataframe (df) in CSV file, encoded in UTF-8 after hiding index & header labels.

A. df_1.to_csv(‘../data/file.csv’,encoding=’utf-8',index=True,header=False)

B. df_1.to_csv(‘../data/file.csv’,encoding=’utf-8',index=False,header=True)

C. df_1.to_csv(‘../data/file.csv’,encoding=’utf-8',index=False,header=False)

D. None of these

Solution: (C)

Option C is correct

40) Which of the following is a correct implementation of mean squared error (MSE) metric?

Note: numpy library has been imported as np.

A. def MSE(real_target, predicted_target):
   return np.mean((np.square(real_target) – np.square(predicted_target)))

B. def MSE(real_target, predicted_target):
   return np.mean((real_target – predicted_target)**2)

C. def MSE(real_target, predicted_target):
   return np.sqrt(np.mean((np.square(real_target) – np.square(predicted_target))))

D. None of the above

Solution: (B)

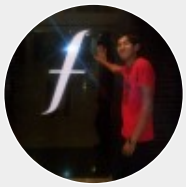
Option B is correct

End Notes

If you are learning Python, make sure you go through the test above. It will not only help you assess your skill. You can also see where you stand among other people in the community. If you have any questions or doubts, feel free to post them below.

Learn, compete, hack and get hired!

Article Url - https://www.analyticsvidhya.com/blog/2017/05/questions-python-for-data-science/



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Faizan is a Data Science enthusiast and a Deep learning rookie. A recent Comp. Sc. undergrad, he aims to utilize his skills to push the boundaries of AI research.