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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 ()

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 (unit? unit=78&lesson=82)

Week 4: Assignment 4

The due date for submitting this assignment has passed.

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

Assignment submitted on 2023-02-16, 10:30 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 the number of rows and columns in the square. 1 point

- ☐ 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.

3) Which of the following statements are true regarding the Magic Squares? (N = Number of rows or columns) 1 point

- ☒ A Magic Square is always a square matrix.
- ☐ A Magic Square can or cannot be a square matrix.

● 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

- ☐ 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

```
1  '''
2  This is a sentence
3  '''
```

- ☐ 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.

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

your twin 03
(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?

☒ 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     flag = 0
9
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

```
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.

☐ Print all perfect squares with square roots between 5-20 and not divisible by 5.

☐ Print all perfect squares with square roots between 5-19 and not divisible by 5.

☒ Print all perfect squares with square roots between 5-19 and divisible by 5.

Yes, the answer is correct.

Score: 1

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, excluding the number itself. For example, 6 is a perfect number as the sum of its divisors 1,2,3 is equal to 6.

1 point

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

unit=78&lesson=103)

● Quiz: Week 4:
Assignment 4
(assessment?
name=300)

● Week 4:
Programming
Assignment 1
(/noc23_cs20/pr
ogassignment?
name=302)

● Week 4:
Programming
Assignment 2
(/noc23_cs20/pr
ogassignment?
name=303)

● Week 4:
Programming
Assignment 3
(/noc23_cs20/pr
ogassignment?
name=304)

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 ()

```
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
```

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

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

