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

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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 ()

○ Introduction to Programming (unit?  
unit=17&lesson=18)

○ Why Programming? (unit?  
unit=17&lesson=19)

○ Programming for Everybody (unit?  
unit=17&lesson=20)

○ Any Prerequisites? (unit?  
unit=17&lesson=21)

○ Where to start? (unit?

## Week 1 : Assignment 1

The due date for submitting this assignment has passed.

Due on 2023-02-08, 23:59 IST.

Assignment submitted on 2023-01-25, 12:09 IST

- 1) Which of the following is/are control commands in Scratch? 1 point

- repeat
- repeat until
- forever
- forever until

Yes, the answer is correct.  
Score: 1

Accepted Answers:

*repeat*  
*repeat until*  
*forever*

- 2) Which option in scratch is used to wait between the commands: 1 point

- Event
- Sensing
- Control
- Operators

Yes, the answer is correct.  
Score: 1

Accepted Answers:  
*Control*

unit=17&lesson=22)	3) _____ command is used to make the sprite walk by certain steps.	<b>1 point</b>
○ Why do we have so many languages? (unit? unit=17&lesson=23)	<input type="radio"/> Hide <input type="radio"/> Delete <input checked="" type="radio"/> Move <input type="radio"/> Walk	
○ How to go about programming? (unit? unit=17&lesson=24)	Yes, the answer is correct. Score: 1 Accepted Answers: Move	
○ Why to learn programming? (unit? unit=17&lesson=25)	4) The command used to make the sprite disappear from the animation stage is _____.	<b>1 point</b>
○ What is programming? (unit? unit=17&lesson=26)	<input type="radio"/> Show <input checked="" type="radio"/> Hide <input type="radio"/> Delete <input type="radio"/> move	
○ How to give instructions? (unit? unit=17&lesson=27)	Yes, the answer is correct. Score: 1 Accepted Answers: Hide	
○ Introduction to Scratch (unit? unit=17&lesson=28)	5) What is the extension of a scratch file?	<b>1 point</b>
○ Introduction to Loops (unit? unit=17&lesson=29)	<input type="radio"/> py <input type="radio"/> Se <input checked="" type="radio"/> Sb <input type="radio"/> sc	
○ More about Loops (unit? unit=17&lesson=30)	Yes, the answer is correct. Score: 1 Accepted Answers: Sb	
○ Solution to Looping Problem (unit? unit=17&lesson=31)	6) Predict the output of the following:	<b>1 point</b>
○ Scratch : Animation 1 (unit? unit=17&lesson=32)		
○ Scratch : Animation 2 (unit? unit=17&lesson=33)		
○ Scratch : Animation 3 (unit? unit=17&lesson=34)	<input type="radio"/> 0 <input type="radio"/> 100 <input type="radio"/> 20	

More on Scratch (unit? unit=17&lesson=35)

Quiz: Week 1 : Assignment 1 (assessment? name=291)

Week 1 Feedback Form: The Joy of Computing using Python (unit? unit=17&lesson=36)

**Week 2 ()**

**Week 3 ()**

**week 4 ()**

**Week 5 ()**

**Week 6 ()**

**Week 7 ()**

**Week 8 ()**

**Week 9 ()**

**Week 10 ()**

**Week 11 ()**

**Week 12 ()**

**Text Transcripts ()**

**Download Videos ()**

**Books ()**

**Live Session ()**

**Problem Solving**

None of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

*None of the above*

7) Which of the following is a facility provided by scratch to use sound effects?

**1 point**

A sound library is provided

Sound can be recorded using a microphone

We can use sound file

None of the above

All of the above are correct (except 4).

Yes, the answer is correct.

Score: 1

Accepted Answers:

*All of the above are correct (except 4).*

8) In addition to an option of using the inbuilt sprite library in scratch, what are the other ways to use a sprite?

**1 point**

We can paint a custom sprite

We can use the camera to take pictures

We can upload an image from our computer

All of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

*All of the above*

9) \_\_\_\_\_ scratch constructs are used to keep doing a set of instructions infinitely?

**1 point**

ever

forever

never

None of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

*forever*

10) Which of the following commands would make the sprite move backward?

**1 point**

Move 10 steps

Move -10 steps

Both 1 and 2

Neither 1 and 2

**Session ()**

Yes, the answer is correct.

Score: 1

Accepted Answers:

*Move -10 steps*

X



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## Course outline

How does an  
NPTEL  
online  
course  
work? ()

Week 0 ()

Week 1 ()

Week 2 ()

Introduction to  
Anaconda  
(unit?  
unit=37&lesson=38)

Installation of  
Anaconda  
(unit?  
unit=37&lesson=39)

Introduction to  
Spyder IDE  
(unit?  
unit=37&lesson=40)

Printing  
statements in  
Python (unit?  
unit=37&lesson=41)

# Week 2 : Assignment 1

The due date for submitting this assignment has passed.

Due on 2023-02-08, 23:59 IST.

Assignment submitted on 2023-01-28, 09:16 IST

1) What are the applications of Python?

**1 point**

- Image processing and graphic design applications
- Enterprise and business applications development
- Operating systems
- All of the above
- None of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

*All of the above*

2) Which of the following is not the correct variable name

**1 point**

- Abc
- Abd23
- 32asd
- Ab\_cd\_23

Yes, the answer is correct.

Score: 1

Accepted Answers:

*32asd*

- Understanding Variables in Python (unit? unit=37&lesson=42)
- Executing a sequence of instructions in the Console (unit? unit=37&lesson=43)
- Writing your First Program (unit? unit=37&lesson=44)
- Taking inputs from the user (unit? unit=37&lesson=45)
- Discount Calculation (unit? unit=37&lesson=46)
- Motivation to if condition (unit? unit=37&lesson=47)
- A reminder on how to deal with numbers (unit? unit=37&lesson=48)
- Understanding if condition's working (unit? unit=37&lesson=49)
- Realizing the importance of syntax and indentation (unit? unit=37&lesson=50)
- Introductions to loops (unit? unit=37&lesson=51)
- Loops: Sum of numbers (unit? unit=37&lesson=52)
- Loops: Sum of numbers

3) Write the output of the following code.

1 point

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

print(L[::-1])

- [1,2,3,4,5,6,7,8,9]
- [1,2,3,4,5,9,8,7,6]
- [9,8,7,6,5,4,3,2,1]
- Error

Yes, the answer is correct.

Score: 1

Accepted Answers:

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

4) Predict the output of the following code:

1 point

L = [[1,2,3],[0,4,5],[0,0,6]]

```

1   for i in range (3):
2       for j in range(2,i-1,-1):
3           print(L[i][j], end = "")
```

- 3,2,1,5,4,6
- 3 2 1 5 4 6
- 0,0,0,0,0,0
- 0 0 0 0 0 0

Yes, the answer is correct.

Score: 1

Accepted Answers:

3 2 1 5 4 6

5) Find all the error(s)in the following code:

1 point

```

n = 10
l = []
for i in range(10,n+10):
    l.append(i**i)

for i in range (10,0,-1):
    print(l[i])
```

- Index out of range
- Syntax error
- Variable not defined

(continued)  
 (unit?  
 unit=37&lesson=53)

Loops:  
 Multiplication  
 Tables (unit?  
 unit=37&lesson=54)

Introduction to  
 While Loop  
 (unit?  
 unit=37&lesson=55)

Week 2  
 Feedback  
 Form: The Joy  
 of Computing  
 using Python  
 (unit?  
 unit=37&lesson=56)

**Quiz: Week 2**  
**: Assignment**  
**1**  
**(assessment?**  
**name=295)**

**Week 2:**  
 Programming  
 Assignment 1  
 (/noc23\_cs20/progassignment?  
 name=292)

**Week 2:**  
 Programming  
 Assignment 2  
 (/noc23\_cs20/progassignment?  
 name=293)

**Week 2:**  
 Programming  
 Assignment 3  
 (/noc23\_cs20/progassignment?  
 name=294)

**Week 3 ()**

**week 4 ()**

**Week 5 ()**

**Week 6 ()**

**Week 7 ()**

**Week 8 ()**

'int' object does not support item assignment

Yes, the answer is correct.  
 Score: 1

Accepted Answers:  
*Index out of range*  
*Syntax error*

6) What is the output of the following code:

**1 point**

```
1 def add_items(x,y):
2     x+= [1,2]
3     y+= (3,4)
4     l = [0]
5     t = (5,)
6     add_items(l, t)
7     print(l,end="")
8     print(t)
```

- [0,1,2] (5,3,4)
- [0,1,2] (5,)
- [0] (5,3,4)
- [0] (5,)

Yes, the answer is correct.  
 Score: 1

Accepted Answers:  
*[0,1,2] (5,)*

7) What is the correct syntax for defining a function in Python?

**0 points**

- def function name():
- function function\_name():
- function\_name():
- def function\_name:

No, the answer is incorrect.  
 Score: 0

Accepted Answers:  
*def function\_name:*

8) What is the purpose of the continue statement in a for loop?

**1 point**

- To skip the rest of the current iteration and move on to the next one
- To terminate the loop and exit the loop block
- To return to the top of the loop and start a new iteration
- To skip the current iteration and move on to the next one, but only if a certain condition is met

No, the answer is incorrect.

[Week 9 \(\)](#)[Week 10 \(\)](#)[Week 11 \(\)](#)[Week 12 \(\)](#)[Text](#)[Transcripts \(\)](#)[Download](#)[Videos \(\)](#)[Books \(\)](#)[Live Session \(\)](#)[Problem Solving Session \(\)](#)

Score: 0

Accepted Answers:

*To skip the rest of the current iteration and move on to the next one*

9) How do you check if a number is even in Python?

**1 point**

- if number % 2 == 0
- if number.is\_even()
- if number % 2 is 0
- if number.even()

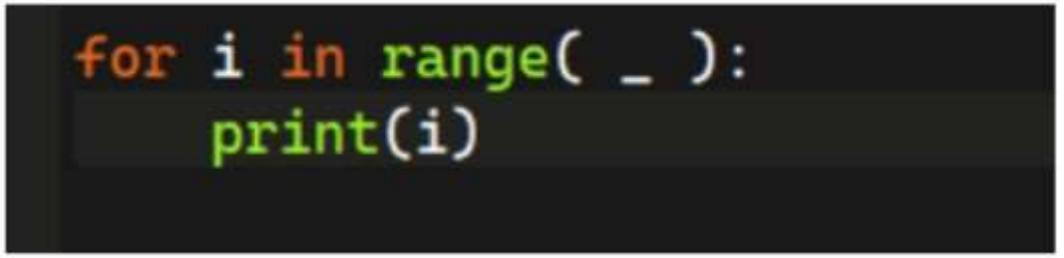
Yes, the answer is correct.

Score: 1

Accepted Answers:

*if number % 2 == 0*

10) What should be the value of \_ to print all numbers from 0-10?

**1 point**

```
for i in range( _ ):
    print(i)
```

- 11
- 9
- 10
- None of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

*11*

X



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**(course)**



## Course outline

How does an  
NPTEL  
online  
course  
work? ()

Week 0 ()

Week 1 ()

Week 2 ()

Week 3 ()

Lists Part 1 :  
Introduction  
(unit?  
unit=57&lesson=58)

Lists Part 2 :  
Manipulation  
(unit?  
unit=57&lesson=59)

Lists Part 3 :  
Operations  
(unit?  
unit=57&lesson=60)

Lists Part 4 :  
Slicing (unit?  
unit=57&lesson=61)

# Week 3 : Assignment 1

The due date for submitting this assignment has passed.

Due on 2023-02-15, 23:59 IST.

Assignment submitted on 2023-02-04, 16:26 IST

1) \_\_\_\_\_ is the method to insert an item into a specified position in a list. **1 point**

- Push
- Write
- Insert
- All of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

*Insert*

2) Which method returns the number of occurrences of an element in a list. **1 point**

- Number of
- Total
- Count
- Length

Yes, the answer is correct.

Score: 1

Accepted Answers:

*Count*

3) The function random.randint(1,100) in python generates. **1 point**

- Loops and Conditionals : Fizzbuzz 01 (unit? unit=57&lesson=62)  A random integer between 1 to 100 with 1 and 100 both inclusive  
 A random integer between 1 to 100 with 1 and 100 both exclusive  
 A random integer between 1 to 100 with only 100 inclusive  
 None of the above
- Loops and Conditionals : Fizzbuzz 02 (unit? unit=57&lesson=63) Yes, the answer is correct.  
Score: 1  
Accepted Answers:  
*A random integer between 1 to 100 with 1 and 100 both inclusive*
- Crowd Computing - Just estimate 01 (unit? unit=57&lesson=64) 4) The method open("file1.txt", r+) opens the file file1.txt in \_\_\_\_\_. **1 point**  
 Read only mode  
 Write only mode  
 Read Write mode  
 None of the above
- Crowd Computing - Just estimate 02 (unit? unit=57&lesson=65) Yes, the answer is correct.  
Score: 1  
Accepted Answers:  
*Read Write mode*
- Crowd Computing - Just estimate 03 (unit? unit=57&lesson=66) 5) Consider the list L= [0, 1, 1, 2, 3, 5, 8, 13, 21, 34]. What will be the output of the statement L [3:6]? **1 point**  
 [2, 3, 5]  
 [0, 1, 1]  
 [1, 2, 3]  
 none
- Crowd Computing - Just estimate 04 (unit? unit=57&lesson=67) Yes, the answer is correct.  
Score: 1  
Accepted Answers:  
*[2, 3, 5]*
- Crowd Computing - Just estimate 05 (unit? unit=57&lesson=68) 6) What is the output of this code? **1 point**
- ```

1   a,b=1,0
2   a=a^b
3   b=a^b
4   a=a^b
5   print(a)

```
- 0  
 1  
 2  
 This code will raise a runtime error
- Permutations - Jumbled Words 01 (unit? unit=57&lesson=70) Yes, the answer is correct.  
Score: 1  
Accepted Answers:  
*0*
- Permutations - Jumbled Words 02 (unit? unit=57&lesson=71)

Permutations -  
Jumbled  
Words 03  
(unit?  
unit=57&lesson=72)

Theory of  
Evolution 01  
(unit?  
unit=57&lesson=73)

Theory of  
Evolution 02  
(unit?  
unit=57&lesson=74)

Theory of  
Evolution 03  
(unit?  
unit=57&lesson=75)

Theory of  
Evolution 04  
(unit?  
unit=57&lesson=76)

Week 3  
Feedback  
Form: The Joy  
of Computing  
using Python  
(unit?  
unit=57&lesson=77)

Quiz: Week 3  
: Assignment  
1  
(assessment?  
name=296)

Week 3:  
Programming  
Assignment 1  
(/noc23\_cs20/progassignment?  
name=297)

Week 3:  
Programming  
Assignment 2  
(/noc23\_cs20/progassignment?  
name=298)

Week 3:  
Programming  
Assignment 3  
(/noc23\_cs20/progassignment?  
name=299)

7) What is the output of the following code?

```

1  def foo(l):
2      a = l[0]
3      for i in l:
4          if i < a:
5              a = i
6      return a
7
8  print(foo([2, 3, 5, 1, 7, 6]))
9

```

1

Yes, the answer is correct.

Score: 1

Accepted Answers:

(Type: Numeric) 1

1 point

8) What is the output of the following code?

1 point

```

1  def bar(string):
2      left = 0
3      right = len(string) - 1
4      while(left < right):
5          if(string[left] != string[right]):
6              return False
7          left += 1
8          right -= 1
9      return True
10
11 print(bar("telugu"))
12 print(bar("malayalam"))
13

```

False True

True False

True True

False False

Yes, the answer is correct.

Score: 1

Accepted Answers:

False True

9) Explain what the output will be when the code given below is executed.

1 point

week 4 ()

[Week 5 \(\)](#)[Week 6 \(\)](#)[Week 7 \(\)](#)[Week 8 \(\)](#)[Week 9 \(\)](#)[Week 10 \(\)](#)[Week 11 \(\)](#)[Week 12 \(\)](#)[Text](#)[Transcripts \(\)](#)[Download Videos \(\)](#)[Books \(\)](#)[Live Session \(\)](#)[Problem Solving Session \(\)](#)

```

def func(list1):
    while (len(list1) > 2):
        k=list1[0]
        for i in list1:
            if k<i:
                k=i
        list1.remove(k)

        j=list1[0]
        for i in list1:
            if j>i:
                j=i
        list1.remove(j)
    return list1

list2=func([1,4,3,6,5,3,7,8,9,4])
#sum is a function which returns the sum of all of the values of all
the elements of a list
print(sum(list2)/len(list2))

```

- The program throws an error
- 5
- 5.5
- 4.5

Yes, the answer is correct.

Score: 1

Accepted Answers:

4.5

10) Which among the following statements is True with respect to the code given below?

**1 point**

```

1 count = 0
2 for i in range(10):
3     for j in range(5):
4         count += i *j
5 print(count)

```

- count=50
- The following code throws up an error.
- count=550
- count=450

Yes, the answer is correct.

Score: 1

Accepted Answers:

count=450



X



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Course  
outline

How does an  
NPTEL  
online  
course  
work? ()

Week 0 ()

Week 1 ()

Week 2 ()

Week 3 ()

week 4 ()

○ Practice is the  
key (unit?  
unit=78&lesson=79)

● Magic Square:  
Hit and Trial 01  
(unit?  
unit=78&lesson=80)

● Magic Square:  
Hit and Trial 02  
(unit?  
unit=78&lesson=81)

○ Magic Square:  
Hit and Trial 03

## Week 4: Assignment 4

The due date for submitting this assignment has passed.

Due on 2023-02-22, 23:59 IST.

Assignment submitted on 2023-02-11, 19:07 IST

1) Which of the following statements are true with regards to magic square? **1 point**

- The sum of each row should be m.
- The sum of each column should be m.
- The sum of each diagonal should be m.
- None of the above.

Yes, the answer is correct.

Score: 1

Accepted Answers:

*The sum of each row should be m.*

*The sum of each column should be m.*

*The sum of each diagonal should be m.*

2) Which of the following statements hold true about N in the magic square? N denotes **1 point** the number of rows and columns in the square.

- N should be even.
- N should be odd.
- N can be even or odd.
- N can take any value.

Yes, the answer is correct.

Score: 1

Accepted Answers:

*N should be odd.*

(unit?  
unit=78&lesson=82)

Magic Square:  
Hit and Trial 04  
(unit?  
unit=78&lesson=83)

Magic Square:  
Hit and Trial 05  
(unit?  
unit=78&lesson=84)

Let's program  
and play (unit?  
unit=78&lesson=85)

Dobble Game  
- Spot the  
similarity 01  
(unit?  
unit=78&lesson=86)

Dobble Game  
- Spot the  
similarity 02  
(unit?  
unit=78&lesson=87)

Dobble Game  
- Spot the  
similarity 03  
(unit?  
unit=78&lesson=88)

Dobble Game  
- Spot the  
similarity 04  
(unit?  
unit=78&lesson=89)

What is your  
date of birth?  
(unit?  
unit=78&lesson=90)

Birthday  
Paradox - Find  
your twin 01  
(unit?  
unit=78&lesson=91)

Birthday  
Paradox - Find  
your twin 02  
(unit?  
unit=78&lesson=92)

Birthday  
Paradox - Find  
your twin 03

3) Which of the following statements are true regarding the Magic Squares? ( $N =$   
Number of rows or columns)

- A Magic Square is always a square matrix.
- A Magic Square can or cannot be a square matrix.
- The Sum of each row and each column is  $N(N+1)/2$
- The Sum of each row and each column is  $N(N^2+1)/2$ .

Yes, the answer is correct.

Score: 1

Accepted Answers:

*A Magic Square is always a square matrix.*

*The Sum of each row and each column is  $N(N^2+1)/2$ .*

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

**1 point**



- This is a sentence.
- Error
- No output
- The program will not run.

Yes, the answer is correct.

Score: 1

Accepted Answers:

*No output*

5) Which of the following operator is used to raise the exponent to a number?

**1 point**

- ^
- \*
- \*\*
- \*\*\*

Yes, the answer is correct.

Score: 1

Accepted Answers:

*\*\**

6) Suppose there is a movie with 3 letters, how many combinations of names are  
possible?

**1 point**

- 26
- 676
- 17576
- 456976

Yes, the answer is correct.

(unit?  
unit=78&lesson=93)  
  
 Birthday  
Paradox - Find  
your twin 04  
(unit?  
unit=78&lesson=94)

Birthday  
Paradox - Find  
your twin 05  
(unit?  
unit=78&lesson=95)

What's your  
favourite  
movie? (unit?  
unit=78&lesson=96)

Guess the  
Movie Name  
01 (unit?  
unit=78&lesson=97)

Guess the  
Movie Name  
02 (unit?  
unit=78&lesson=98)

Guess the  
Movie Name  
03 (unit?  
unit=78&lesson=99)

Guess the  
Movie Name  
04 (unit?  
unit=78&lesson=100)

Guess the  
Movie Name  
05 (unit?  
unit=78&lesson=101)

Guess the  
Movie Name  
06 (unit?  
unit=78&lesson=102)

Week 4  
Feedback  
Form: The Joy  
of Computing  
using Python  
(unit?  
unit=78&lesson=103)

Quiz: Week 4:  
Assignment 4

Score: 1  
Accepted Answers:  
17576

7) What should be the value of a, b, c, d respectively?

1 point

|   |   |   |
|---|---|---|
| 6 | a | 8 |
| b | 5 | c |
| 2 | d | 4 |

- 1,3,9,7
- 9,3,7,1
- 1,7,3,9
- 7,3,9,1

Yes, the answer is correct.  
Score: 1

Accepted Answers:  
1,7,3,9

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

1 point

```

1 L1 = ['harry potter', 'matrix', 'spiderman', 'avengers', 'john wick']
2 L2= ['drishyam', 'spiderman', 'bahubali', 'dhoom', 'race', 'matrix']
3
4 L = []
5
6
7 for i in range(len(L1)):
8
9     flag = 0
10
11     for j in range(len(L2)):
12
13         if(L1[i] == L2[j]):
14             flag = 1
15             break
16         else:
17             flag = 0
18
19     if(flag == 0):
20         L.append(L1[i])
21
22 print(L)

```

- Print unique movies of list L1
- Print unique movies of list L2
- Print unique movies of list L1 and L2
- Shows an error

Yes, the answer is correct.  
Score: 1

Accepted Answers:  
*Print unique movies of list L1*

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

1 point

(assessment?  
name=300)

Week 4:  
Programming  
Assignment 1

(/noc23\_cs20/progassignment?○ Print all perfect squares with square roots between 5-20 and divisible by 5.  
name=302)

- 
- 
- 
- Print all perfect squares with square roots between 5-20 and divisible by 5.
- 
- 
- 

Week 4:  
Programming  
Assignment 2

(/noc23\_cs20/progassignment?○ Yes, the answer is correct.  
name=303)

Score: 1

Week 4:  
Programming  
Assignment 3

(/noc23\_cs20/progassignment?○ 10) A perfect number is a positive integer that is equal to the sum of its positive divisors, **1 point**  
excluding the number itself. For example, 6 is a perfect number as the sum of its divisors 1,2,3 is  
name=304)

Which function will return True if the number is a perfect number?

Week 5 ()

Week 6 ()

Week 7 ()

Week 8 ()

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Week 10 ()

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Week 12 ()

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)

Problem  
Solving  
Session ()

```
1 for i in range(5,20):
2     if(i%5 == 0):
3         print(i**2)
```

○ Print all perfect squares with square roots between 5-20 and divisible by 5.  
name=302)

- 
- 
- 
- Print all perfect squares with square roots between 5-20 and divisible by 5.
- 
- 
- 

Accepted Answers:  
*Print all perfect squares with square roots between 5-19 and divisible by 5.*

10) A perfect number is a positive integer that is equal to the sum of its positive divisors, **1 point**  
excluding the number itself. For example, 6 is a perfect number as the sum of its divisors 1,2,3 is  
name=304)

Which function will return True if the number is a perfect number?

```
1 def perfect_number(num):
2     ans=0
3     for i in range(1,num):
4         if(num%i==0):
5             ans = ans + i
6     if(ans==num):
7         return True
8     else:
9         return False
10
11 def perfect_number(num):
12     ans=0
13     for i in range(1,num):
14         if(num%i==0):
15             ans+=i
16     if(ans==num):
17         return False
18     else:
19         return True
20
21 def perfect_number(num):
22     ans=0
23     for i in range(3,num):
24         if(num%i==0):
25             ans = ans + i
26     if(ans==num):
27         return True
28     else:
29         return False
```

```
1 def perfect_number(num):
2     ans=0
3     for i in range(1,num):
4         if(num%i==0):
5             ans = ans + i
6     if(ans!=num):
7         return True
8     else:
9         return False
```

Yes, the answer is correct.

Score: 1

Accepted Answers:

```
1 def perfect_number(num):
2     ans=0
3     for i in range(1,num):
4         if(num%i==0):
5             ans = ans + i
6     if(ans==num):
7         return True
8     else:
9         return False
10
```

X



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**(course)**

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### 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=104&lesson=105)

○ Speech to Text  
: No need to  
write 01 (unit?  
unit=104&lesson=106)

○ Speech to Text  
: No need to

## Week 5 : Assignment 1

The due date for submitting this assignment has passed.

Due on 2023-03-01, 23:59 IST.

Assignment submitted on 2023-02-17, 19:37 IST

1) Binary search can be applied on \_\_\_\_.

**1 point**

- Sorted list
- Unsorted list
- Both A and B
- Any list with any elements

Yes, the answer is correct.

Score: 1

Accepted Answers:

*Sorted list*

2) Which of the following is a Waveform Audio File Format.

**1 point**

- Wav
- Wave
- Wv
- Waves

Yes, the answer is correct.

Score: 1

Accepted Answers:

*Wav*

*Wave*

3) Which of the following libraries can help us to convert audio into lyrics?

**1 point**

|                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| write 02 (unit?<br>unit=104&lesson=107)                                                           | <input checked="" type="radio"/> speech_recognition<br><input type="radio"/> text_to_speech<br><input type="radio"/> speech_to_text<br><input type="radio"/> text_translate                                                                                                                                                                                                                                                                                                                                                    |
| ○ Speech to Text<br>: No need to<br>write 03 (unit?<br>unit=104&lesson=108)                       | Yes, the answer is correct.<br>Score: 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| ● Monte Hall : 3<br>doors and a<br>twist 01 (unit?<br>unit=104&lesson=109)                        | Accepted Answers:<br><i>speech_recognition</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| ● Monte Hall : 3<br>doors and a<br>twist 02 (unit?<br>unit=104&lesson=110)                        | 4) State True or False: In the monte hall problem, swapping the choice does not increase the chance of winning. (For the large number of experiments) <span style="float: right;"><b>1 point</b></span><br><br><input type="radio"/> Swapping will decrease the chance of winning.<br><input checked="" type="radio"/> Swapping will increase the chance of winning.<br><input type="radio"/> Swapping will not affect the chance of winning.<br><input type="radio"/> Swapping may or may not increase the chance of winning. |
| ○ Rock, Paper<br>and Scissor :<br>Cheating not<br>allowed !! 01<br>(unit?<br>unit=104&lesson=111) | Yes, the answer is correct.<br>Score: 1<br>Accepted Answers:<br><i>Swapping will increase the chance of winning.</i>                                                                                                                                                                                                                                                                                                                                                                                                           |
| ○ Rock, Paper<br>and Scissor :<br>Cheating not<br>allowed !! 02<br>(unit?<br>unit=104&lesson=112) | 5) What is the correct way to initialize a dictionary? <span style="float: right;"><b>1 point</b></span><br><br><input type="radio"/> D = {a-10, b-20, c-30}<br><input type="radio"/> D = {'a'-10, 'b'-20, 'c'-30}<br><input type="radio"/> D = {a:10, b:20, c:30}<br><input checked="" type="radio"/> D = {'a':10, 'b':20, 'c':30}                                                                                                                                                                                            |
| ○ Rock, Paper<br>and Scissor :<br>Cheating not<br>allowed !! 03<br>(unit?<br>unit=104&lesson=113) | Yes, the answer is correct.<br>Score: 1<br>Accepted Answers:<br><i>D = {'a':10, 'b':20, 'c':30}</i>                                                                                                                                                                                                                                                                                                                                                                                                                            |
| ○ Rock, Paper<br>and Scissor :<br>Cheating not<br>allowed !! 04<br>(unit?<br>unit=104&lesson=114) | 6) What is the correct syntax to get all the keys only from a dictionary d? <span style="float: right;"><b>1 point</b></span><br><br><input type="radio"/> d.key()<br><input type="radio"/> d.item()<br><input type="radio"/> d.value()<br><input checked="" type="radio"/> d.keys()                                                                                                                                                                                                                                           |
| ○ Sorting and<br>Searching : 20<br>questions<br>game 01 (unit?<br>unit=104&lesson=115)            | Yes, the answer is correct.<br>Score: 1<br>Accepted Answers:<br><i>d.keys()</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| ○ Sorting and<br>Searching : 20<br>questions<br>game 02 (unit?<br>unit=104&lesson=116)            | 7) Which of the following is valid?. <span style="float: right;"><b>1 point</b></span><br><br><input checked="" type="checkbox"/> D = {'a': {'a': 10}, 'b': 10}<br><input type="checkbox"/> D = {'a': 'a': 10, 'b': 10}<br><input checked="" type="checkbox"/> D = {'a': {'a': 10}, 'b': {'b': 10}}<br><input type="checkbox"/> D = {'a': 'a': 10, 'b': 'b': 10}                                                                                                                                                               |
| ○ Sorting and<br>Searching : 20                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

questions  
game 03 (unit?  
unit=104&lesson=117)

Yes, the answer is correct.  
Score: 1

Accepted Answers:

$D = \{'a': \{'a': 10\}, 'b': 10\}$   
 $D = \{'a': \{'a': 10\}, 'b': \{'b': 10\}\}$

Sorting and  
Searching : 20  
questions  
game 04 (unit?  
unit=104&lesson=118)

8) For bubble sort, which of the following statements is true? 1 point

- If the list is sorted, the algorithm won't work.
- In each iteration consecutive pairs of elements are compared with each other.
- Every element is compared with every other element in the list in each iteration.
- Swapping never happens in bubble sort.

Sorting and  
Searching : 20  
questions  
game 05 (unit?  
unit=104&lesson=119)

Yes, the answer is correct.  
Score: 1

Accepted Answers:

*In each iteration consecutive pairs of elements are compared with each other.*

Sorting and  
Searching : 20  
questions  
game 06 (unit?  
unit=104&lesson=120)

9) Which error is faced while accessing an element that is not there in a dictionary? 1 point

- KeyError
- IndexError
- RunTimeError
- ValueError

Sorting and  
Searching : 20  
questions  
game 07 (unit?  
unit=104&lesson=121)

Yes, the answer is correct.  
Score: 1

Accepted Answers:

*KeyError*

Sorting and  
Searching : 20  
questions  
game 08 (unit?  
unit=104&lesson=122)

10) In dictionaries, d.items() will return \_ 1 point

- Pairs of all (key, value) together.
- All (keys) and (values) separately.
- All (values) and (keys) separately.
- Pairs of all (value, key) together.

Week 5  
Feedback  
Form: The Joy  
of Computing  
using Python  
(unit?  
unit=104&lesson=123)

Yes, the answer is correct.  
Score: 1

Accepted Answers:

*Pairs of all (key, value) together.*

Quiz: Week 5  
: Assignment  
1  
(assessment?  
name=306)

Week 5:  
Programming  
Assignment 1  
(/noc23\_cs20/progassignment?  
name=307)

Week 5:  
Programming  
Assignment 2  
(/noc23\_cs20/progassignment?  
name=308)

Week 5:  
Programming  
Assignment 3  
(/noc23\_cs20/progassignment?  
name=309)

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**Week 6 ()**

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**Week 7 ()**

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**Week 8 ()**

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**Week 9 ()**

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**Week 10 ()**

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**Week 11 ()**

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**Week 12 ()**

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Transcripts ()**

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()**

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**Problem  
Solving  
Session ()**

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Week 6 ()

Substitution Cipher -The science of secrecy (unit? unit=124&lesson=125)

Substitution Cipher -The science of secrecy 01

# Week 6 : Assignment 1

The due date for submitting this assignment has passed.

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

Assignment submitted on 2023-02-24, 19:20 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*

- (unit?  
unit=124&lesson=126)
- 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)
  - random.random(L)
- Yes, the answer is correct.  
Score: 1  
Accepted Answers:  
*random.choices(L)*
- (unit?  
unit=124&lesson=127)
- (unit?  
unit=124&lesson=128)
- (unit?  
unit=124&lesson=129)
- (unit?  
unit=124&lesson=130)
- (unit?  
unit=124&lesson=131)
- (unit?  
unit=124&lesson=132)
- (unit?  
unit=124&lesson=133)
- (unit?  
unit=124&lesson=134)
- (unit?  
unit=124&lesson=135)
- (unit?  
unit=124&lesson=136)
- 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.

<input type="radio"/> Recursion 02 (unit? unit=124&lesson=137)	<input type="radio"/> Shift every letter in a given word by 26. <input type="radio"/> Returns the same word.	
<input type="radio"/> Recursion 03 (unit? unit=124&lesson=138)	Yes, the answer is correct. Score: 1 Accepted Answers: <i>Shift every letter in a given word by value.</i>	
<input type="radio"/> Recursion 04 (unit? unit=124&lesson=139)	6) Library used to import images?	<b>1 point</b>
	<input checked="" type="radio"/> PIL <input type="radio"/> Imageview <input type="radio"/> IMG <input type="radio"/> image	
<input type="radio"/> Recursion 05 (unit? unit=124&lesson=140)	Yes, the answer is correct. Score: 1 Accepted Answers:	
<input type="radio"/> Recursion 06 (unit? unit=124&lesson=141)		
<input type="radio"/> Week 6 Feedback Form: The Joy of Computing using Python (unit? unit=124&lesson=142)	7) Values of CSV files are separated by?	<b>1 point</b>
	<input checked="" type="radio"/> Commas <input type="radio"/> Colons <input type="radio"/> Semi-colons <input type="radio"/> Slash	
<b>Quiz: Week 6</b> : Assignment 1 (assessment? name=310)	Yes, the answer is correct. Score: 1 Accepted Answers: <i>Commas</i>	
<b>Week 6:</b> Programming Assignment 1 (/noc23_cs20/progassignment? name=311)	8) what will be the output of the following program?	<b>1 point</b>
<b>Week 6:</b> Programming Assignment 2 (/noc23_cs20/progassignment? name=312)	<pre>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 12    recursive(num-1) 13 14 15 recursive(10)</pre>	
<b>Week 6:</b> Programming Assignment 3 (/noc23_cs20/progassignment? name=313)		
<b>Week 7 ()</b>		
<b>Week 8 ()</b>		
<b>Week 9 ()</b>		

[Week 10 \(\)](#)[Week 11 \(\)](#)[Week 12 \(\)](#)[Text  
Transcripts \(\)](#)[Download  
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\( \)](#)[Problem  
Solving  
Session \(\)](#) \*\*\*\*  
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\* \*\*\*\*  
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\* Runs into infinite loop \*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*  
\*\*  
\*

Yes, the answer is correct.  
Score: 1

Accepted Answers:

\*\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*  
\*\*  
\*

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.*

X



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Course  
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Week 7 ()

Snakes and  
Ladders - Not  
on the Board  
(unit?  
unit=143&lesson=144)

Snakes and  
Ladders - Not

## Week 7 : Assignment 1

The due date for submitting this assignment has passed.

Due on 2023-03-15, 23:59 IST.

Assignment submitted on 2023-03-03, 16:08 IST

1) Which of the following is/are uses of functions?

**1 point**

- Gives a higher-level overview of the task to be performed
- Reusability- uses the same functionality at various places
- A better understanding of code
- All of the above
- None of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

*All of the above*

2) What is the output of the following spiral print python function?

**1 point**

on the Board -  
Part 01 (unit?  
unit=143&lesson=145)

Snakes and  
Ladders - Not  
on the Board -  
Part 02 (unit?  
unit=143&lesson=146)

Snakes and  
Ladders - Not  
on the Board -  
Part 03 (unit?  
unit=143&lesson=147)

Snakes and  
Ladders - Not  
on the Board -  
Part 04 (unit?  
unit=143&lesson=148)

Snakes and  
Ladders - Not  
on the Board -  
Part 05 (unit?  
unit=143&lesson=149)

Snakes and  
Ladders - Not  
on the Board -  
Part 06 (unit?  
unit=143&lesson=150)

Spiral  
Traversing -  
Let's Animate  
(unit?  
unit=143&lesson=151)

Spiral  
Traversing -  
Let's Animate -  
Part 01 (unit?  
unit=143&lesson=152)

Spiral  
Traversing -  
Let's Animate -  
Part 02 (unit?  
unit=143&lesson=153)

Spiral  
Traversing -  
Let's Animate -  
Part 03 (unit?  
unit=143&lesson=154)

Spiral  
Traversing -

```
def spiralprint(m, n, spiralmatrix):
    k = 0
    l = 0
    while (k < m and l < n):
        for i in range(l, n):
            print(spiralmatrix[k][i], end=" ")
        k += 1
        for i in range(k, m):
            print(spiralmatrix[i][n - 1], end=" ")
        n -= 1
        if (k < m):
            for i in range(n - 1, (l - 1), -1):
                print(spiralmatrix[m - 1][i], end=" ")
            m -= 2
        if (l < n):
            for i in range(m - 1, k - 1, -1):
                print(spiralmatrix[i][l], end=" ")
            l += 2
spiralmatrix = [[1, 2, 3, 4, 5, 6],
                [7, 8, 9, 10, 11, 12],
                [13, 14, 15, 16, 17, 18]]
rows = 3
cols = 6
spiralprint(rows, cols, spiralmatrix)
```

- 1 2 3 4 5 6 12 18 17 16 15 14 13 7 8 9 10 11
- 1 2 3 4 5 6 12 18 17 16 15 14 13

- 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
- 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

Yes, the answer is correct.  
Score: 1

Accepted Answers:

1 2 3 4 5 6 12 18 17 16 15 14 13

3) Which of the following library moves the turtle backward? 1 point

- turtle.back(distance)
- turtle.bk(distance)
- turtle.backward(distance)
- All of the above

Yes, the answer is correct.  
Score: 1

Accepted Answers:

All of the above

4) Which of the following library has to be imported to plot the route map using GPS locations in python? 1 point

- gmplot
- csv
- both
- None

Yes, the answer is correct.

Let's Animate - Part 04 (unit? unit=143&lesson=155)	Score: 1 Accepted Answers: <i>both</i>	
○ Spiral Traversing - Let's Animate - Part 05 (unit? unit=143&lesson=156)	5) bytes, bytearray, memoryview are type of the ___ data type. <input type="radio"/> Mapping Type <input type="radio"/> Boolean Type <input checked="" type="radio"/> Binary Types <input type="radio"/> All of the above <input type="radio"/> None of the above	<b>1 point</b>
○ Spiral Traversing - Let's Animate - Part 06 (unit? unit=143&lesson=157)	Yes, the answer is correct. Score: 1 Accepted Answers: <i>Binary Types</i>	
○ Spiral Traversing - Let's Animate - Part 07 (unit? unit=143&lesson=158)	6) In the Snakes and Ladders game, the least number of times a player has to roll a die with the following ladder positions is _____ ladders = { 3: 20, 6: 14, 11: 28, 15: 34, 17: 74, 22: 37, 38: 59, 49: 67, 57: 76, 61: 78, 73: 86, 81: 98, 88: 91 } <input type="radio"/> 4 <input checked="" type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7	<b>1 point</b>
○ GPS - Track the route (unit? unit=143&lesson=159)	Yes, the answer is correct. Score: 1 Accepted Answers: <i>5</i>	
○ GPS - Track the route - Part 01 (unit? unit=143&lesson=160)	7) Which of the following code snippet will create a tuple in python? <input checked="" type="radio"/> name = ('kiran','bhushan','madan') <input type="radio"/> name = {'kiran','bhushan','madan'} <input type="radio"/> name = ['kiran','bhushan','madan'] <input type="radio"/> None of the above	<b>1 point</b>
○ GPS - Track the route - Part 02 (unit? unit=143&lesson=161)	Yes, the answer is correct. Score: 1 Accepted Answers: <i>name = ('kiran','bhushan','madan')</i>	
○ GPS - Track the route - Part 03 (unit? unit=143&lesson=162)	8) What does the following program plot?	<b>1 point</b>
○ GPS - Track the route - Part 04 (unit? unit=143&lesson=163)		
○ Week 7 Feedback Form: The Joy of Computing using Python (unit? unit=143&lesson=164)		
● Quiz: Week 7 : Assignment 1 (assessment? name=314)		

● Week 7:  
Programming  
Assignment 1  
(/noc23\_cs20/progassign  
name=315)

● Week 7:  
Programming  
Assignment 2  
(/noc23\_cs20/progassign  
name=316)

● Week 7:  
Programming  
Assignment 3  
(/noc23\_cs20/progassign  
name=317)

**Week 8 ()**

**Week 9 ()**

**Week 10 ()**

**Week 11 ()**

**Week 12 ()**

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Transcripts ()**

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**Problem  
Solving  
Session ()**

```
import random
import matplotlib.pyplot as plt
rn=random.randint(0,9)
print(rn)
l=[0 for i in range(10)]
y=[]
for i in range(10):
    x=int(input())
    y.append(i)
    if x==rn:
        l[x]+=1
plt.plot(y,l)
plt.show()
```

- Plots the random number generated in each iteration
- Plots the number of times the given input matches with the random number generated
- Plots the input entered for each iteration
- none of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

*Plots the number of times the given input matches with the random number generated*

9) Sentiment analysis involves working with \_\_\_\_\_ **1 point**

- a piece of information is useful or not
- a piece of information is biased or unbiased
- a piece of information is true or false
- a piece of information is positive or negative

Yes, the answer is correct.

Score: 1

Accepted Answers:

*a piece of information is positive or negative*

10) What does the following code snippet in python compute **1 point**

```
text1 = input()
len1 = len(text1)
text2 = input()
len2 = len(text2)
for i in range(0,len1-len2+1):
    j = 0
    while ((j < len2) and (text1[i + j] == text2[j])):
        j = j + 1
    if (j==len2):
        print(text2)
```

- checks whether the two given texts are the same
- searches for text2 in text1
- finds all the occurrences of text2 in text1
- none of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

*finds all the occurrences of text2 in text1*

X



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Course  
outline

How does an  
NPTEL  
online  
course  
work? ()

Week 0 ()

Week 1 ()

○ Introduction to  
Programming  
(unit?  
unit=17&lesson=18)

○ Why  
Programming?  
(unit?  
unit=17&lesson=19)

○ Programming  
for Everybody  
(unit?  
unit=17&lesson=20)

○ Any  
Prerequisites?  
(unit?  
unit=17&lesson=21)

○ Where to  
start? (unit?

## Week 8 : Assignment 1

The due date for submitting this assignment has passed.

Due on 2023-03-22, 23:59 IST.

Assignment submitted on 2023-03-10, 23:03 IST

1) Which of the following is not true about Stylometry Analysis? **1 point**

- It is the quantitative study of literature style
- It is based on the observation that the authors tend to write in relatively consistent and recognizable ways
- any two people may have the same vocabulary
- It is a tool to study a variety of questions involving style of writing

Yes, the answer is correct.

Score: 1

Accepted Answers:

*any two people may have the same vocabulary*

2) Which of the following is not true about tuples in python? **1 point**

- Tuple consumes less memory
- Tuples are immutable
- Tuple supports item deletion
- Tuples does not support modification

Yes, the answer is correct.

Score: 1

Accepted Answers:

*Tuple supports item deletion*

3) What is the output of the following code snippet in python? **1 point**

unit=17&amp;lesson=22)

```
name =('kiran','bhushan','madan')
print (name[-1])
```

Why do we have so many languages?  
(unit?

unit=17&amp;lesson=23)

- invalid syntax
- tuple index out of range
- prints nothing
- madan

How to go about programming?  
(unit?  
unit=17&lesson=24)

Yes, the answer is correct.

Score: 1

Accepted Answers:  
*madan*

**1 point**

Why to learn programming?  
(unit?

unit=17&amp;lesson=25)

4) Strings in python can be created using

- single quotes
- double quotes
- triple quotes
- only A and B
- A, B and C

What is programming?  
(unit?  
unit=17&lesson=26)

Yes, the answer is correct.

Score: 1

Accepted Answers:  
*A, B and C*

How to give instructions?  
(unit?  
unit=17&lesson=27)

5) Networkx in python is used for which of the following operation(s)?

**1 point**

Introduction to Scratch (unit?

unit=17&amp;lesson=28)

- Visualizing social network
- Analyzing social networks
- Generate social network
- All of the above
- None of the above

More about Loops (unit?  
unit=17&lesson=30)

Yes, the answer is correct.

Score: 1

Accepted Answers:  
*All of the above*

Solution to Looping Problem (unit?  
unit=17&lesson=31)

6) Which of the following will generate a complete graph in python using the networkx package?

**1 point**

Scratch : Animation 1  
(unit?

unit=17&amp;lesson=32)

- Graph = nx.gnp random graph(25,0.5)
- Graph = nx.gnp random graph(25,1.0)
- Graph = nx.gnp random graph(25,0.25)
- Graph = nx.gnp random graph(25,0.75)

Scratch : Animation 2  
(unit?  
unit=17&lesson=33)

Yes, the answer is correct.  
Score: 1

Accepted Answers:  
*Graph = nx.gnp random graph(25,1.0)*

Scratch : Animation 3  
(unit?  
unit=17&lesson=34)

7) Which of the following method will return the RBG value of a pixel in python?

**1 point**

- More on Scratch (unit? unit=17&lesson=35)
- Quiz: Week 1 : Assignment 1 (assessment? name=291)
- Week 1 Feedback Form: The Joy of Computing using Python (unit? unit=17&lesson=36)
- Week 2 ()**
- Week 3 ()**
- week 4 ()**
- Week 5 ()**
- Week 6 ()**
- Week 7 ()**
- Week 8 ()**
- Tuples- Python Data Structure (unit? unit=165&lesson=166)
- Lottery Simulation - Profit or Loss (unit? unit=165&lesson=167)
- Lottery Simulation - Profit or Loss - Part 01 (unit? unit=165&lesson=168)
- Lottery Simulation - Profit or Loss - Part 02 (unit? unit=165&lesson=169)
- Lottery Simulation - Profit or Loss -
- getpixel()
- RBGvalue()
- pixelValue()
- none of the above
- Yes, the answer is correct.  
Score: 1  
Accepted Answers:  
*getpixel()*
- 8) The degree of separation of a complete graph with n nodes is always **1 point**
- n  
 n-1  
 1  
 6
- Yes, the answer is correct.  
Score: 1  
Accepted Answers:  
*1*
- 9) Which of the following is true about six degrees of separation? **1 point**
- the minimum degree of separation of any node in the network is 6  
 the maximum degree of separation of any node in the network is 6  
 the average degree of separation of the nodes in the network is 6  
 the degree of separation of every node in the network is 6
- Yes, the answer is correct.  
Score: 1  
Accepted Answers:  
*the average degree of separation of the nodes in the network is 6*
- 10) What is the output of the following code? **1 point**
- ```
1 import nltk
2 nltk.download('punkt')
3 from nltk.tokenize import sent_tokenize
4
5 mytext = "Have nice day, my friend !!! Programming in Python is fun"
6 print(sent_tokenize(mytext))
```
- ['Have nice day, my friend!!! Programming in Python is fun']
 ['Have nice day, my friend!!!', 'Programming in Python is fun']
'Have nice day, my friend!!!'  
'Programming in Python is fun'
- Error
- Yes, the answer is correct.  
Score: 1  
Accepted Answers:  
*['Have nice day, my friend!!!', 'Programming in Python is fun']*

Part 03 (unit?  
unit=165&lesson=170)

○ Lottery  
Simulation -  
Profit or Loss -  
Part 04 (unit?  
unit=165&lesson=171)

○ Lottery  
Simulation -  
Profit or Loss -  
Part 05 (unit?  
unit=165&lesson=172)

○ Lottery  
Simulation -  
Profit or Loss -  
Part 06 (unit?  
unit=165&lesson=173)

○ Image  
Processing -  
Enhance your  
images (unit?  
unit=165&lesson=174)

○ Image  
Processing -  
Enhance your  
images - Part  
01 (unit?  
unit=165&lesson=175)

○ Image  
Processing -  
Enhance your  
images - Part  
02 (unit?  
unit=165&lesson=176)

○ Image  
Processing -  
Enhance your  
images - Part  
03 (unit?  
unit=165&lesson=177)

○ Anagrams  
(unit?  
unit=165&lesson=178)

○ Anagrams -  
Part 01 (unit?  
unit=165&lesson=179)

○ Anagrams -  
Part 02 (unit?  
unit=165&lesson=180)

○ Anagrams -  
Part 03 (unit?  
unit=165&lesson=181)

○ Facebook  
Sentiment  
Analysis (unit?  
unit=165&lesson=182)

○ Facebook  
Sentiment  
Analysis - Part  
01 (unit?  
unit=165&lesson=183)

○ Facebook  
Sentiment  
Analysis - Part  
02 (unit?  
unit=165&lesson=184)

○ Facebook  
Sentiment  
Analysis - Part  
03 (unit?  
unit=165&lesson=185)

○ Facebook  
Sentiment  
Analysis - Part  
04 (unit?  
unit=165&lesson=186)

○ Week 8  
Feedback  
Form: The Joy  
of Computing  
using Python  
(unit?  
unit=165&lesson=187)

● Quiz: Week 8  
: Assignment  
1  
(assessment?  
name=318)

● Week 8:  
Programming  
Assignment 1  
(/noc23\_cs20/progassignment?  
name=319)

● Week 8:  
Programming  
Assignment 2  
(/noc23\_cs20/progassignment?  
name=320)

Week 8:  
Programming  
Assignment 3  
(/noc23\_cs20/progassignment?  
name=322)

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**Week 9 ()**

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**Week 10 ()**

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**Week 11 ()**

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**Week 12 ()**

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Transcripts ()**

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Solving  
Session ()**

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Week 2 ()

Week 3 ()

week 4 ()

Week 5 ()

Week 6 ()

Week 7 ()

Week 8 ()

Week 9 ()

Natural  
Language  
Processing -  
Author

# Week 9 : Assignment 1

The due date for submitting this assignment has passed.

Due on 2023-03-29, 23:59 IST.

Assignment submitted on 2023-03-17, 20:45 IST

1) How can we identify which book is written by which author? **1 point**

- By matching handwriting.
- By analyzing word length distribution with previous books.
- By analyzing the number of pages in a book.
- By analyzing the book's preface.

Yes, the answer is correct.

Score: 1

Accepted Answers:

*By analyzing word length distribution with previous books.*

2) Is it guaranteed that the following code snippet will consistently yield a True result? **1 point**

```
4     G = nx.gnp_random_graph(10, 0.5)
5     print(nx.is_connected(G))
```

- True
- False
- It will return neither True nor False
- It will throw an error

Yes, the answer is correct.

|                                                                                                           |                                                                                                                                                                                                                         |                                                                                               |
|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Stylometry<br>(unit?<br>unit=188&lesson=189)                                                              | Score: 1<br>Accepted Answers:<br><i>False</i>                                                                                                                                                                           | 3) What are the different methods available in Python for generating a string? <b>1 point</b> |
| ○ Natural<br>Language<br>Processing -<br>Author<br>Stylometry -<br>Part 01 (unit?<br>unit=188&lesson=190) | <input type="radio"/> By using single quotes.<br><input type="radio"/> By using double quotes.<br><input type="radio"/> By using triple quotes.<br><input checked="" type="radio"/> All of the above                    |                                                                                               |
| ○ Natural<br>Language<br>Processing -<br>Author<br>Stylometry -<br>Part 02 (unit?<br>unit=188&lesson=191) | Yes, the answer is correct.<br>Score: 1<br>Accepted Answers:<br><i>All of the above</i>                                                                                                                                 | 4) A complete graph will have __ degree of separation <b>1 point</b>                          |
| ○ Natural<br>Language<br>Processing -<br>Author<br>Stylometry -<br>Part 03 (unit?<br>unit=188&lesson=192) | <input checked="" type="radio"/> 1<br><input type="radio"/> 2<br><input type="radio"/> 3<br><input type="radio"/> Depends on the number of nodes.                                                                       |                                                                                               |
| ○ Natural<br>Language<br>Processing -<br>Author<br>Stylometry -<br>Part 04 (unit?<br>unit=188&lesson=193) | Yes, the answer is correct.<br>Score: 1<br>Accepted Answers:<br><i>1</i>                                                                                                                                                | 5) Networkx in python is used for <b>1 point</b>                                              |
| ○ Natural<br>Language<br>Processing -<br>Author<br>Stylometry -<br>Part 05 (unit?<br>unit=188&lesson=194) | <input checked="" type="checkbox"/> Making networks<br><input checked="" type="checkbox"/> Analyzing networks<br><input checked="" type="checkbox"/> Visualizing networks<br><input type="checkbox"/> Breaking networks |                                                                                               |
| ○ Natural<br>Language<br>Processing -<br>Author<br>Stylometry -<br>Part 06 (unit?<br>unit=188&lesson=195) | Partially Correct.<br>Score: 0.75<br>Accepted Answers:<br><i>Making networks</i><br><i>Analyzing networks</i><br><i>Visualizing networks</i><br><i>Breaking networks</i>                                                | 6) In the world, on average, how many hops will it take to connect two people? <b>1 point</b> |
| ○ Natural<br>Language<br>Processing -<br>Author<br>Stylometry -<br>Part 07 (unit?<br>unit=188&lesson=196) | <input checked="" type="radio"/> 6<br><input type="radio"/> 7<br><input type="radio"/> 8<br><input type="radio"/> 9<br><input type="radio"/> 10                                                                         |                                                                                               |

Natural Language Processing - Author Stylometry - Part 08 (unit? unit=188&lesson=197)

Natural Language Processing - Author Stylometry - Part 09 (unit? unit=188&lesson=198)

Natural Language Processing - Author Stylometry - Part 10 (unit? unit=188&lesson=199)

Introduction to Networkx - Part 01 (unit? unit=188&lesson=200)

Introduction to Networkx - Part 02 (unit? unit=188&lesson=201)

Six Degrees of Separation : Meet your favourites (unit? unit=188&lesson=202)

Six Degrees of Separation : Meet your favourites - Part 01 (unit? unit=188&lesson=203)

Six Degrees of Separation : Meet your favourites - Part 02 (unit? unit=188&lesson=204)

Six Degrees of Separation : Meet your favourites -

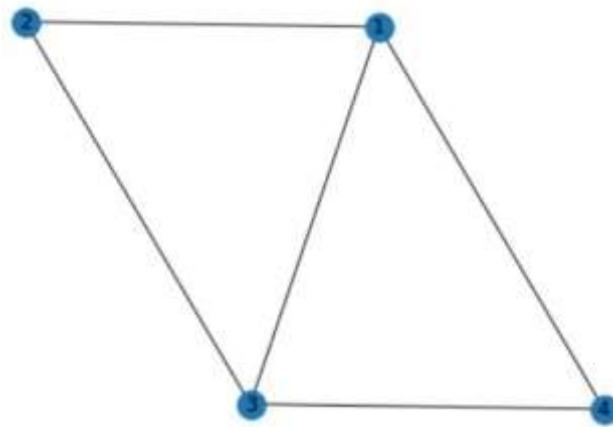
Score: 1

Accepted Answers:

6

7) How many neighbors does node 4 have?

**1 point**



- 1
- 2
- 3
- 4

Yes, the answer is correct.  
Score: 1

Accepted Answers:  
2

8) Assuming that the length and breadth remain constant, how can we enhance the precision of the calculated area for a state?

**1 point**

- By increasing the size of the image.
- By increasing the number of points.
- By decreasing the size of the image.
- By decreasing the number of points.

Yes, the answer is correct.  
Score: 1

Accepted Answers:  
*By increasing the number of points.*

9) Degree of separation is equivalent to

**1 point**

- Number of nodes in a graph
- Number of edges in a graph
- The average length of the shortest path in a graph
- None of the above

Yes, the answer is correct.  
Score: 1

Accepted Answers:  
*The average length of the shortest path in a graph*

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| Part 03 (unit?<br>unit=188&lesson=205)<br><input type="radio"/> Area<br>Calculation -<br>Don't Measure<br>(unit?<br>unit=188&lesson=206)<br><input type="radio"/> Area<br>Calculation -<br>Don't Measure<br>- Part 01 (unit?<br>unit=188&lesson=207)<br><input type="radio"/> Area<br>Calculation -<br>Don't Measure<br>- Part 02 (unit?<br>unit=188&lesson=208)<br><input type="radio"/> Area<br>Calculation -<br>Don't Measure<br>- Part 03 (unit?<br>unit=188&lesson=209)<br><input type="radio"/> Area<br>Calculation -<br>Don't Measure<br>- Part 04 (unit?<br>unit=188&lesson=210)<br><input type="radio"/> Area<br>Calculation -<br>Don't Measure<br>- Part 05 (unit?<br>unit=188&lesson=211)<br><input type="radio"/> Area<br>Calculation -<br>Don't Measure<br>- Part 06 (unit?<br>unit=188&lesson=212)<br><input type="radio"/> Week 9<br>Feedback<br>Form: The Joy<br>of Computing<br>using Python<br>(unit?<br>unit=188&lesson=213)<br><b>Quiz: Week 9</b><br><b>: Assignment</b><br><b>1</b><br><b>(assessment?</b><br><b>name=323)</b> | 10) While calculating the area of Punjab, which of the following will help in more accurate results.<br><input checked="" type="radio"/> More points landed in the Punjab region.<br><input type="radio"/> More points landed outside the Punjab.<br><input type="radio"/> More points on the overall map.<br><input type="radio"/> None of the above.<br>Yes, the answer is correct.<br>Score: 1<br>Accepted Answers:<br><i>More points landed in the Punjab region.</i> | <b>1 point</b> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|

● Week 9:  
Programming  
Assignment 1  
(/noc23\_cs20/progassignment?  
name=324)

● Week 9:  
Programming  
Assignment 2  
(/noc23\_cs20/progassignment?  
name=325)

● Week 9:  
Programming  
Assignment 3  
(/noc23\_cs20/progassignment?  
name=326)

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**Week 10 ()**

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**Week 11 ()**

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**Week 12 ()**

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**Text**  
**Transcripts ()**

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**Videos ()**

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**Books ()**

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**Live Session**  
( )

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**Problem**  
**Solving**  
**Session ()**

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course  
work? ()

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Week 3 ()

week 4 ()

Week 5 ()

Week 6 ()

Week 7 ()

Week 8 ()

Week 9 ()

Week 10 ()

# Week 10 : Assignment 1

The due date for submitting this assignment has passed.

Due on 2023-04-05, 23:59 IST.

Assignment submitted on 2023-03-24, 15:17 IST

1) Which math problem flames is related to?

**1 point**

- kadane's problem
- Josephus problem
- Conjecture Collatz
- Dijkstra Problem

Yes, the answer is correct.

Score: 1

Accepted Answers:

*Josephus problem*

2) What will be the output of the following list slicing.

**1 point**

```
1 s = 'The Joy of Computing'
2
3 print(s[3:12])
```

- 'Joy of C'
- ' Joy of C'
- 'Joy of Co'
- ' Joy of Co'

Yes, the answer is correct.

FLAMES -  
Part 01 (unit?  
unit=214&lesson=215)

FLAMES -  
Part 02 (unit?  
unit=214&lesson=216)

FLAMES -  
Part 03 (unit?  
unit=214&lesson=217)

FLAMES -  
Part 04 (unit?  
unit=214&lesson=218)

FLAMES -  
Part 05 (unit?  
unit=214&lesson=219)

FLAMES -  
Part 06 (unit?  
unit=214&lesson=220)

Data  
Compression -  
Part 01 (unit?  
unit=214&lesson=221)

Data  
Compression -  
Part 02 (unit?  
unit=214&lesson=222)

Data  
Compression -  
Part 03 (unit?  
unit=214&lesson=223)

Data  
Compression -  
Part 04 (unit?  
unit=214&lesson=224)

Data  
Compression -  
Part 05 (unit?  
unit=214&lesson=225)

Week 10  
Feedback  
Form: The Joy  
of Computing  
using Python  
(unit?  
unit=214&lesson=226)

**Quiz: Week**  
**10 :**  
**Assignment 1**

Score: 1

Accepted Answers:  
'Joy of C'

3) What will be the output of the following program?

**1 point**

```
1 s = 'I am amazed'
2 s.replace('a', 'z')
3 print(s)
```

- I zm zmzzed
- I zm zmazed
- I am zmzzed
- I am amazed

Yes, the answer is correct.

Score: 1

Accepted Answers:  
*I am amazed*

4) What are the consequences of image compression?

**1 point**

- Less size
- Lower quality
- More size
- Higher quality

Yes, the answer is correct.

Score: 1

Accepted Answers:  
*Less size*  
*Lower quality*

5) what is the output of the following code?

**1 point**

```
1 import numpy as np
2
3 a = np.array([1,2,3,4,5,6,7,8,9,10,11,12])
4 print(a.reshape(3,4))
5
```

- [[ 1 2 3 4]
[ 5 6 7 8]
[ 9 10 11 12]]
- [[ 1 2 3]
[ 4 5 6]
[ 7 8 9]]
- Error

(assessment?  
name=327)

Week 10:

Programming  
Assignment 1

(/noc23\_cs20/progassignment?name=328)

- [[1,2,3,4,5,6]]
- [7, 8, 9, 10, 11, 12]]

Yes, the answer is correct.  
Score: 1

Accepted Answers:

[[ 1 2 3 4 ]]

[ 5 6 7 8 ]

[ 9 10 11 12 ]]

Week 10:

Programming

Assignment 2

(/noc23\_cs20/progassignment?name=329)

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

1 point

```
1 import numpy as np
2
3 b = np.array([[1,2],[3,4]])
4
5 print(np.sum(b, axis = 1))
```

Week 11 ()

Week 12 ()

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()

Problem

Solving

Session ()

- [4 6]
- [3 7]
- [3 4]
- None of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

[3 7]

7) Amongst which of the following is / are the method of list?

1 point

- append()
- extend()
- insert()
- All of the mentioned above

Yes, the answer is correct.

Score: 1

Accepted Answers:

All of the mentioned above

8) The output of the following program will be?

1 point

```
3 word = 'Python'
4 word[2] = 'n'
5
6 print(word)
```

- Pynhon
- Pnthon

Python

Error

Yes, the answer is correct.

Score: 1

Accepted Answers:

*Error*

9) Which of the following is not a method in string?

**1 point**

lower()

upper()

isalpha()

insert()

Yes, the answer is correct.

Score: 1

Accepted Answers:

*insert()*

10) What is the output of the following code?

**1 point**

```
1 s = 'Hello Everyone'
2 print(s.lower())
3
```

HELLO EVERYONE

Hello Everyone

helloeveryone

hello everyone

Yes, the answer is correct.

Score: 1

Accepted Answers:

*hello everyone*

X



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Week 9 ()

Week 10 ()

# Week 11 : Assignment 1

The due date for submitting this assignment has passed.

Due on 2023-04-12, 23:59 IST.

Assignment submitted on 2023-04-01, 20:56 IST

1) Which statement will return the calendar for a whole year? 1 point

- calendar.month(year)
- calendar(year)
- calendar.prcal(year)
- calendar.year(year)

Yes, the answer is correct.

Score: 1

Accepted Answers:  
*calendar.prcal(year)*

2) By which statement can we come out of the loop? 1 point

- continue
- leave
- catch
- break

Yes, the answer is correct.

Score: 1

Accepted Answers:  
*break*

3) What time.time() will return? 1 point

**Week 11 ()**

Browser Automation Watsapp using Python - Part 01 (unit? unit=227&lesson=228)

Browser Automation Watsapp using Python - Part 02 (unit? unit=227&lesson=229)

Browser Automation Watsapp using Python - Part 03 (unit? unit=227&lesson=230)

Browser Automation Watsapp using Python - Part 04 (unit? unit=227&lesson=231)

Fun with Calendar - Part 01 (unit? unit=227&lesson=232)

Fun with Calendar - Part 02 (unit? unit=227&lesson=233)

Fun with Calendar - Part 03 (unit? unit=227&lesson=234)

Fun with Calendar - Part 04 (unit? unit=227&lesson=235)

Fun with Calendar - Part 05 (unit? unit=227&lesson=236)

Fun with Calendar - Part 06 (unit? unit=227&lesson=237)

- Time in seconds.
- Current date and time.
- Time in minutes
- The current date, time and year.

Yes, the answer is correct.

Score: 1

Accepted Answers:

*Time in seconds.*

4) Which library used to get all timezones?

**1 point**

- selenium
- calender
- nltk
- pytz

Yes, the answer is correct.

Score: 1

Accepted Answers:

*pytz*

5) What is the output of the following code:

**1 point**

```

1 import pytz
2 from datetime import datetime as dt
3
4 zone = pytz.all_timezones
5
6 for i in range(len(zone)):
7     print(dt.now(pytz.timezone(zone[i])))

```

- Print the current date and time of all time zones.
- Print the current date and time of specific time zones.
- Print the current date of all time zones.
- Print the current date of some specific time zones.

Yes, the answer is correct.

Score: 1

Accepted Answers:

*Print the current date and time of all time zones.*

6) In the page rank algorithm,

**1 point**

- We randomly travel from node to node without any relationship.
- We randomly travel from node to neighbor node.
- The maximum visited node will be the leader.
- 2 and 3
- 1 and 3

Fun with Calendar - Part 07 (unit? unit=227&lesson=238)

Yes, the answer is correct.  
Score: 1

Accepted Answers:  
*2 and 3*

Fun with Calendar - Part 08 (unit? unit=227&lesson=239)

7) If we perform the page rank algorithm on the web as a graph, which of the following **1 point** is true?

- Websites are nodes, and hyperlinks in websites are edges.
- Hyperlinks in websites are nodes, and websites are edges.
- Websites will work as nodes and edges.
- Hyperlinks will work as nodes and edges.

Fun with Calendar - Part 09 (unit? unit=227&lesson=240)

Yes, the answer is correct.  
Score: 1

Accepted Answers:  
*Websites are nodes, and hyperlinks in websites are edges.*

Fun with Calendar - Part 10 (unit? unit=227&lesson=241)

8) In the page rank algorithm, the leader is decided by?

**1 point**

- A node(person) with a maximum number of outgoing edges.
- A node(person) with a maximum number of incoming edges.
- A node(person) that is visited maximum times.
- Can not decide.

Fun with Calendar - Part 11 (unit? unit=227&lesson=242)

Yes, the answer is correct.  
Score: 1

Accepted Answers:  
*A node(person) that is visited maximum times.*

Fun with Calendar - Part 12 (unit? unit=227&lesson=243)

9) Which statement is correct about the following program?

**1 point**

Week 11 Feedback Form: The Joy of Computing using Python (unit? unit=227&lesson=244)

**Quiz: Week 11 : Assignment 1 (assessment? name=331)**

**Week 11:**  
Programming  
Assignment 1  
(/noc23\_cs20/progassignment?  
name=332)

**Week 11:**  
Programming  
Assignment 2  
(/noc23\_cs20/progassignment?  
name=333)

**Week 11:**  
Programming  
Assignment 3

(/noc23\_cs20/progassgnr  
name=334)

[Week 12 \(\)](#)

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Solving  
Session \(\)](#)

```

1 import random
2 import matplotlib.pyplot as plt
3
4 l = []
5 count = 0
6
7 for i in range(10):
8     guess = random.randint(1, 10)
9     pick = random.randint(1, 10)
10
11     if(guess!=pick):
12         count+=1
13         l.append(count)
14     else:
15         count-=1
16         l.append(count)
17
18 plt.plot(l)
19 plt.show()

```

- The graph will go up when guess and pick are the same.
- The graph will go down when guess and pick are the same.
- The graph will go up when guess and pick are not the same.
- Both B and C

Yes, the answer is correct.

Score: 1

Accepted Answers:

*Both B and C*

10) Which of the following is not used as conditional statement in Python?

**1 point**

- switch
- if...else
- elif
- None of the mentioned above

Yes, the answer is correct.

Score: 1

Accepted Answers:

*switch*



X

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

amazonking616@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 ()

Week 7 ()

Week 8 ()

Week 9 ()

Week 10 ()

## Week 12 : Assignment 12

The due date for submitting this assignment has passed.

Due on 2023-04-19, 23:59 IST.

Assignment submitted on 2023-04-08, 08:29 IST

1) NLTK \_\_\_\_\_.

1 point

- Helps to work with human language data.
- Helps to convert machine data into human language.
- Helps to work on gibberish language.
- Helps to translate dog language into human language

Yes, the answer is correct.

Score: 1

Accepted Answers:

*Helps to work with human language data.*

2) The following code will return:

1 point



**Week 11 ()****Week 12 ()**

- Page Rank -  
How does  
Google Work ?  
- Part 01 (unit?  
unit=245&lesson=246)

- Page Rank -  
How does  
Google Work ?  
- Part 02 (unit?  
unit=245&lesson=247)

- Page Rank -  
How does  
Google Work ?  
- Part 03 (unit?  
unit=245&lesson=248)

- Page Rank -  
How does  
Google Work ?  
- Part 04 (unit?  
unit=245&lesson=249)

- Page Rank -  
How does  
Google Work ?  
- Part 05 (unit?  
unit=245&lesson=250)

- Page Rank -  
How does  
Google Work ?  
- Part 06 (unit?  
unit=245&lesson=251)

- Page Rank -  
How does  
Google Work ?  
- Part 07 (unit?  
unit=245&lesson=252)

- Page Rank -  
How does  
Google Work ?  
- Part 08 (unit?  
unit=245&lesson=253)

- Page Rank -  
How does  
Google Work ?  
- Part 09 (unit?  
unit=245&lesson=254)

```
def test(word):
    new_word = ''
    for ch in word:
        if ch>='a' and ch<='z':
            temp = ord(ch)
            temp = temp - 32
            temp = chr(temp)
            new_word = new_word + temp
    return new_word
```

- Converting lower case letters into upper case.
- Converting upper case letters into lower case.
- Return the same word
- Error

Yes, the answer is correct.

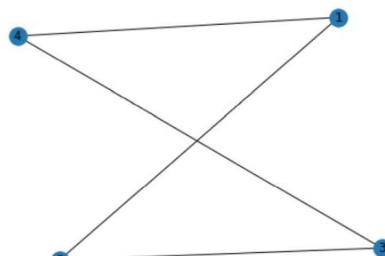
Score: 1

Accepted Answers:

*Converting lower case letters into upper case.*

- 3) How many edges are there in the following graph?

**1 point**



- Three
- Five
- Four
- Two

Yes, the answer is correct.

Score: 1

Accepted Answers:

*Four*

- 4) A complete graph will have a degree of separation.

**1 point**

- 2
- 1
- 3
- Depends on the number of nodes.

Yes, the answer is correct.



Page Rank -  
How does  
Google Work ?  
- Part 10 (unit?  
unit=245&lesson=255)

Page Rank -  
How does  
Google Work ?  
- Part 11 (unit?  
unit=245&lesson=256)

Page Rank -  
How does  
Google Work ?  
- Part 12 (unit?  
unit=245&lesson=257)

Page Rank -  
How does  
Google Work ?  
- Part 13 (unit?  
unit=245&lesson=258)

Page Rank -  
How does  
Google Work ?  
- Part 14 (unit?  
unit=245&lesson=259)

Page Rank -  
How does  
Google Work ?  
- Part 15 (unit?  
unit=245&lesson=260)

Page Rank -  
How does  
Google Work ?  
- Part 16 (unit?  
unit=245&lesson=261)

Collatz  
Conjecture -  
Part 01 (unit?  
unit=245&lesson=262)

Collatz  
Conjecture -  
Part 02 (unit?  
unit=245&lesson=263)

JOC  
Conclusion  
(unit?  
unit=245&lesson=264)

Week 12  
Feedback  
Form: The Joy

Score: 1

Accepted Answers:

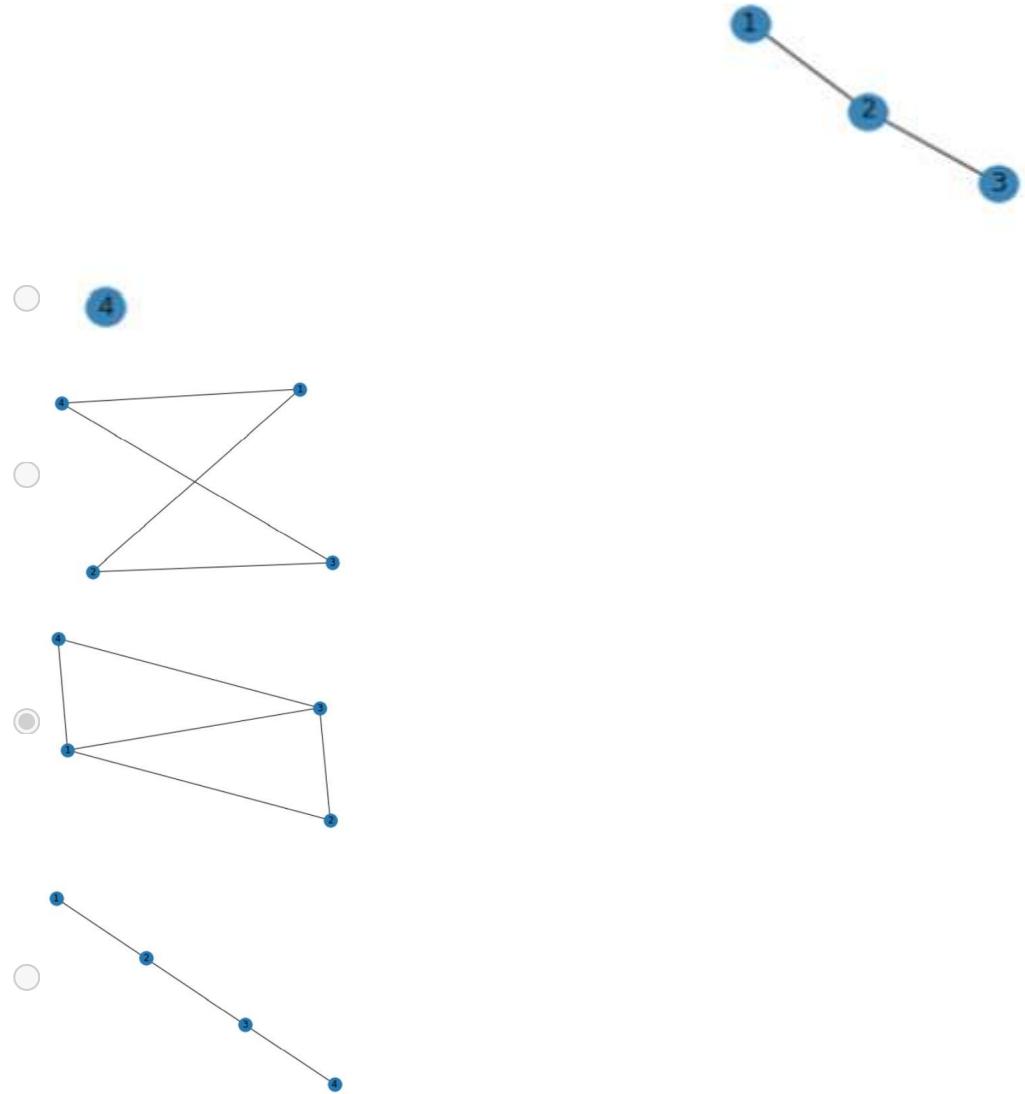
1

5) What is the output of the following code?

**1 point**

```

1 import networkx as nx
2 import matplotlib.pyplot as plt
3
4
5 G = nx.Graph()
6 G.add_nodes_from([1, 2, 3, 4])
7 G.add_edges_from([(1, 2), (2, 1), (2, 3), (3, 4), (4, 1), (3, 1)])
8
9 nx.draw(G, with_labels=True)
10 plt.show()
```



Yes, the answer is correct.



of Computing  
using Python  
(unit?  
unit=245&lesson=265)

**Quiz: Week  
12 :  
Assignment  
12  
(assessment?  
name=335)**

**Week 12:  
Programming  
Assignment 1  
(/noc23\_cs20/progassignment?  
name=336)**

**Week 12:  
Programming  
Assignment 2  
(/noc23\_cs20/progassignment?  
name=337)**

**Week 12:  
Programming  
Assignment 3  
(/noc23\_cs20/progassignment?  
name=338)**

**Text  
Transcripts ()**

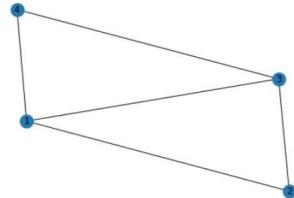
**Download  
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( )**

**Problem  
Solving  
Session ()**

Score: 1  
Accepted Answers:



- 6) What is the shape of the following numpy array?  
**numpy.array([ [1,2,3], [4,5,6] ])**

**1 point**

- (2,3)
- (3,2)
- (3,3)
- (2,2)

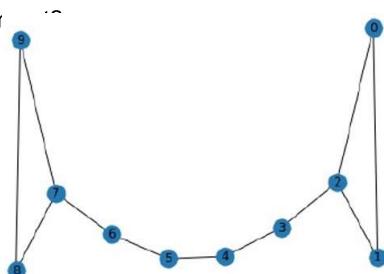
Yes, the answer is correct.

Score: 1

Accepted Answers:  
**(2,3)**

- 7) Which is the following graph?

**1 point**



- Triangle Graph
- Directed Graph
- Barbell Graph
- Wheel graph

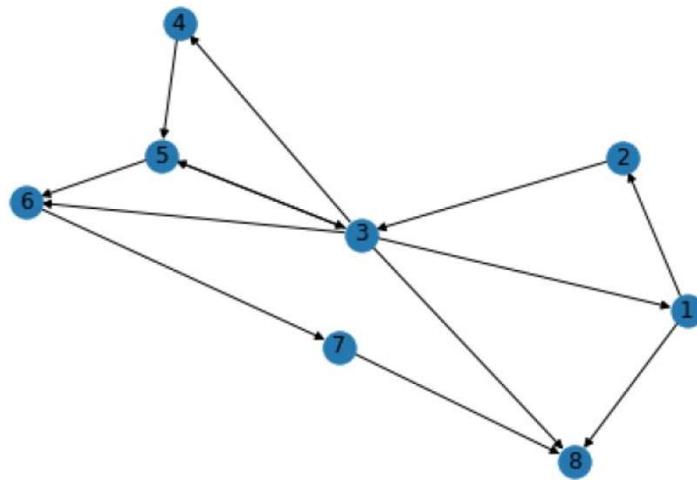
Yes, the answer is correct.  
Score: 1

Accepted Answers:  
**Barbell Graph**

- 8) What will be the G.out\_degree(3) for the following graph(G)?

**1 point**





- 4
- 6
- 3
- None of the above

No, the answer is incorrect.  
Score: 0

Accepted Answers:

4

9) What should we do when encountered a sink? 1 point

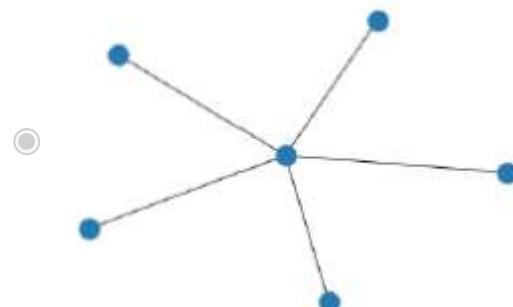
- Stop the algorithm.
- Start with the last node.
- Randomly choose a node from all nodes.
- Randomly choose a node from neighbor nodes.

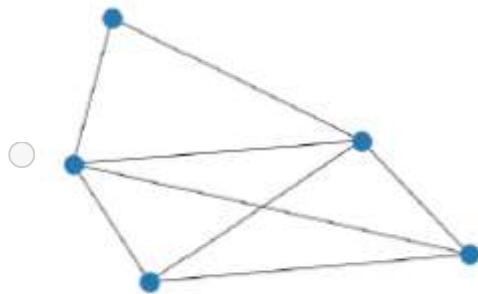
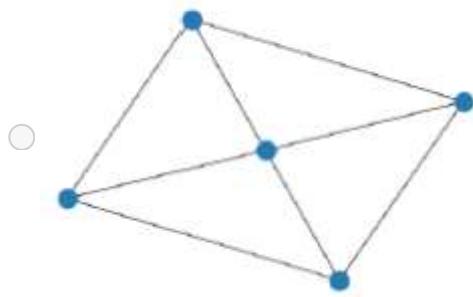
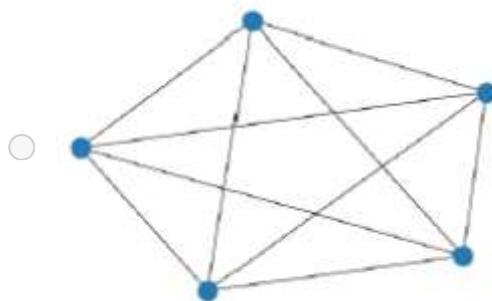
Yes, the answer is correct.  
Score: 1

Accepted Answers:

*Randomly choose a node from all nodes.*

10) Which of the following is a star graph of node 5? 1 point





Yes, the answer is correct.

Score: 1

Accepted Answers:

