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([https://swayam.gov.in/nc\\_details/NPTEL](https://swayam.gov.in/nc_details/NPTEL))

kashyapgarima700@gmail.com ▾

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



## Course outline

How does an NPTEL online course work?  
( )

Week 0 ( )

Week 1 ( )

Week 2 ( )

Week 3 ( )

week 4 ( )

Week 5 ( )

Week 6 ( )

● Substitution Cipher -The science of secrecy (unit? unit=124&lesso n=125)

● Substitution Cipher -The science of secrecy 01 (unit? unit=124&lesso n=126)

● Substitution Cipher -The

# Week 6 : Assignment 1

The due date for submitting this assignment has passed.

Due on 2023-03-08, 23:59 IST.

Assignment submitted on 2023-03-01, 15:55 IST

1) Which of the following is true about recursion?

1 point

- ☐ Recursion always performs better than non-recursive code.
- ☒ Recursive code can be reused.
- ☒ The base case is necessary for recursion.
- ☒ Recursive code can be shorter than non-recursive code

Yes, the answer is correct.

Score: 1

Accepted Answers:

*Recursive code can be reused.*

*The base case is necessary for recursion.*

*Recursive code can be shorter than non-recursive code*

2) If PYTHON is encoded by TCXLSR then DIAMOND will be encoded as?

1 point

- ☐ EJBNPOE
- ☐ FKCORPF
- ☐ HMERTSH
- ☒ HMEQSRH

Yes, the answer is correct.

Score: 1

Accepted Answers:

*HMEQSRH*

3) Let L be a list containing different names of movies. Which statement is correct to select a random movie name from that list L? **1 point**

- ☒ random.choices(L)
- ☐ random.select(L)
- ☐ random.movie(L)

science of  
secrecy 02  
(unit?  
unit=124&lesso  
n=127)

● Substitution  
Cipher -The  
science of  
secrecy 03  
(unit?  
unit=124&lesso  
n=128)

● Tic Tac Toe -  
Down the  
memory Lane  
(unit?  
unit=124&lesso  
n=129)

● Tic Tac Toe -  
Down the  
memory Lane  
01 (unit?  
unit=124&lesso  
n=130)

● Tic Tac Toe -  
Down the  
memory Lane  
02 (unit?  
unit=124&lesso  
n=131)

● Tic Tac Toe -  
Down the  
memory Lane  
03 (unit?  
unit=124&lesso  
n=132)

● Tic Tac Toe -  
Down the  
memory Lane  
04 (unit?  
unit=124&lesso  
n=133)

○ Tic Tac Toe -  
Down the  
memory Lane  
05 (unit?  
unit=124&lesso  
n=134)

● Recursion  
(unit?  
unit=124&lesso  
n=135)

● Recursion 01  
(unit?  
unit=124&lesso  
n=136)

☐ random.random(L)

Yes, the answer is correct.

Score: 1

Accepted Answers:

*random.choices(L)*

4) In the list L = [4,6,7,4,6,2,1], What is the index of element '7'?

1 point

☐ 0

☐ 1

☒ 2

☐ 3

Yes, the answer is correct.

Score: 1

Accepted Answers:

2

5) What will be the output of the following code?

1 point

```
import string

def shift(word,value):

    letters = string.ascii_lowercase
    new = ''

    for i in range(len(word)):

        if word[i] in letters:

            index = letters.index(word[i])
            new = new + letters[(index+value)%26]

        else:

            new = new + word[i]

    return new
```

☒ Shift every letter in a given word by value.

☐ Shift every letter in a given word by 1.

☐ Shift every letter in a given word by 26.

☐ Returns the same word.

Yes, the answer is correct.

Score: 1

Accepted Answers:

*Shift every letter in a given word by value.*

6) Library used to import images?

1 point

☒ PIL

☐ Imageview

☐ IMG

● Recursion 02  
(unit?  
unit=124&lesso  
n=137)

● Recursion 03  
(unit?  
unit=124&lesso  
n=138)

● Recursion 04  
(unit?  
unit=124&lesso  
n=139)

● Recursion 05  
(unit?  
unit=124&lesso  
n=140)

● Recursion 06  
(unit?  
unit=124&lesso  
n=141)

○ Week 6  
Feedback  
Form: The Joy  
of Computing  
using Python  
(unit?  
unit=124&lesso  
n=142)

● Quiz: Week 6 :  
Assignment 1  
(assessment?  
name=310)

● Week 6:  
Programming  
Assignment 1  
(/noc23\_cs20/pr  
ogassignment?  
name=311)

● Week 6:  
Programming  
Assignment 2  
(/noc23\_cs20/pr  
ogassignment?  
name=312)

● Week 6:  
Programming  
Assignment 3  
(/noc23\_cs20/pr  
ogassignment?  
name=313)

Week 7 ()

Week 8 ()

Week 9 ()

○ image

Yes, the answer is correct.

Score: 1

Accepted Answers:

*PIL*

7) Values of CSV files are separated by?

1 point

☒ Commas

☐ Colons

☐ Semi-colons

☐ Slash

Yes, the answer is correct.

Score: 1

Accepted Answers:

*Commas*

8) what will be the output of the following program?

1 point

```
1 def recursive(num):
2
3     if(num==1):
4         print('*')
5         return
6
7     if(num%2 == 0):
8         print('*'*num)
9         recursive(num-1)
10        return
11    else:
12        recursive(num-1)
13        return
14
15 recursive(10)
```

☐ \*\*\*\*\*

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☐ Runs into infinite loop

☒ \*\*\*\*\*

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Week 10 ()

Week 11 ()

Week 12 ()

Text  
Transcripts ()

Download  
Videos ()

Books ()

Live Session  
()

Problem  
Solving  
Session ()

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Yes, the answer is correct.

Score: 1

Accepted Answers:

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9) What will happen if we don't check for a base case in recursion.

**1 point**

- ☐ The program will run smoothly
- ☐ The program will return a wrong output.
- ☒ The program will enter into an infinite loop.
- ☐ The program will never run.

Yes, the answer is correct.

Score: 1

Accepted Answers:

*The program will enter into an infinite loop.*

10) Which of the following is true about recursion?

**1 point**

- ☐ Recursion increases the speed of the program.
- ☒ Recursion decreases the speed of the program.
- ☐ Speed of the program remains the same.
- ☐ Recursion is easier to understand than non-recursive programs.

Yes, the answer is correct.

Score: 1

Accepted Answers:

*Recursion decreases the speed of the program.*