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NPTEL (https://swayam.gov.in/explorer?ncCode=NPTEL) » The Joy of Computing using Python (course)

Announcements (announcements)   **About the Course (https://swayam.gov.in/nd1_noc20_cs35/preview)**

Ask a Question (forum)   Progress (student/home)   Mentor (student/mentor)

Unit 7 - Week 5

Course outline

How does an NPTEL online course work?

Week 0

Week 1

Week 2

Week 3

week 4

Week 5

● Introduction to Dictionaries (unit? unit=84&lesson=85)

○ Speech to Text : No need to write 01 (unit? unit=84&lesson=86)

● Speech to Text : No need to write 02 (unit? unit=84&lesson=87)

● Speech to Text : No need to write

Assignment 5

**The due date for submitting this assignment has passed.   Due on 2020-03-04, 23:59 IST.
As per our records you have not submitted this assignment.**

1) What does the following code do?   *1 point*

```
1  import random
2  def get_gates():
3     r=random.randint(0,2)
4     r1=random.randint(0,2)
5     while(r==r1):
6        r=random.randint(0,2)
7     l=['x','x','x']
8     l[r]='c'
9     l[r1]='c'
10    ind=[0,1,2]
11    for each in ind:
12       if(each!=r1 and each!=r):
13          l[each]='g'
14    print(l)
15
16  get_gates()
```

○ creates a list where two random elements are 'c' and the other element is 'g'

○ creates a list where two random elements are 'g' and the other element is 'c'

○ creates a list where one random elements is 'c' and the other element is 'g'

○ none of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:

creates a list where two random elements are 'c' and the other element is 'g'

2) Which of the random experiments from the options does the code represent?   **1 point**

```python
import random
while(1):
    r=random.randint(0,1)
    if(r==0):
        print('tossing')
        break
    else:
        print('tossing')
```

○ Tossing a coin once

○ Tossing a coin infinite times

○ Tossing a coin repeatedly till a head in encountered

○ none of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
none of the above

3) Which of the random experiments from the options does the code represent?   **1 point**

```python
import random
p1=["rock","paper","scissor"]
p2=["rock","paper","scissor"]
c1=random.choice(p1)
c2=random.choice(p2)
if(c1==c2):
    print("SUCCESS")
else:
    print("FAIL")
```

○ Prints a success when both people select the same object

○ Prints a success when both people select "rock"

○ Prints a success when both people select different objects

○ None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
Prints a success when both people select the same object

4) For the code below, which of the statement in the options is false?   **1 point**

```python
t =[]
for i in range(10):
    a=int(input("Enter the number you want to insert in the list"))
    if(len(t)==0):
        t.append(a)
    else:
        if(a>t[len(t)-1]):
            t.append(a)
print(t)
```

○ The loop runs exactly 10 times

○ All the integers taken as input from the user need not be in the list l

○ The list l consists of exactly 10 elements at the end of the program

○ The list l printed in the last line is a sorted list

No, the answer is incorrect.
Score: 0

Accepted Answers:
The list l consists of exactly 10 elements at the end of the program

5) Which of the random experiments from the options does the code represent?   *1 point*

```
1  import  random
2  bins ={}
3  for  i  in  range (1 ,11):
4     bins [ i ]=0
5  for  i  in  range (1 ,101):
6     r = random . randint (1 ,10)
7     bins [ r ]= bins [ r ]+1
8  print ( bins )
```

○ Placing 100 bins and then throwing 10 balls randomly in these bins

○ Placing 10 bins and then throwing 100 balls randomly in these bins

○ Placing 10 bins and 10 balls and then throwing 10 balls randomly in these bins

○ None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
Placing 10 bins and then throwing 100 balls randomly in these bins

6) Assuming that "bins" represents a dictionary where key is the number of a bin and value   *1 point*
represents the number of balls present in the
corresponding bin, what is the output of the following code?

```
1  min_ =0
2  min_i=−1
3  for  each  in  bins :
4     if ( bins [ each ]>min_ ):
5        min_i=each
6        min_= bins [ each ]
7  print ( min_i )
```

○ Displays the maximum number of balls present in any bin

○ Displays the number of the bin containing maximum balls

○ Displays the number of the bin containing minimum balls

○ None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
Displays the number of the bin containing maximum balls

7) Assuming that "bins" represents a dictionary where key is the number of a bin and value   *1 point*
represents the number of balls present in the
corresponding bin, what is the output of the following code?

```
1  def mbin():
2      max_=0
3      max_i=-1
4      for each in bins:
5          if(bins[each]>max_):
6              max_i=each
7              max_=bins[each]
8      print(max_i)
9      return max_i
10
11 while(len(bins)>0):
12     b=mbin()
13     del(bins[b])
```

○ Displays the maximum number of balls present in any bin

○ Displays bins in the ascending order of the number of balls they have

○ Displays bins in the descending order of the number of balls they have

○ None of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
Displays bins in the descending order of the number of balls they have

8)   *1 point*

```
1  def find(list1,num):
2      for each in list1:
3          if(each!=num):
4              print(each)
5          else:
6              break
7
8  t=[]
9  for i in range(100000):
10     t.append(i)
11
12 find(t,99999)
```

The above code generates numbers from

○ 0 to 99999

○ 0 to 100000

○ 0 to 99998

○ 1 to 99998

No, the answer is incorrect.
Score: 0
Accepted Answers:
0 to 99998

9) Which of the random experiments from the options does the code represent?   *1 point*

```
1 import random
2 while (1):
3     r=random.randint(1,6)
4     if (r%2==0):
5         print('rolling')
6         break
7     else:
8         print('rolling')
```

○ Rolling a dice once

○ Rolling a dice infinite times

○ Rolling a dice repeatedly till an odd number is encountered

○ Rolling a dice repeatedly till an even number is encountered

No, the answer is incorrect.
Score: 0

Accepted Answers:
Rolling a dice repeatedly till an even number is encountered

10)Assuming that "bins" represents a dictionary where key is the number of a bin and value   ***1 point***
represents the number of balls present in the
        corresponding bin, what plot does the following code generate?

```
1 import matplotlib.pyplot as plt
2 val=bins.values()
3 x=[]
4 y=[]
5 print(val)
6 for each in list(set(val)):
7     x.append(each)
8     y.append(val.count(each))
9     print(each,val.count(each))
10 plt.plot(x,y)
11 plt.show()
```

○ X axis: Number of balls, Y axis: Number of bins having as many balls as specified by X axis

○ X axis: Bin number, Y axis: Number of balls in the bin whose number is specified by X axis

○ X axis: Ball number, Y axis: The bin number which contained the ball whose number is specified
by the X axis

○ None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
None of the above