# Week 1: Assignment 1

**The due date for submitting this assignment has passed.**

**Due on 2022-08-10, 23:59 IST.**

## Assignment submitted on 2022-07-16, 22:37 IST

1) What are the functions that can be performed on the variables? ***1 point***

- Rename
- Delete
- Initialize starting value
- All of the above

Yes, the answer is correct.
Score: 1
Accepted Answers:
*All of the above*

2) Which of the following statements is true? ***1 point***

- One can run an infinite loop.
- One cannot change the value of a variable.
- One cannot add sound in scratch.
- One cannot change the size of the image.

Yes, the answer is correct.
Score: 1
Accepted Answers:
*One can run an infinite loop.*

3) Choose the odd one out. ***1 point***

- If
- Repeat
- hide
- Wait

Yes, the answer is correct.
Score: 1

Accepted Answers:
*hide*

4) Which command can be used to decrease the size of a sprite? ***1 point***

- Set size by
- Change size by
- Decrease size
- Size change by

No, the answer is incorrect.
Score: 0

Accepted Answers:
*Change size by*

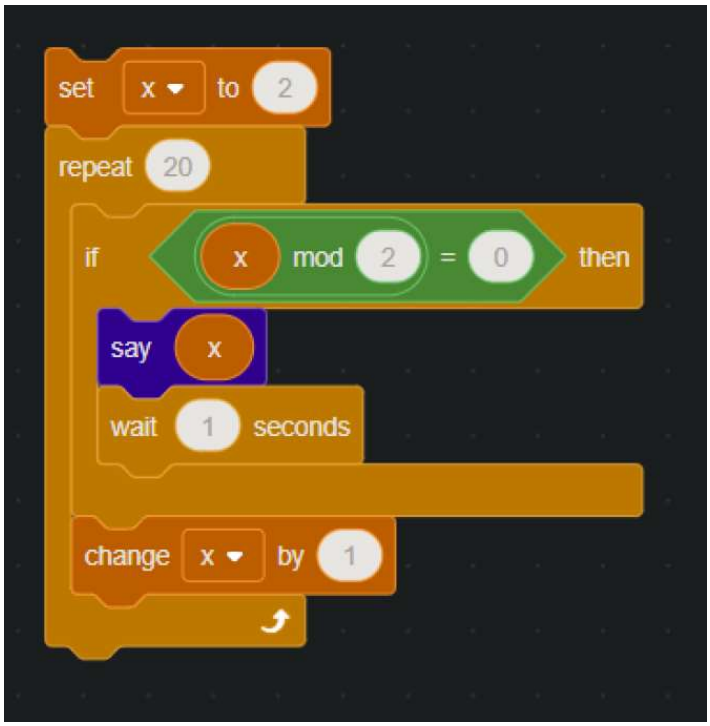
5) Which command can be used to move an object by some steps? ***1 point***

- rotate
- turn
- move
- forward

Yes, the answer is correct.
Score: 1

Accepted Answers:
*move*

6) What does the cat say after executing the following code? ***1 point***




- All-natural numbers between 1-20. (Both inclusive)
- All even numbers between 1-20. (Both inclusive)
- All odd numbers between 1-20. (Both inclusive)
- All whole numbers between 0-20. (Both inclusive)

Yes, the answer is correct.
Score: 1
Accepted Answers:
*All even numbers between 1-20. (Both inclusive)*

7) Which of the following command is not related to the motion section? ***0 points***

- if
- wait
- move
- rotate

No, the answer is incorrect.
Score: 0
Accepted Answers:
*if*

8) Which command can be used to make an image reappear? ***1 point***

- hide
- reappear
- show
- glide

Yes, the answer is correct.

**(October 16 2022 - 10 AM to 1 PM) ()**

**Programming test - Session 1 (October 16 2022 - 8 PM to 11 PM) ()**

**Problem Solving Session ()**

Score: 1
Accepted Answers:
*show*

9) Which of the following command is used to take the absolute value of a number? ***1 point***

- absolute of
- abs of
- mod of
- modulus of

Yes, the answer is correct.
Score: 1
Accepted Answers:
*abs of*

10) State True or False: In scratch one can mention x and y coordinates to move an image. ***1 point***

- True
- False

Yes, the answer is correct.
Score: 1
Accepted Answers:
*True*

X





# Week 2: Assignment 2

**The due date for submitting this assignment has passed.**

**Due on 2022-08-10, 23:59 IST.**

## Assignment submitted on 2022-08-01, 19:14 IST

1) What is the correct command to show the value stored in a variable? ***1 point***

- show()
- cout()
- print()
- out()

Yes, the answer is correct.
Score: 1
Accepted Answers:
*print()*

2) What will be the output of the following piece of code? ***1 point***

```
a = 'Bond'
b = 34
print('Hello Mr.', a, b+1)
```

- Hello Mr. Bond 34
- Hello Mr. 34
- Hello Mr. Bond 35
- Hello Mr. Bond 34

Yes, the answer is correct.
Score: 1
Accepted Answers:
*Hello Mr. Bond 35*

3) What will be the output of the following code? ***1 point***

```
In [3]: x=10 x=y print(x,y)
```

- 10,10
- 10
- No output
- Error

Yes, the answer is correct.
Score: 1
Accepted Answers:
*Error*

4) What is the extension of a python file? ***1 point***

- sc
- py
- md
- Cp

Yes, the answer is correct.
Score: 1
Accepted Answers:
*py*

5) what will be the output of the following code, if the given input is 5? ***1 point***

```
A = input()
print(A*5)
```

- 25
- 55555
- 55
- 5

Yes, the answer is correct.
Score: 1
Accepted Answers:
*55555*

6) Which of the following commands are correct to take input from a user? ***1 point***

- [x] n = input(‘Hello’)
- [x] n = input(“42”)
- [x] n = input(‘42’)
- [ ] n = input(Hello)

☑ n = input()

Yes, the answer is correct.
Score: 1

Accepted Answers:
*n = input('Hello')*
*n = input("42")*
*n = input('42')*
*n = input()*

7) What will be the output of the following code if the input is '5'? ***1 point***

```
a = input('Enter a number')
b = int(a)
print(5*b)
```

- 25
- 25.0
- Error
- 5555

No, the answer is incorrect.
Score: 0

Accepted Answers:
*25*

8) Which of the following blocks of codes are correct?(Assume x and y are initialized) ***1 point***

☐
```
if(x==1):
if(y==1):
    print(hey)
```

☑
```
if(x==1):
    print('statement')
if(y==1):
    print('hey')
```

☐
```
if(x=1):
    print('statement')
if(y=1):
    print('hey')
```

```
if(x==1):
    print('statement')
if(y=1):
    print('hey')
```

Yes, the answer is correct.
Score: 1
Accepted Answers:

```
if(x==1):
    print('statement')
if(y==1):
    print('hey')
```

9) Which of the following statements are correct regarding the following code? ***1 point***

for i in range(a):

- i will take values from 0 to a.
- i will take values from 1 to a.
- i will take values from 0 to a-1.
- i will take values from 1 to a-1.

Yes, the answer is correct.
Score: 1
Accepted Answers:
*i will take values from 0 to a-1.*

10) What will be the output of the following code? ***1 point***

```
a = 0
while(a < 10):
    a = a+2
    print(a)
```

- 1,2,3,4,5,6,7,8,9,10
- 2,4,6,8,10
- 0,1,2,3,4,5,6,7,8,9,10
- Error

Yes, the answer is correct.

Score: 1

Accepted Answers:

*2,4,6,8,10*

X





# Week 3: Assignment 3

**The due date for submitting this assignment has passed.**

**Due on 2022-08-17, 23:59 IST.**

## Assignment submitted on 2022-08-09, 14:39 IST

1) Which of the following statements describes the challenge 'Fizz Buzz'? ***1 point***

- Multiples of 3 should print buzz, multiples of 5 should print fizz, and multiples of 3 and 5 should print fizz buzz.
- Multiples of 3 should print fizz, multiples of 5 should print buzz, and multiples of 3 or 5 should print fizz buzz.
- Multiples of 3 should print fizz, multiples of 5 should print buzz, and multiples of 3 and 5 should print fizz buzz.
- Multiples of 3 should print buzz, multiples of 5 should print fizz, and multiples of 3 and 5 should print fizz buzz.

Yes, the answer is correct.
Score: 1

Accepted Answers:
*Multiples of 3 should print fizz, multiples of 5 should print buzz, and multiples of 3 and 5 should print fizz buzz.*

2) random.randint(1,100) will generate a number _____.(assume random is imported) ***1 point***

- Between 1,100 both inclusive.
- Between 1,100 both exclusive.
- Between 1,100 only 100 inclusive.
- Between 1,100 only 1 inclusive.

Yes, the answer is correct.
Score: 1

Accepted Answers:
*Between 1,100 both inclusive.*

3) Consider a string of 20 digits initialized with all zeros as a DNA sequence, in the context of lectures, updating a random 'zero' as 'one' implies ___. ***1 point***

- Updating a random number
- Evolution
- Degradation
- Increase

Yes, the answer is correct.
Score: 1

Accepted Answers:
*Evolution*

4) Which of the following method is correct to add an element at a specific position? ***1 point***

- insert()
- add()
- append()
- index()

Yes, the answer is correct.
Score: 1

Accepted Answers:
*insert()*

5) What will be the output of the following program? ***1 point***

```
1  L = ['Python', 'C++', 'Java', 'Kotlin']
2
3  for lang in range(len(L)):
4      print(lang)
```

- Python, C++, Java, Kotlin
- 0, 1, 2, 3
- 0, 1, 2, 3, 4
- Python, C++, Java

Yes, the answer is correct.
Score: 1

Accepted Answers:
*0, 1, 2, 3*

6) Which of the following methods is correct to count the number of instances on an element in a list? ***1 point***

- total()

- sum()
- count()
- numberof()

Yes, the answer is correct.
Score: 1
Accepted Answers:
*count()*

7) In the Fizz Buzz game, What will be the output if the number is 285? ***1 point***

- Fizz
- Buzz
- Fizz Buzz
- No output

Yes, the answer is correct.
Score: 1
Accepted Answers:
*Fizz Buzz*

8) Which of the following keywords is used to define a function in python? ***1 point***

- func
- function
- define function
- def

Yes, the answer is correct.
Score: 1
Accepted Answers:
*def*

9) Which of the following statements are true about crowd-sourcing? ***1 point***

- [ ] Answers received via crowdsourcing are never correct.
- [x] Answers received via crowdsourcing can be as good as the answer by an expert.
- [x] Answers received via crowdsourcing can be better than the answer by an expert.
- [ ] Answers received via crowdsourcing are always correct.

Yes, the answer is correct.
Score: 1
Accepted Answers:
*Answers received via crowdsourcing can be as good as the answer by an expert.*
*Answers received via crowdsourcing can be better than the answer by an expert.*

10) Which of the following commands is not correct in order to generate a graph? ***1 point***

- import matplotlib.pyplot as plt
  plt.plot([1,2,3,4],[5,6,7,8],ro)
- import matplotlib.pyplot as plt
  plt.plot([1,2,3,4],[5,6,7,8],r--)

- import matplotlib.pyplot as plt
  plt.plot([1,2,3,4],[5,6,7,8],bs)
- (selected) import matplotlib.pyplot as plt
  plt.plot([1,2,3,4],[5,6,7,8],r---)

Yes, the answer is correct.
Score: 1

Accepted Answers:
*import matplotlib.pyplot as plt*
*plt.plot([1,2,3,4],[5,6,7,8],r---)*

X





# Week 4: Assignment 4

**The due date for submitting this assignment has passed.**

**Due on 2022-08-24, 23:59 IST.**

## Assignment submitted on 2022-08-15, 19:38 IST

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

- [x] 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
- [x] 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 $N(N^2+1)/2$.*

2) 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*

3) A perfect number is a number in which the sum of its proper divisors is equal to that number. For example, 6 is a perfect number as the sum of its divisors 1,2,3 is equal to 6. Which function returns True if the number is perfect? ***1 point***

```
def perfect_number(num):
    ans=0
    for i in range(1,num):
        if(num%i==0):
            ans = ans + i
    if(ans==num):
        return True
    else:
        return False
```

```
def perfect_number(num):
    ans=0
    for i in range(1,num):
        if(num%i==0):
            ans+=i
    if(ans==num):
        return False
    else:
        return True
```

```
def perfect_number(num):
    ans=0
    for i in range(3,num):
        if(num%i==0):
            ans = ans + i
    if(ans==num):
        return True
    else:
        return False
```

```
def perfect_number(num):
    ans=0
    for i in range(1,num):
        if(num%i==0):
            ans = ans + i
    if(ans!=num):
        return True
    else:
        return False
```

Yes, the answer is correct.
Score: 1

Accepted Answers:

```
def perfect_number(num):
    ans=0
    for i in range(1,num):
        if(num%i==0):
            ans = ans + i
    if(ans==num):
        return True
    else:
        return False

```

4) 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*

5) What are the possible outputs of the following program? ***1 point***

```
import random

n = random.randint(0,100)
print(n%5)
```

- Any number in the range between 0,4 (Both inclusive).
- Any number in the range between 1,4 (Both inclusive).
- Any number in the range between 0,5 (Both inclusive).
- Any number in the range between 1,5 (Both inclusive).

Yes, the answer is correct.
Score: 1

Accepted Answers:
*Any number in the range between 0,4 (Both inclusive).*

6) Birthday Paradox can be simulated with approximately _____ people. ***1 point***

- 365
- 100
- 40
- 20

No, the answer is incorrect.
Score: 0

Accepted Answers:
*40*

7) What is the command to print the last result of the ipython console? ***1 point***

- ‘’
- -
- _
- \\

Yes, the answer is correct.
Score: 1

Accepted Answers:
_

8) What will be the output of the following program? ***1 point***

```
L1 = ['starwars', 'godfather', 'passsenger', 'jaurassic park']
L2 = ['spiderman', 'jumanji', 'Passenger', 'Starwars']

for i in L1:
    for j in L2:
        if i[0] == j[0]:
            print(j)
```

- Passenger, Starwars
- spiderman, jumanji
- spiderman, jumanji, Passenger, Starwars
- spiderman, Starwars

Yes, the answer is correct.
Score: 1

Accepted Answers:
*spiderman, jumanji*

**Programming test - Session 1 (October 16 2022 - 8 PM to 11 PM) ()**

**Problem Solving Session ()**

9) In the 'Dobble Game', if there are 8 objects on 1 card and 10 objects on another, how many comparisons are possible? ***1 point***

- 8
- 10
- 18
- 80

Yes, the answer is correct.
Score: 1
Accepted Answers:
*80*

10) ***1 point***

What will be the output of the following code?

```
import random

L = ['harry potter', 'matrix', 'spiderman', 'terminator', 'karate ki

movie = random.choice(L)

count = 0

for character in movie:

    if(character == 'a' or character == 'A'):
        count = count+1

    elif(character == 'e' or character == 'E'):
        count = count+1

    elif(character == 'i' or character == 'I'):
        count = count+1

    elif(character == 'o' or character == 'O'):
        count = count+1

    elif(character == 'U' or character == 'u'):
        count = count+1

print(count, movie)
```

- Display the number of consonants and name of the movie.
- Display the number of letters and name of the movie.
- Display the number of vowels and name of the movie.
- Display the number of special characters and name of the movie.

Yes, the answer is correct.
Score: 1
Accepted Answers:
*Display the number of vowels and name of the movie.*

X





# Week 5: Assignment 5

**The due date for submitting this assignment has passed.**

**Due on 2022-08-31, 23:59 IST.**

## Assignment submitted on 2022-08-22, 16:53 IST

1) What is the correct way to initialize a dictionary? ***1 point***

- D = {a-10, b-20, c-30}
- D = {'a'-10, 'b'-20, 'c'-30}
- D = {a:10, b:20, c:30}
- D = {'a':10, 'b':20, 'c':30}

Yes, the answer is correct.
Score: 1

Accepted Answers:
*D = {'a':10, 'b':20, 'c':30}*

2) What is the correct syntax to get all the keys only from a dictionary d? ***1 point***

- d.key()
- d.item()
- d.value()
- d.keys()

Yes, the answer is correct.
Score: 1

Accepted Answers:
*d.keys()*

3) Which of the following statements are true about dictionaries in python? ***1 point***

- [x] The keys of a dictionary must be unique values.
- [ ] The keys of a dictionary can or cannot be unique.
- [ ] The values of a dictionary must be unique values.
- [x] The values of a dictionary can or cannot be unique.

Yes, the answer is correct.
Score: 1
Accepted Answers:
*The keys of a dictionary must be unique values.*
*The values of a dictionary can or cannot be unique.*

4) State True or False: In the monte hall problem, swapping the choice does not increase the chance of winning. ***1 point***

- ( ) True
- (•) False

Yes, the answer is correct.
Score: 1
Accepted Answers:
*False*

5) 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.

Yes, the answer is correct.
Score: 1
Accepted Answers:
*Pairs of all (key, value) together.*

6) What will be the output of the following program? ***1 point***

```
import string
import random

a = string.ascii_lowercase
d = {}

for i in range(26):

    index = random.randint(0, 25)
    try:
        d[a[index]]+=1

    except KeyError:
        d[a[index]] = 0

print(d)
```

- A dictionary with all letters as keys and 0 as values.
- A dictionary with some letters as keys and 0 as values.
- A dictionary with all letters as keys and some random numbers as values.
- (selected) A dictionary with some letters as keys and some random numbers as values.

Yes, the answer is correct.
Score: 1

Accepted Answers:
*A dictionary with some letters as keys and some random numbers as values.*

7) Binary search can be applied on ___. ***1 point***

- (selected) Sorted list in ascending order.
- Unsorted list
- Both A and B
- (selected) Sorted list in descending order

Yes, the answer is correct.
Score: 1

Accepted Answers:
*Sorted list in ascending order.*
*Sorted list in descending order*

8) Which error is encountered while accessing a position that is not present in a list? ***1 point***

- KeyError
- (selected) IndexError
- RunTimeError
- ValueError

Yes, the answer is correct.
Score: 1

Accepted Answers:
*IndexError*

9) Which of the following command is correct to delete a key from a dictionary 'd'? ***1 point***

- d.pop('key')
- d.del('key')
- d.remove('key')
- d.delete('key')

Yes, the answer is correct.
Score: 1

Accepted Answers:
*d.pop('key')*

10) Which of the following is/are correct regarding dictionaries? ***1 point***

1) One can make a dictionary inside a dictionary in python.
2) Keys in the dictionary are mutable.

- Option 1 is correct, option 2 is correct. Option 2 is the correct explanation for option 1.
- Option 1 is correct, option 2 is incorrect. Option 2 is not the correct explanation for option 1.
- Option 1 is correct, option 2 is correct. Option 2 is not the correct explanation for option 1.
- None of these

Yes, the answer is correct.
Score: 1

Accepted Answers:
*Option 1 is correct, option 2 is incorrect. Option 2 is not the correct explanation for option 1.*

X





# Week 6: Assignment 6

**The due date for submitting this assignment has passed.**

**Due on 2022-09-07, 23:59 IST.**

## Assignment submitted on 2022-08-28, 08:41 IST

1) 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*

2) Which of the following is true about recursion? ***1 point***

- Recursion always performs better than non-recursive code.
- Recursive code is easier to debug
- 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 is easier to debug*
*The base case is necessary for recursion.*
*Recursive code can be shorter than non-recursive code.*

3) What will be the output of the following program? ***1 point***

```
1  s = 'AbraKaDabra'
2  print(s[1:6])
```

- No output
- braKa
- Abra
- rak

Yes, the answer is correct.
Score: 1

Accepted Answers:
*braKa*

4) What will be the output of the following program? ***1 point***

```
1  def recursive(a):
2
3      if a == 0:
4          return 0
5
6      return a+recursive(a-1)
7
8  print(recursive(10))
```

- Sum of first 10 natural numbers.
- Sum of first 9 natural numbers.
- The program will never end.
- Sum of numbers from 2-10(Both inclusive).

Yes, the answer is correct.
Score: 1

Accepted Answers:
*Sum of first 10 natural numbers.*

5) What's the correct code for Binary search? ***1 point***

```
def Binary(L,find, start, end):

    mid = int((start+end)/2)

    if(start < end):
        if(L[end] == find):
            return end
        else:
            return -100


    if(L[mid] == find):
        return mid

    elif(find > L[mid]):
        return Binary(L, find, mid + 1, end)

    else:
        return Binary(L, find, start, mid-1)
```

```
def Binary(L,find, start, end):

    mid = int((start+end)/2)

    if(start == end):
        if(L[end] == find):
            return end
        else:
            return -100


    if(L[mid] == find):
        return mid

    elif(find > L[mid]):
        return Binary(L, find, start, mid - 1)

    else:
        return Binary(L, find, mid + 1, end)
```

```
def Binary(L,find, start, end):

    mid = int((start+end)/2)

    if(start == end):
        if(L[end] == find):
            return end
        else:
            return -100


    if(L[mid] == find):
        return mid

    elif(find > L[mid]):
        return Binary(L, find, mid + 1, end)

    else:
        return Binary(L, find, start, mid-1)
```

```
def Binary(L,find, start, end):

    mid = int((start+end)/2)

    if(start >= end):
        if(L[end] == find):
            return end
        else:
            return -100


    if(L[mid] != find):
        return mid

    elif(find > L[mid]):
        return Binary(L, find, mid + 1, end)

    else:
        return Binary(L, find, start, mid-1)
```

Yes, the answer is correct.

Score: 1

Accepted Answers:

```
def Binary(L,find, start, end):

    mid = int((start+end)/2)

    if(start == end):
        if(L[end] == find):
            return end
        else:
            return -100


    if(L[mid] == find):
        return mid

    elif(find > L[mid]):
        return Binary(L, find, mid + 1, end)

    else:
        return Binary(L, find, start, mid-1)
```

6) Which of the following can be used to see the dimension of a NumPy array named 'arr'? ***1 point***

- dim(arr)
- shape(arr)
- arr.shape
- arr.shape()

Yes, the answer is correct.
Score: 1

Accepted Answers:
*arr.shape*

7) 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*

8) Select the correct statement ***1 point***

1) print('9a'.isalnum()) will return True.
2) '9a' contains both alphabetic and numeric parts.

- Option 1 is correct, option 2 is correct. Option 2 is the correct explanation for option 1.

- Option 1 is correct, option 2 is incorrect.
- Option 1 is correct, option 2 is correct. Option 2 is not the correct explanation for option 1.
- Option 1 is incorrect, option 2 is incorrect.

Yes, the answer is correct.
Score: 1

Accepted Answers:
*Option 1 is correct, option 2 is correct. Option 2 is the correct explanation for option 1.*

9) What will be the output of the following program? ***1 point***

```
s = 'Fusce id odio leo In quis laoreet nulla'
d = {}

for i in s:

    d[i]+=1

print(d)
```

- A dictionary with the count of each character in s.
- A dictionary with the count of each special character in s.
- A dictionary with the count of letters in s.
- Error

Yes, the answer is correct.
Score: 1

Accepted Answers:
*Error*

10) 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)*

X





# Week 7: Assignment 7

**The due date for submitting this assignment has passed.**

**Due on 2022-09-14, 23:59 IST.**

## Assignment submitted on 2022-09-06, 11:17 IST

1) How ladders & snakes are represented by the instructor? ***1 point***

- Through lists.
- Through dictionaries.
- Through if and elif conditions.
- Through sets.

Yes, the answer is correct.
Score: 1
Accepted Answers:
*Through if and elif conditions.*

2) Which of the following is the correct full form of CSV? ***1 point***

- Comma separated values.
- Colon separated values.
- Semi-Colons separated values.
- Tab separated values.

Yes, the answer is correct.
Score: 1
Accepted Answers:
*Comma separated values.*

3) Why do we use functions? ***1 point***

- [x] To improve readability.
- [x] To reuse code blocks.
- [x] For the ease of code debugging.
- [ ] For fun.

Yes, the answer is correct.
Score: 1
Accepted Answers:
*To improve readability.*
*To reuse code blocks.*
*For the ease of code debugging.*

4) In snakes and ladders, what can be the other ways, except for one used by the instructor, to keep track of ladders and snakes? ***1 point***

- [x] Maintain a dictionary with snakes or ladder number blocks as keys.
- [ ] Using the if condition to check on every number.
- [x] Using lists.
- [ ] None of the above

Partially Correct.
Score: 0.67
Accepted Answers:
*Maintain a dictionary with snakes or ladder number blocks as keys.*
*Using the if condition to check on every number.*
*Using lists.*

5) Which of the following libraries is used for animation? ***1 point***

- ( ) Matplotlib
- (•) Turtle
- ( ) Random
- ( ) PIL

Yes, the answer is correct.
Score: 1
Accepted Answers:
*Turtle*

6) The spiral animation problem can be broken down into? ***1 point***

- ( ) A list.
- (•) A 2D table.
- ( ) A 3D table.
- ( ) A dictionary.

Yes, the answer is correct.
Score: 1
Accepted Answers:
*A 2D table.*

7) What is the purpose of the GPS program shown in the lectures? ***0 points***

- ( ) To show directions to the user.

- (selected) To track the directions of the user.
- To show the way to the user on maps.
- None of the above.

Yes, the answer is correct.
Score: 0
Accepted Answers:
*To track the directions of the user.*

8) What does the following program will do after execution? ***1 point***

```
from PIL import image

im = image.open('snakesraw.png')
im.save('snakes.png')
```

- Rename snakesraw.png as snakes.png
- Make a copy of snakesraw.png with the name snakes.png
- Make a copy of snakesraw.png with the name snakes.jpeg
- (selected) Throws an error

Yes, the answer is correct.
Score: 1
Accepted Answers:
*Throws an error*

9) Which of the following code will draw a star? ***1 point***

- 
```
import turtle
mypen = turtle.Turtle()

for i in range(3):
    mypen.forward(50)
    mypen.right(144)

turtle.done()
```

```
import turtle
mypen = turtle.Turtle()

for i in range(3):
    mypen.forward(100)
    mypen.right(144)

turtle.done()
```

```
import turtle
mypen = turtle.Turtle()

for i in range(6):
    mypen.forward(50)
    mypen.right(144)

turtle.done()
```

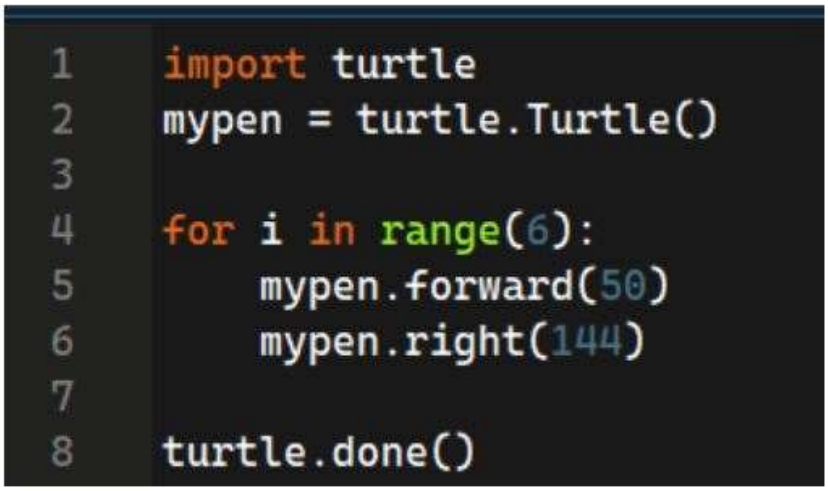
```
import turtle
mypen = turtle.Turtle()

for i in range(6):
    mypen.forward(100)
    mypen.right(60)

turtle.done()
```

Yes, the answer is correct.

**Problem Solving Session ()**

Score: 1

Accepted Answers:



```
import turtle
mypen = turtle.Turtle()

for i in range(6):
    mypen.forward(50)
    mypen.right(144)

turtle.done()
```

10) Which method is used to fill color in shapes drawn by the turtle? ***1 point***

- [ ] color
- [x] fillcolor
- [ ] changecolor
- [ ] putcolor

Partially Correct.
Score: 0.5

Accepted Answers:

*color*

*fillcolor*

X





# Week 8: Assignment 8

**The due date for submitting this assignment has passed.**

**Due on 2022-09-21, 23:59 IST.**

## Assignment submitted on 2022-09-12, 17:24 IST

1) Which of the following q43 the correct representation of tuples? ***1 point***

- [ ] [1,2,3,4]
- [x] (1,2,3,4)
- [x] ((1), (2), (3), (4))
- [ ] [[1], [2], [3], [4]]

Yes, the answer is correct.
Score: 1
Accepted Answers:
*(1,2,3,4)*
*((1), (2), (3), (4))*

2) Why gambling is not recommended? ***1 point***

- ( ) Because you lose every time.
- ( ) Because you win every time.
- (•) Because the loss amount is greater than the winning amount over time.
- ( ) Because the winning amount is greater than the loss amount over time.

Yes, the answer is correct.
Score: 1
Accepted Answers:
*Because the loss amount is greater than the winning amount over time.*

3) Which of the following programs will print the exact same word? ***1 point***

- [x]
```
word = 'nptel'
new = ''

for i in word:
    j = ord(i)
    k = (((j+26) - 97) % 26) + 97

    new = new+chr(k)

print(new)
```

- [ ]
```
word = 'nptel'
new = ''

for i in word:
    j = ord(i)
    k = (((j+26)) % 26)

    new = new+chr(k)

print(new)
```

- [x]
```
word = 'nptel'
new = ''

for i in word:
    j = ord(i)
    k = (((j) - 97) % 26) + 97

    new = new+chr(k)

print(new)
```

```
word = 'nptel'
new = ''

for i in word:
    j = (i)
    k = (((j+26) - 97) % 26) + 97

    new = new+(k)

print(new)
```

Yes, the answer is correct.
Score: 1

Accepted Answers:

```
word = 'nptel'
new = ''

for i in word:
    j = ord(i)
    k = (((j+26) - 97) % 26) + 97

    new = new+chr(k)

print(new)
```

```
word = 'nptel'
new = ''

for i in word:
    j = ord(i)
    k = (((j) - 97) % 26) + 97

    new = new+chr(k)

print(new)
```

4) Using which of the following methods a person can store over a million images in small digital storage? ***1 point***

- [ ] Decompression
- [x] Compression

☐ Enhancement
☐ Unzip

Partially Correct.
Score: 0.5
Accepted Answers:
*Compression*
*Enhancement*

5) State True or False, A lot of information can be revealed from images by using the right kind of enhancement. ***1 point***

◉ True
○ False

Yes, the answer is correct.
Score: 1
Accepted Answers:
*True*

6) type(10) will return? ***1 point***

◉ int
○ str
○ float
○ list

Yes, the answer is correct.
Score: 1
Accepted Answers:
*int*

7) Which of the following pair of words are anagrams? ***1 point***

☑ A gentleman, Elegant man
☐ Cat, Arc
☑ Looted, Toledo
☐ Monasteries, Aman stories

Yes, the answer is correct.
Score: 1
Accepted Answers:
*A gentleman, Elegant man*
*Looted, Toledo*

8) Using PIL how an image 'img' can be flipped? ***1 point***

○ img.flip()
○ img.rotate()
◉ img.transpose()
○ img.turn()

Yes, the answer is correct.

**(October 16 2022 - 8 PM to 11 PM) ()**

**Problem Solving Session ()**

Score: 1

Accepted Answers:
*img.transpose()*

9) What is the purpose of NLTK? ***1 point***

- To process binary language.
- To process foreign language.
- To process human language.
- To process only Hindi language

Yes, the answer is correct.
Score: 1

Accepted Answers:
*To process human language.*

10) How does Vader help in sentiment analysis? ***1 point***

- It calculates whether the statement is negative, positive, or neutral.
- It takes care of the intensity of a statement.
- Both A and B
- None of the above

Yes, the answer is correct.
Score: 1

Accepted Answers:
*Both A and B*

X





# Week 9: Assignment 9

**The due date for submitting this assignment has passed.**

**Due on 2022-09-28, 23:59 IST.**

## Assignment submitted on 2022-09-21, 18:59 IST

1) Which of the following ways can help to identify the author of a book? ***1 point***

- [x] Books coverage
- [x] The uniqueness of writing.
- [x] Average word length.
- [ ] Publisher name.

No, the answer is incorrect.
Score: 0
Accepted Answers:
*The uniqueness of writing.*
*Average word length.*

2) Networkx in pythons is used for ***1 point***

- [x] Making networks
- [x] Analyzing networks
- [x] Visualizing networks
- [ ] Breaking networks

Yes, the answer is correct.
Score: 1
Accepted Answers:
*Making networks*
*Analyzing networks*
*Visualizing networks*

3) What is the output of the following program? ***1 point***

```
s = 'joc python'
print(list(s))
```

- ['joc, 'python']
- ['j', 'o', 'c', 'p', 'y', 't', 'h', 'o', 'n']
- ['j', 'o', 'c', ' ', 'p', 'y', 't', 'h', 'o', 'n']
- [' ', 'c', 'h', 'j', 'n', 'o', 'o', 'p', 't', 'y']

Yes, the answer is correct.
Score: 1

Accepted Answers:
*['j', 'o', 'c', ' ', 'p', 'y', 't', 'h', 'o', 'n']*

4) In the world, on average, how many hops it will take to connect two people? ***1 point***

- 6
- 7
- 8
- 9
- 10

Yes, the answer is correct.
Score: 1

Accepted Answers:
*6*

5) In the following code, nx.is_connected(G) will return? ***1 point***

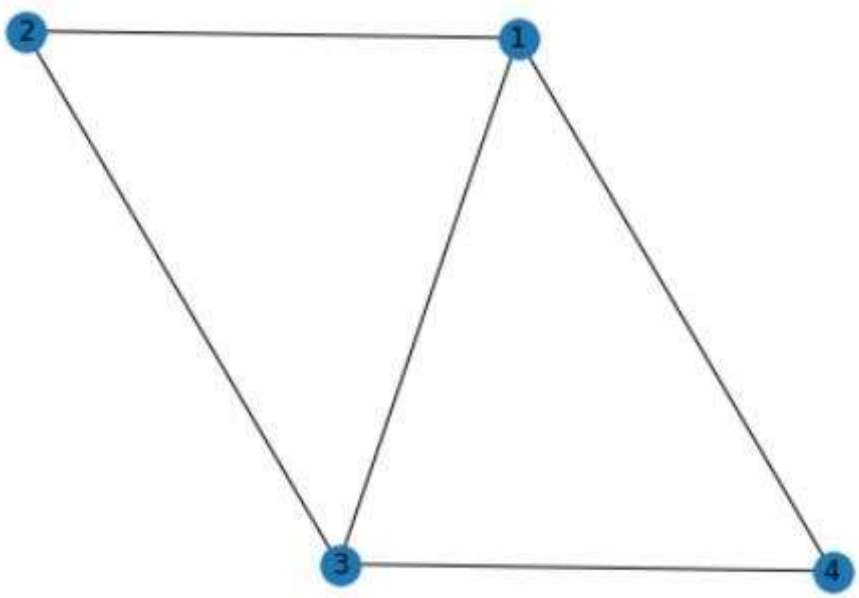
```
import networkx as nx

G = nx.gnp_random_graph(5, 1)
```

- True
- False
- Sometimes True, sometimes false

Yes, the answer is correct.
Score: 1

Accepted Answers:
*True*

6) How many neighbors does node 4 have? ***1 point***




- 1
- 2
- 3
- 4

Yes, the answer is correct.
Score: 1

Accepted Answers:
*2*

7) While calculating the area of a state, how can we increase the accuracy of the calculated area? ***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.*

8) How many nodes and edges does the following graph have? ***1 point***

- 5,5
- 2,5
- 5,2
- 2,2

Yes, the answer is correct.
Score: 1

Accepted Answers:
*5,2*

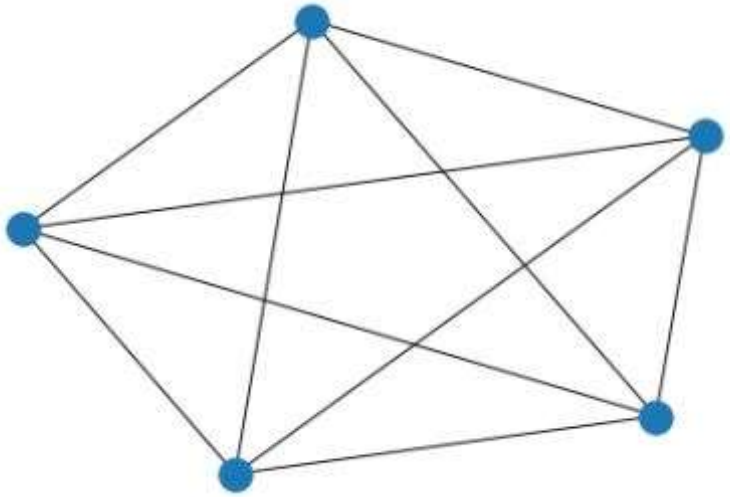
9) Which function of NLTK is used to make a frequency distribution of words? ***1 point***

- freqdist()
- FreqDist()
- frequency_distribution
- freq_dist()

Yes, the answer is correct.
Score: 1

Accepted Answers:
*FreqDist()*

10) Degree of separation for the following graph is ***1 point***



- 1
- 2
- 3
- 5

Yes, the answer is correct.
Score: 1

Accepted Answers:
*1*

X





# Week 10: Assignment 10

**The due date for submitting this assignment has passed.**

**Due on 2022-10-05, 23:59 IST.**

## Assignment submitted on 2022-09-26, 14:37 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) Which of the following is the task of s.upper()(Given the string name is ‘s’)? ***1 point***

- It converts the first character into uppercase.
- It converts every vowel into uppercase.
- It converts every single character into uppercase.
- It converts consonants into uppercase.

Yes, the answer is correct.
Score: 1
Accepted Answers:
*It converts every single character into uppercase.*

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

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

- (•) 'The Joy of Computing'
- ( ) ' Joy of C'
- ( ) 'Joy of C'
- ( ) Error

Yes, the answer is correct.
Score: 1

Accepted Answers:
*'The Joy of Computing'*

4) What will be the output of the following program? ***1 point***

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

- ( ) [[3, 7]]
- (•) [[4, 6]]
- ( ) [[5, 5]]
- ( ) [[4, 4]]

Yes, the answer is correct.
Score: 1

Accepted Answers:
*[[4, 6]]*

5) 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.

(assessment?name=326)
Week 10: Programming Assignment 1 (/noc22_cs122/progassignment?name=327)
Week 10: Programming Assignment 2 (/noc22_cs122/progassignment?name=328)
Week 10: Programming Assignment 3 (/noc22_cs122/progassignment?name=329)
Week 11 ()
Week 12 ()
Text Transcripts ()
Download Videos ()
Books ()
Live Session ()
Programming test - Session 1 (October 16 2022 - 10 AM to 1 PM) ()
Programming test - Session 1 (October 16 2022 - 8 PM to 11 PM) ()
Problem Solving Session ()

Score: 1
Accepted Answers:
*I am amazed*

6) What are the consequences of image compression? ***1 point***

- [x] Less size
- [x] Lower quality
- [ ] More size
- [ ] Higher quality

Yes, the answer is correct.
Score: 1
Accepted Answers:
*Less size*
*Lower quality*

7) What will be the output of the following program? ***1 point***

```
s = 'JOC'
print('#'.join(s))
```

- ( ) JOC
- ( ) #J#O#C#
- ( ) #J#O#C
- (•) J#O#C

Yes, the answer is correct.
Score: 1
Accepted Answers:
*J#O#C*

8) How to take a transpose of a matrix? ***1 point***

```
import numpy as np

b = np.array([[1,2],[3,4]])

print(b.T())
```

```
import numpy as np

b = np.array([[1,2],[3,4]])

print(b.transpose())
```

```
import numpy as np

b = np.array([[1,2],[3,4]])

print(b.T)
```

```
import numpy as np

b = np.array([[1,2],[3,4]])

print(b.transpose)
```

Yes, the answer is correct.
Score: 1

Accepted Answers:

```
import numpy as np

b = np.array([[1,2],[3,4]])

print(b.transpose())
```

```
import numpy as np

b = np.array([[1,2],[3,4]])

print(b.T)
```

9) Consider the following code. ***1 point***

```
import numpy as np

a = np.array([[8,9,20],[10,31,22]])
b = np.array([[1,2,3],[4,5,6]])
```

What print(a+b) will produce?

- [[6 6 6]
  [6 6 6]]
- [[ -7 -7 -17]
  [ -6 -26 -16]]
- [[ 7 7 17]
  [ 6 26 16]]
- [[ 9 11 23]
  [14 36 28]]

Yes, the answer is correct.
Score: 1

Accepted Answers:
*[[ 9 11 23]*
*[14 36 28]]*

10) what is the output of the following code? ***1 point***

```
import numpy as np

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

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

Yes, the answer is correct.
Score: 1

Accepted Answers:
*[[ 1 2 3 4]*
*[ 5 6 7 8]*
*[ 9 10 11 12]]*

X





# Week 11: Assignment 11

**The due date for submitting this assignment has passed.**

**Due on 2022-10-12, 23:59 IST.**

## Assignment submitted on 2022-10-02, 13:25 IST

1) State True or False ***1 point***

We can get any element using CSS tag in seleium? (If CSS is applicable)

- (•) True
- ( ) False

Yes, the answer is correct.
Score: 1
Accepted Answers:
*True*

2) We can use the same web drivers for different browsers. ***1 point***

- ( ) True
- (•) False

Yes, the answer is correct.
Score: 1
Accepted Answers:
*False*

3) Which of the following method can be used to print the calendar of month march, 2022? ***1 point***

- (•) calendar.month(2022, 3)
- ( ) calendar.month(3, 2022)

- calendar(3,2022)
- calendar(2022, 3)

Yes, the answer is correct.
Score: 1
Accepted Answers:
*calendar.month(2022, 3)*

4) Which method will allow us to see the current date and time using datetime? ***1 point***

- current()
- now()
- today()
- time()

Yes, the answer is correct.
Score: 1
Accepted Answers:
*now()*

5) 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)*

6) Which of the following method is used to fetch an element by its class name? ***1 point***

- get_element_by_class_name
- fetch_element_by_class_name
- find_element_by_class_name
- return_element_by_class_name

No, the answer is incorrect.
Score: 0
Accepted Answers:
*find_element_by_class_name*

7) Which library allows us to work with timezones in python? ***1 point***

- timezone
- pythontz
- pytz
- pythontimezone

Yes, the answer is correct.

Score: 1

Accepted Answers:
*pytz*

8) which of the following functions can be used to find the coordinated universal time. ***1 point***

- (selected) datetime.datetime.utcnow()
- datetime.utc()
- datetime.utcnow()
- datetime.utc()

Yes, the answer is correct.
Score: 1

Accepted Answers:
*datetime.datetime.utcnow()*

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

- continue
- leave
- catch
- (selected) break

Yes, the answer is correct.
Score: 1

Accepted Answers:
*break*

10) Which of the following will convert a string ‘s’ containing numbers into an integer? ***1 point***

- str(s)
- float(s)
- (selected) int(s)
- None of the above

Yes, the answer is correct.
Score: 1

Accepted Answers:
*int(s)*

(unit?
unit=227&lesson=244)

**Week 12 ()**

**Text Transcripts ()**

**Download Videos ()**

**Books ()**

**Live Session ()**

**Programming test - Session 1 (October 16 2022 - 10 AM to 1 PM) ()**

**Programming test - Session 1 (October 16 2022 - 8 PM to 11 PM) ()**

**Problem Solving Session ()**

X





# Week 12: Assignment 12

**The due date for submitting this assignment has passed.**

**Due on 2022-10-19, 23:59 IST.**

## Assignment submitted on 2022-10-19, 17:08 IST

1) State True or False: ***1 point***

The number of people referring a person matters over who is referring a person.

- ○ True
- ◉ False

Yes, the answer is correct.
Score: 1
Accepted Answers:
*False*

2) Which of the following is true about page rank? ***1 point***

- ◉ 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.

Yes, the answer is correct.
Score: 1
Accepted Answers:
*Websites are nodes and hyperlinks in websites are edges.*

3) What is a drunkard's walk? ***1 point***

- ○ Strategised walking

- Walking one step at a time.
- Random walking
- Zig zag walking

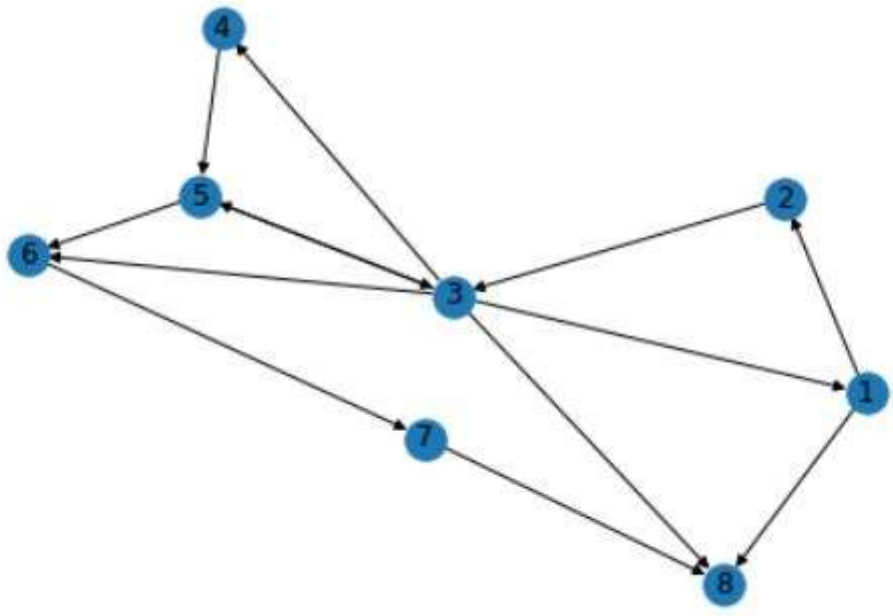
Yes, the answer is correct.
Score: 1
Accepted Answers:
*Random walking*

4) Given a set of networks, which node in that network is considered as most impressive? ***1 point***

- Node with maximum incoming edges.
- Node with maximum visits.
- Node with minimum incoming edges.
- Node with minimum visits.

Yes, the answer is correct.
Score: 1
Accepted Answers:
*Node with maximum visits.*

5) What will be the **G.out_degree(8)** for the following graph(G)? ***1 point***




- 0
- 5
- 3
- 6

Yes, the answer is correct.
Score: 1
Accepted Answers:
*0*

6) Which of the following is true about undirected graphs? ***1 point***

- (•) One can come back and forth from one node to another using a single edge.
- ( ) One can only go forward from one node to another using a single edge.
- ( ) One can go to any node from one node using one edge.
- ( ) None of the above.

Yes, the answer is correct.
Score: 1
Accepted Answers:
*One can come back and forth from one node to another using a single edge.*

7) which of the following statements will choose a random node from graph A? ***1 point***

- ( ) random.choices(A)
- ( ) random.choices(A.nodes())
- (•) random.choice(A.nodes())
- ( ) random.choice(A)

Yes, the answer is correct.
Score: 1
Accepted Answers:
*random.choice(A.nodes())*

8) which of the following is not true about collatz conjecture? ***1 point***

- [x] Bigger the number, larger the steps it would take to converge.
- [ ] The number of steps is independent of the number.
- [x] Collatz conjecture will always converge.
- [ ] Collatz conjecture might or might not converge.

Yes, the answer is correct.
Score: 1
Accepted Answers:
*Bigger the number, larger the steps it would take to converge.*
*Collatz conjecture will always converge.*

9) In collatz conjecture, if a number is even then what should be the next step? ***1 point***

- (•) Divide it by 2
- ( ) Multiply it by 3
- ( ) Multiply it by 3 then add 1
- ( ) Divide it by 2 then add 1

Yes, the answer is correct.
Score: 1
Accepted Answers:
*Divide it by 2*

10) The collatz conversion of 10 looks like ***1 point***

- (•) 10 5 16 8 4 2 1
- ( ) 10 22 11 8 4 2 1

10 5 16 8 4 2

None of the above

Yes, the answer is correct.
Score: 1

Accepted Answers:
*10 5 16 8 4 2 1*

**Problem Solving Session ()**