ISOM 2600 Introduction to Business Analytics

Practice Questions of Topic 1

Q1:

By default plot() function plots a __:

A. Histogram

B. Bar graph

C. Line chart

D. Pie chart

Q2:

Given the following code:

```
word = "Python Code for Data Analysis"
count = [1 if x == 'a' else 0 for x in word]
print(count)
```

How many "1" will be in the output?

A. 1
B. 2
C. 3
D. 4

Solution: Python is case-sensitive, and therefore we have only three 'a'.

Q3:

Given the following code:

```
a = "True"
b = "False"
print(a+b)
```

What is the expected output?

A. 1
B. "TrueFalse"
C. True
D. It shows an error message

Q4:

We want to show the shape of uniform distribution, U[0,1], using python. Given the following code:

```
import numpy as np

x = _____

plt.hist(x, density = True)
```

If we draw 1000 random variable from U[0,1] to plot the histogram, what is the missing code?

A. np.arange(0,1,1000)
B. np.random.randn(1000)
C. np.random.rand(1000)
D. scipy.stats.norm.rvs(0,1,1000)

Q5

What is the output of the following list function?

```
sampleList = [10, 20, 30, 40, 50]

sampleList.append(60)

print(sampleList)


sampleList.append(60)

print(sampleList)


sampleList.append(60)

print(sampleList)
```

A. [10, 20, 30, 40, 50, 60]
[10, 20, 30, 40, 50, 60]
[10, 20, 30, 40, 50, 60]

B. [10, 20, 30, 40, 50, 60]
[10, 20, 30, 40, 50, 60, 60]
[10, 20, 30, 40, 50, 60, 60]

C. [10, 20, 30, 40, 50, 60]
[10, 20, 30, 40, 50, 60]
[10, 20, 30, 40, 50, 60, 60]

D. [10, 20, 30, 40, 50, 60]
[10, 20, 30, 40, 50, 60, 60]
[10, 20, 30, 40, 50, 60, 60, 60]

Q6.

For a right-sided test, i.e H_0: $\mu \leq \mu_0$ versus H_1: $\mu > \mu_0$, if the test statistic is given as Z, where Z = (sample mean - μ_0)/standard error, how can we compute the p-value in python?

A. 1 – norm.cdf(Z)
B. 1 – norm.pdf(Z)
C. norm.cdf(Z)
D. norm.pdf(Z)