

X


<https://swayam.gov.in>

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

rohitkumar57486@gmail.com ✓

[NPTEL \(https://swayam.gov.in/explorer?ncCode=NPTEL\)](https://swayam.gov.in/explorer?ncCode=NPTEL) » [The Joy of Computing using Python \(course\)](#)
[Announcements \(announcements\)](#)    [About the Course \(https://swayam.gov.in/nd1\\_noc20\\_cs35/preview\)](https://swayam.gov.in/nd1_noc20_cs35/preview)
[Ask a Question \(forum\)](#)    [Progress \(student/home\)](#)    [Mentor \(student/mentor\)](#)

## Unit 6 - week 4

### 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=59&lesson=60)
- Magic Square: Hit and Trial 01 (unit? unit=59&lesson=61)
- Magic Square: Hit and Trial 02 (unit? unit=59&lesson=62)
- Magic Square: Hit and Trial 03 (unit? unit=59&lesson=63)

## Assignment 4

The due date for submitting this assignment has passed. Due on 2020-02-26, 23:59 IST.

Assignment submitted on 2020-02-24, 20:02 IST

1) What does the check\_magic() function in the following code do

1 point

```

1 def check_magic():
2     num=[1,2,3,4,5,6,7,8,9]
3     a00=0
4     a01=0
5     a10=0
6     a11=0
7     for i in range(0,9):
8         for j in range(0,9):
9             for k in range(0,9):
10                for l in range(0,9):
11                    a00=num[i]
12                    a01=num[j]
13                    a10=num[k]
14                    a11=num[l]
15                    l=[a00, a01, a10, a11]
16
17                print a00, '\t', a01, '\n', a10, '\t', a11
18                print '\n'

```

- ☐ displays all  $2 \times 2$  matrices where elements are from 1 to 9.

● Magic Square:  
Hit and Trial 04  
(unit?  
unit=59&lesson=64)

● Magic Square:  
Hit and Trial 05  
(unit?  
unit=59&lesson=65)

● Let's program  
and play (unit?  
unit=59&lesson=66)

● Dobble Game -  
Spot the  
similarity 01  
(unit?  
unit=59&lesson=67)

● Dobble Game -  
Spot the  
similarity 02  
(unit?  
unit=59&lesson=68)

● Dobble Game -  
Spot the  
similarity 03  
(unit?  
unit=59&lesson=69)

● Dobble Game -  
Spot the  
similarity 04  
(unit?  
unit=59&lesson=70)

● What is your  
date of birth?  
(unit?  
unit=59&lesson=71)

● Birthday  
Paradox - Find  
your twin 01  
(unit?  
unit=59&lesson=72)

● Birthday  
Paradox - Find  
your twin 02  
(unit?  
unit=59&lesson=73)

● Birthday  
Paradox - Find  
your twin 03  
(unit?  
unit=59&lesson=74)

● Birthday  
Paradox - Find  
your twin 04  
(unit?  
unit=59&lesson=75)

- ☐ displays all  $2 \times 2$  matrices where elements are from 1 to 9 but no element is repeated
- ☐ displays magic squares of size 2
- ☒ none of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

*displays all  $2 \times 2$  matrices where elements are from 1 to 9.*

2) What does the following code do?

**1 point**

```
1 l1 = ["apple", "banana", "kiwi", "orange"]
2 l2 = ["watermelon", "melon", "kiwi", "banana"]
3 cmn=[]
4 for i in range(4):
5     if (l1[i]==l2[i]):
6         cmn.append(l1[i])
7 print (cmn)
```

- ☒ displays common fruits in both the lists l1 and l2
- ☐ displays fruits which are in l1 but not in l2
- ☐ displays fruits which are in l2 but not in l1
- ☐ none of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

*none of the above*

3) Leap years are the years

**1 point**

1. which divisible by 4 but not divisible by 100, and, those
2. divisible by 400

Which of the following code does not represent a code displaying all the leap years from 1 to 2000.

☐

```
1 d4=[]
```

● Birthday Paradox - Find your twin 05 (unit? unit=59&lesson=76)

● What's your favourite movie? (unit? unit=59&lesson=77)

● Guess the Movie Name 01 (unit? unit=59&lesson=78)

● Guess the Movie Name 02 (unit? unit=59&lesson=79)

● Guess the Movie Name 03 (unit? unit=59&lesson=80)

● Guess the Movie Name 04 (unit? unit=59&lesson=81)

● Guess the Movie Name 05 (unit? unit=59&lesson=82)

● Guess the Movie Name 06 (unit? unit=59&lesson=83)

● Quiz : Assignment 4 (assessment? name=263)

● Programming Assignment-1: Digits (/noc20\_cs35/progassignment? name=280)

● Programming Assignment-2: Factorial (/noc20\_cs35/progassignment? name=281)

● Programming Assignment-3: Matrix (/noc20\_cs35/progassignment? name=282)

○ Week 4 Feedback (unit? unit=59&lesson=283)

```

2 d100=[]
3 d400=[]
4 for i in range(1,2001):
5     if (i%4==0):
6         d4.append(i)
7     if (i%100==0):
8         d100.append(i)
9     if (i%400==0):
10        d400.append(i)
11 ly=[]
12 for each in d4:
13     if each not in d100:
14         ly.append(each)
15 for each in d400:
16     ly.append(each)
17 print(ly)

```

○

```

1 ly=[]
2 for i in range(1,2001):
3     if (i%4==0):
4         if (i%100!=0):
5             ly.append(i)
6         else:
7             if (i%400==0):
8                 ly.append(i)
9 print(ly)

```

●

```

1 ly=[]
2 for i in range(1,2001):
3     if (i%400==0):
4         ly.append(i)
5     else:
6         if (i%4==0):
7             ly.append(i)
8 print(ly)

```

○

```

1 ly=[]
2 for i in range(1,2001):
3     if (i%400==0 or (i%100!=0 and i%4==0)):
4         ly.append(i)
5 print(ly)

```

Yes, the answer is correct.

Score: 1

Accepted Answers:

Week 5

Week 6

Week 7

Week 8

Week 9

Week 10

Week 11

Week 12

Text Transcripts

Download Videos

Books

```

1 ly=[]
2 for i in range(1,2001):
3     if (i%400==0):
4         ly.append(i)
5     else:
6         if (i%4==0):
7             ly.append(i)
8 print(ly)

```

4) What does the following function do

1 point

```

1 def leap(year):
2     if (year%400==0 or (year%100!=0 and year%4==0)):
3         return 1
4     else:
5         return 0

```

- ☐ returns true for century year and false for non century year
- ☒ returns true for leap year and false for non leap year
- ☐ returns false for century year and true for non century year
- ☐ none of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

*returns true for leap year and false for non leap year*

5) Which of the following code correctly represents how one can display the number of dashes equal to that of the letters in the movie name? 1 point

☒

```

movies=["titanic","chinatown","avengers","3idiots","conjuring","jungle
book","matrix"]
ch=random.choice(movies)
for i in range(len(ch)):
    print('_',)

```

☐

```

movies=["titanic","chinatown","avengers","3idiots","conjuring","jungle
book","matrix"]
ch=random.choice(movies)
for i in range(100):
    print('_',)

```

☐

```

movies=["titanic","chinatown","avengers","3idiots","conjuring","jungle
book","matrix"]
ch=random.choice(movies)
for ch in range(len(ch)):
    print('_',)

```

☐ none of these

Yes, the answer is correct.

Score: 1

Accepted Answers:

```
movies=["titanic","chinatown","avengers","3idiots","conjuring","junglebook","matrix"]
ch=random.choice(movies)
for i in range(len(ch)):
    print('_',)
```

6) Given a list of movies, which of the following represents a code which randomly chooses a movie amongst all? **1 point**

☒

```
movies=["titanic","chinatown","avengers","3idiots","conjuring","junglebook","matrix"]
ch=movies[random.randint(0,len(movies))]
```

☐

```
movies=["titanic","chinatown","avengers","3idiots","conjuring","junglebook","matrix"]
ch=movies[random.uniform(0,len(movies))]
```

☐

```
movies=["titanic","chinatown","avengers","3idiots","conjuring","junglebook","matrix"]
ch=movies[random.choice(0,len(movies))]
```

☐

none of these

No, the answer is incorrect.

Score: 0

Accepted Answers:

*none of these*

7) What does the following code do?

**1 point**

```
1 s1=input("Enter a string")
2 s2=input("Enter another string")
3 for each in list(s2):
4     for each2 in list(s1):
5         if(each==each2):
6             print("yes")
7             break
```

☐

prints yes if both strings are same

☒

prints yes if both strings have atleast one common character

☐

prints yes if first string is contained in the second

☐

none of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

*prints yes if both strings have atleast one common character*

8) Which numbers from 1 to 100 does the following code print?

**1 point**

```

1 for i in range(1001):
2     f=0
3     for j in range(2,i):
4         if (i%j==0):
5             f=1
6             break
7     if (f==0):
8         print(i)

```

- ☒ prime numbers  
☐ perfect squares  
☐ numbers which are factorial of some other number  
☐ perfect cubes

Yes, the answer is correct.

Score: 1

Accepted Answers:

*prime numbers*

9) Which numbers from 1 to 100 does the following code print?

**1 point**

```

1 for i in range(1001):
2     f=0
3     for j in range(2,i):
4         if (j*j==i):
5             f=1
6             break
7     if (f==1):
8         print(i)

```

- ☐ prime numbers  
☒ perfect squares  
☐ numbers which are factorial of some other number  
☐ perfect cubes

Yes, the answer is correct.

Score: 1

Accepted Answers:

*perfect squares*

10) Assume a drunkard whose movement is defined on the number line, i.e. he can either move forward or backward. Assume he is standing at a position  $p$ . He takes 2 steps forward followed by 4 steps backward. He falls into the pit as soon as he steps

on the position zero. Which of the following codes correctly represents his walk? A.



```

p=int(input())
while (p > 0):
    p=p+2
    print("Location =", p)
    p=p-4
    print("Location =", p)

```

```
print(" Fell in pit at location ", p )
```



```
p=int(input())
while (p > 0):
    p=p-2
    print(" Location =", p )
    p=p+4
    print(" Location =", p )
print(" Fell in pit at location ", p )
```



```
p=int(input())
while (p > 0):
    for i in range ( 2 ) :
        p=p+1
        print(" Loc = ", p )
        if ( p == 0):
            break
    for i in range ( 4 ) :
        p=p-1
        print(" Loc = ", p )
        if ( p == 0):
            break
print(" Fell in pit at location ", p )
```



none of these

Yes, the answer is correct.

Score: 1

Accepted Answers:

```
p=int(input())
while (p > 0):
    for i in range ( 2 ) :
        p=p+1
        print(" Loc = ", p )
        if ( p == 0):
            break
    for i in range ( 4 ) :
        p=p-1
        print(" Loc = ", p )
        if ( p == 0):
            break
print(" Fell in pit at location ", p )
```

