

Multiple Choice Questions

- What is the output of following code?

```
list1=[4, 3, 7, 6, 4, 9, 5, 0, 3, 2]
l1=list1[1:10:3]
print(l1)
```

(a) [3, 7, 6] (b) [3, 4, 0]
(c) [3, 6, 9] (d) [7, 9, 2]
- Identify the output of following Python statement.

```
a = [[0, 1, 2], [3, 4, 5, 6]]
b = a[1][2]
print(b)
```

(a) 2 (b) 1 (c) 4 (d) 5
- Identify the output of following code.

```
list1 = [2, 3, 9, 12, 4]
list1.insert(4, 17)
list1.insert(2, 23)
print(list1[-4])
```

(a) 4 (b) 9 (c) 12 (d) 23
- What will be the output of the following Python code?

```
books = ['Hindi', 'English', 'Computer']
if 'put' in books:
    print(True)
else:
    print(False)
```

(a) True (b) False (c) None (d) Error
- Identify the output of the following Python statement.

```
list1=[4,3,7,9,15,0,3,2]
s = list1[2:5]
print(s)
```

(a) [7,9,15,0] (b) [3,7,9,15]
(c) [7,9,15] (d) [7,9,15,0,3]
- What will be the output of following code?

```
list1=[2, 5, 4, [9, 6], 3]
list1[3][2]=10
print(list1)
```

(a) [2, 5, 4, [9, 10], 3] (b) [2, 5, 4, 10, [9, 6], 3]
(c) Index out of range (d) None of these

Short Answer Type Questions

- What will be the output of the following Python code?

```
list1 = [11, 12, 13, 14, 15]
for i in range(1, 5):
    list1[i-1] = list1[i]
for i in range(0, 5):
    print(list1[i], end = " ")
```

- What will be the output of following code?

```
l = []
for i in range(20, 40):
    if(i % 7 == 0) and (i % 5 != 0):
        l.append(str(i))
print('.'.join(l))
```

- What are the output of below questions?

```
L = [45, 89, 74, 12, 9, 83]
```

(i) L.remove ()
(ii) L.remove (12)
- Predict the output.

```
L1 = [3, 2, 1]
L2 = [5, 9, 8]
```

(i) L1 * L2
(ii) L2.sort ()
(iii) L1.reverse ()

- Write a program to input a list and print it in reverse order.

- Give the output.

```
(i) str1 = 'aeiou'
list1 = list(str1)
print(list1)
(ii) list1 = [2, 3, 4, 5]
list1.append(1)
print(list1)
```

Long Answer Type Questions

- Write the best suited method's name for the following conditions.

(i) Remove the value from the list.
(ii) Sort the elements in descending order.
(iii) Calculate the sum of all the elements of list.
(iv) Return the minimum element out of elements.
- Write program to find the minimum and maximum elements from the entered list.
- Write program to calculate the sum and mean of the elements which are entered by user.
- Write program to count the frequency of elements in a list entered by user.
- Write program to search for an element with its respective index number.
- Write program to enter the elements of a list and reverse these elements.

Multiple Choice Questions

1. Consider the declaration `obj = (2, 'Hello', 3, 4)`. What will be the data type of `obj`?
(a) List (b) Tuple
(c) Dictionary (d) String
2. What is the output of following code?
`t1 = (1, 2, 3, 4, 5, 6, 7, 8)`
`print(t1[2:4])`
(a) (3, 4) (b) (2, 3)
(c) (4, 5, 6) (d) (3, 4, 5)
3. Choose the correct option with respect to Python.
(a) Both tuples and lists are immutable.
(b) Tuples are immutable while lists are mutable.
(c) Both tuples and lists are mutable.
(d) Tuples are mutable while lists are immutable.
4. Which of the following options will not result in an error when performed on tuples in Python where `tpl=(5,2,7,0,3)`?
(a) `tpl[1]=2`
(b) `tpl.append(2)`
(c) `tpl1=tpl+tpl`
(d) `tpl.sort()`
5. What will be the output of the following Python code?
`>>>my_tuple = (10, 20, 30, 40)`
`>>>my_tuple.append((50, 60))`
`>>>print(len(my_tuple))`
(a) 1 (b) 6
(c) 4 (d) Error
6. Is the following Python code valid?
`>>> a, b=1, 2, 3`
(a) Yes, this is an example of tuple unpacking, where `a=1` and `b=2`.
(b) Yes, this is an example of tuple unpacking, where `a=(1,2)` and `b=3`.
(c) No, too many values to unpack.
(d) Yes, this is an example of tuple unpacking, where `a=1` and `b=(2,3)`.

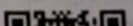
Short Answer Type Questions

7. Observe the following tuple and answer the questions that follow
`t = (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)`
(i) `t[-3]`
(ii) `t[:2]`
8. Explain the any () method of tuple with an example.

9. Suppose the tuple `t1 = (2, 3, 4, 7, 1, 6)`. Find
(i) `t1.index(4)`
(ii) `t1.count(4)`
10. Suppose the tuple `t1 = (2, 3, 2, 2, 3, 4, 6, 7)`.
(i) `count(t1)` (ii) `len(t1)`
11. Observe the given tuples and answers the questions
`t1 = (1, 2, 3, 4)`
`t2 = (5, 6, 7)`
(i) `>>> t = t1 + t2`
`>>> print(t)`
(ii) `>>> t = t1 * t2`
`>>> print(t)`
12. Consider the tuple `t = (2,3, 'Hello', 2, 5, 9)` and find out the error if any in following code
`tuple1 = t + 5`
`print(tuple1)`
13. Compare the tuple and write the output.
(i) `t1 = (4, 5, 6, 9)`
`t2 = (6, 9, 5, 6)`
`print(t1 < t2)`
(ii) `t1 = (4, 5, 6, 9)`
`t2 = (4.0, 5.0, 6.0, 9.0)`
`print(t1 == t2)`

Long Answer Type Questions

14. Write a Python program to count the positive numbers and negative numbers in a tuple.
15. Write the most appropriate tuple methods for the following conditions.
(i) To count the number of elements in a tuple.
(ii) Calculate total occurrence of given element.
(iii) Returns the element with maximum value.
(iv) Returns the element with minimum value.
(v) To sort the given tuple in ascending order.
(vi) Returns true if atleast one element is present in the tuple.
(vii) Returns the index of first occurrence of element.
(viii) Converts string and list into tuple.
16. Write a Python program to test if a variable is a list or tuple.
17. Write a Python program to sort a list of tuples by the second item.
18. Write a Python program to sort a list of tuples alphabetically.



Multiple Choice Questions

- Suppose `d = {"Rahul":40, "Riya":45}`.
To obtain the number of entries in dictionary which command do we use?
(a) `d.size()` (b) `len(d)` (c) `size(d)` (d) `d.len()`
- Which of the following is not true about dictionary keys?
(a) More than one key is not allowed.
(b) Keys must be immutable.
(c) Keys must be integers.
(d) When duplicate keys encountered, the last assignment wins.
- What will be the output of the following Python code?

```
a={1:5,2:3,3:4}
a.pop(3)
print(a)
```


(a) {1: 5}
(b) {1: 5, 2: 3}
(c) Error, syntax error for pop() method
(d) {1: 5, 3: 4}
- What will be the output of the following Python code snippet?

```
dict1={}
dict1['a']=1
dict1['b']=[2,3,4]
print(dict1)
```


(a) Exception is thrown (b) {'b': [2], 'a': 1}
(c) {'b': [2], 'a': [3]} (d) {'b': [2, 3, 4], 'a': 1}
- What will be the output of the following Python code?

```
>>> dic1={}
>>> dic1.fromkeys([1,2,3], "Hello")
```


(a) Syntax error (b) {1:"Hello",2:"Hello",3:"Hello"}
(c) "Hello" (d) {1:None,2:None,3:None}

Short Answer Type Questions

- Predict the output.

```
dic={'a': 1, 'b': 2, 'c': 3, 'd': 4}
if 'a' in dic:
    del dic['a']
print(dic)
```
- What is the output of following code?

```
dic = {}
dic[2] = 1
dic['2'] = 6
dic[2.0] = 8
sum = 0
for i in dic:
    sum = sum + dic[i]
print(sum)
```

- What is the output of following code?

```
d = {}
a, b, c, = 1, 2, 3
d[a, b, c] = a + b - c
a, b, c, = 2, 10, 4
d[a, b, c] = a + b - c
print (d)
```

- What will be the output of the following Python code snippet?

```
dic1 = {1:'One', 2:'Two', 3:'Three'}
del dic1[1]
dic1[1] = 'Four'
del dic1[2]
print(len(dic1))
```

- Write any two properties of dictionary keys.
- Write a program to multiply all the items in a dictionary.
- Write a Python code to iterate over dictionary using for loop when dictionary is

```
dic = {'A' : 50, 'B' : 100, 'C' : 150}
```
- Write a Python code to concatenate following dictionaries to create a new one.

```
d1 = {'A' : 10, 'B' : 20}
d2 = {'C' : 30, 'D' : 40}
d3 = {'E' : 50, 'F' : 60}
```

Long Answer Type Questions

- Write Python code which display the nested dictionary.
- Write Python code to count the frequencies in a list using dictionary.
- Write Python code to sort the list in a dictionary.
- Write Python code to convert dictionary to list of tuple.
- Find the output of the given Python code to swap keys and values in dictionary.

```
old_dict = {'One' : 742, 'Two':145, 'Three' : 654, 'Four' : 321, 'Five' : 120, 'Six': 365, 'Seven':459, 'Eight': 449}
new_dict = dict([(value, key)for key, value in old_dict.items()])
print("Original dictionary is :")
print (old_dict)
print()
print("Dictionary after swapping is:")
print("Keys:Values")
for i in new_dict:
    print(i, " : ", new_dict[i])
```


Multiple Choice Questions

- Which module is used for `pow()` to find the power of a number?
(a) random (b) math
(c) statistics (d) power
- Identify the correct output of following code.

```
import math  
print (math.floor (153.42))
```


(a) 153 (b) 154
(c) 154.0 (d) 153.4
- To include the use of functions which are present in the statistics library, we must use the option
(a) `statistics.h` (b) `import statistics`
(c) `import.statistics` (d) `statistics.statistics`
- The value passed in `sin()` should be in
(a) degree (b) meter
(c) inch (d) radian
- Which of the following function always gives output in integer form?
(a) `random ()` (b) `choice()`
(c) `mean()` (d) `randint()`

Short Answer Type Questions

- What is the output of following code?

```
import math  
print(int (math.pow (4, 2)))  
print (math.pow (4, 2))  
print (math.ceil (4.23))
```

- What is the output of following code?

```
math.ceil (9.6)  
math.floor (9.4)  
math.floor (-9.4)
```

- Identify the output of following code.

```
import math  
print ('cos:', math.cos (42.3651))  
print ('sin:', math.sin (1))  
print ('tan:', math.tan (0))
```

- Write a short note on

- `random()`
- `randint()`

- Distinguish between `mean()` and `mode()`.

Long Answer Type Questions

- What will be the output of following code?

```
import math  
print ('ceil:', math.ceil (8.65))  
print ('fabs:', math.fabs (8.65))  
print ('fabs:', math.fabs (-8.65))  
print ('floor:', math.floor (-8.65))  
print ('pow:', math.pow (5, 4))  
print ('round:', round (7.654265))  
print ('round:', round (7.654265, 2))  
print ('sqrt:', math.sqrt (289))
```

- What is the output of following code?

```
import statistics  
list1 = [23, 45, 3, 5, 6, 7, 12, 32, 11, 22,  
8, 45]  
  
a = statistics.mean (list1)  
print ("Mean is:", a)  
b = statistics.median (list1)  
print ("Median is:", b)  
c = statistics.mode (list1)  
print ("Mode is:", c)
```

- Identify the output of following code.

```
import statistics  
from fractions import Fraction as F  
from decimal import Decimal as D  
a = statistics.mean ([45, 65, 22, 78, 65, 23, 99])  
b = statistics.mean ([F(8, 10), F(11, 20), F(2, 5), F(28, 5)])  
c = statistics.mean ([D ('1.5'), D ('5.75'),  
D ('10.625'), D ('2.375')])  
print ('Simple mean:', a)  
print ('Fraction mean:', b)  
print ('Decimal mean:', c)
```


Multiple Choice Questions

1. Charlene is an artist. She displays her artwork on the Internet using her website to attract buyers. One day while browsing the Internet she discovers that another artist has displayed her painting portraying it as his own. Which rights of Charlene was infringed?
(a) Digital Privacy Rights
(b) Intellectual Property Rights
(c) Digital Property Rights
(d) Intellectual Privacy Rights
2. Shreya told her friend Princy about a term that, "It is the study of ethics pertaining to computers, encompassing user behaviour and what computers are programmed to and how this affects individuals and society". What is it?
(a) Cyber ethics
(b) Plagiarism
(c) Netiquette
(d) Hacking
3. Which of the following refers to attempt to gain information from undisclosed areas?
(a) Hacking
(b) Knowledge
(c) Etiquette
(d) Plagiarism
4. Rahul is working in MNC company. His friend told him about a term that it encourages people to create new softwares as well as helps them to improve the existing application. Identify that term.
(a) Hacking
(b) Plagiarism
(c) Intellectual property rights
(d) Netiquette
5. footprints which include data that we intentionally submit online.
(a) Active digital
(b) Passive digital
(c) Both (a) and (b)
(d) None of these

Short Answer Type Questions

6. What do you mean by digital footprint?
7. How can you explain netizen?
8. What is intellectual property and how can protect these rights?
9. Define two popular categories of public licenses.
10. What is non-ethical hacker? Also, give its other name.

Long Answer Type Questions

11. What is identity theft? Also, give its few examples.
12. Explain the preventing cyber crime.
13. Define the reduce and recycle factors used in E-Waste management.

1. Suppose that the list

```
list1 = [2,3,4,7,53,23,12,9,0]
```

Based on the above information, answer the following questions.

(i) Identify the output of following code.

```
l = list1. pop(9)
```

```
print(l)
```

(a) [2, 3, 4, 7, 53, 23, 12, 0]

(c) 9

(b) [2, 3, 4, 7, 53, 23, 12, 9]

(d) Error

(ii) Choose the correct output from the following options for statement `list1[-4]`.

(a) 7

(c) 23

(b) 53

(d) 63

(iii) Identify the output of following code.

```
print (list1[5 :])
```

(a) [23, 12, 9, 0]

(c) [2, 3, 4, 7, 53]

(b) [53, 23, 12, 9, 0]

(d) [2, 3, 4, 7, 53, 23]

(iv) Which command will be used to add a new element 14 to a list list1?

(a) `list1.append(14)`

(c) `list1.addLast(14)`

(b) `list1.add(14)`

(d) `list1.addEnd(14)`

(v) Which value is used to represent the second index of list l?

(a) 2

(c) -2

(b) 1

(d) -1

2. Find the output of the given questions.

```
L1 = [1, 2, 3, 4]
```

```
L2 = [5, 6, 7, 8]
```

(i) `print (L2[2])`

(ii) `print (L1+L2)`

(iii) `print (len (L1*2))`

(iv) `print (L1[4])`

(v) `print (L2[-3])`

(vi) `print (L2[:3])`

3. Define the concatenate lists with an example.

Or Find the output of the given questions.

```
tup1 = (23,45,23,12,(12,14,16),34)
```

(i) `print (tup1[4])`

(ii) `print (tup1[1 : 8 : 2])`

(iii) `tup1[2] + tup 1[-3]`

4. Write a code to add all the items in a dictionary.

```
dic1 = {'One' : 20, 'Two' : 15, 'Three' : 10, 'Four' : 12 }
```

Or Define the `get()` method used in dictionary.

5. Give any three guidelines to avoid plagiarism.

6. Define the following terms :

(i) Softlifting

(ii) Renting

(iii) Hard disk loading

Or What is passive digital footprint? Also, give its two examples.

7. Write a program to calculate the average of the elements which are entered by user.

Or Write a Python program to count the even and odd numbers in a tuple.

8. What points should be considered as safety measures to reduce the risk of cyber crime ?

Or How to avoid being stalked on social media by disable geotagging, delete old accounts and hide your contacts?

9. Explain cyber stalking with its any three examples.

Or Explain online fraud. How to ensure safe sites, while entering crucial information?

1. Suppose that the tuple

```
tup1=(1,2,3,(4,5),6,(7,8,9),10)
```

Based on the above information, answer the following questions.

(i) Identify the correct output of the following code.

```
print (tup1 [2 : 4])
```

(a) (3, (4, 5))

(b) (2, 3)

(c) (3, (4, 5), 6)

(d) Error

(ii) Find the value of tup1 [2. 5].

(a) 3

(b) (4, 5)

(c) (7, 8, 9)

(d) Error

(iii) Choose the correct output for tup1 [9].

(a) 9

(c) (7, 8, 9)

(b) 10

(d) Error

(iv) Choose the correct output for len (tup1).

(a) 10

(c) 8

(b) 7

(d) Error

(v) Identify the output of tup1 [5:].

(a) ((7, 8, 9), 10)

(c) (6, (7, 8, 9), 10)

(b) (7, 8, 9, 10)

(d) Error

2. What will be the output of the following code?

```
list1 = [12, 10, 15, 13, 14, 22, 37]
```

```
for i in range (0, len (list1)):
```

```
    if i%2 != 0 :
```

```
        print (list 1 [i])
```



```
(ii) del list1 [:5]
    print(list1)
```

```
(iii) del list1 [::2]
    print (list1)
```

Or Observe the following tuple and answer the questions that follow.

```
tuple1 = (10, 20, 'One', 'Two', 30, (40, 50), 'Three')
```

```
(i) len (tuple1)
```

```
(ii) tuple1 [-6]
```

```
(iii) tuple1 [3]
```

```
(iv) tuple1 [: 2]
```

```
(v) tuple [3 :]
```

```
(vi) tuple1 [1 : 8 : 2]
```

3. Predict the output.

```
dic1 = {}
dic1 [1] = 2
dic1 ['1'] = 4
dic1 [1.0] = 8
sum = 0
for i in dic1:
    sum = sum+ dic1 [i]
print (sum)
print (dic1)
```

Or Define the insert () method of list with an example.

4. What is dictionary? Also, write the ways to delete elements from a dictionary.

5. Define the ways to stop online frauds.

Or Explain the identity protection while using Internet.

6. What is active digital footprint? Write any two examples of it.

7. Write Python program to count the frequencies in a list using dictionary.

Or Write the best suited method's name for the following conditions.

(i) Calculate the sum of all the elements.

(ii) Calculate the total occurrence of given element of list.

(iii) Returns the index of first occurrence.

(iv) Calculate the total length of list.

(v) Used to remove all the items of a list.

8. What are Intellectual Property Rights (IPR)? Also, explain Patent is one of the types of IPR.

Or Explain E-Waste disposal management.

9. What is digital footprint? Also, write the differences between active digital footprint and passive digital footprint.

Or Define the following terms :

(i) Hacking

(ii) Piracy

(iii) Cyber crime

(iv) Plagiarism

(v) Netiquette