PYTHON FOR COMPUTATIONAL PROBLEM SOLVING

QUIZ: Unit - 2

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QUIZ

Say True or False

Set is an ordered collection of unique elements.

Answer: False.
Set is unordered

QUIZ

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What gets printed?

```
list1 = [10, 20, 10, 2]
set1 = set(list1)
print(set1[0])
```

Answer:
TypeError: 'set' object is not subscriptable

QUIZ

```
x = 50

def func(x):

        print('x is', x)
        x = 20
func(x)
print('x is still', x)
```

Value of x will never be _____ in the output

a) 20
b) 50

Answer: a) 20

QUIZ

```
s1=list("choco")          #Line1
def concat(s2):           #Line2
        s1.append(s2)  #Line3
        return "".join(s1)   #Line4
print(concat(list("late")))        #Line5
```

Choose the option that can be used to to get the expected output: chocolate

a) Line3 replace append with extend
b) Line5 remove list
c) None of these
d) Either a) or b)

Answer: d) Either a) or b)

QUIZ

What gets printed?

```
 A = [99,88,33]
def modify(B):
        B += [12,55]
        print(B)
print(A)
modify(A)
print(A)
```

Answer:

```
[99,88,33]
[99,88,33,12,55]
[99,88,33,12,55]
```

QUIZ

What gets printed?

```
A = [99,88,33]
def modify(B):
        A += B
        print(B)

modify(A)
```

a) [99,88,33]
b) [99,88,33, 99,88,33]
c) Error
d) None of these

Answer:
c) Error

QUIZ

```
def f1():
        print("in f1")
def f2():
        print(" in f2")
        return f2
k=f1
k()
k.f2()
```

What is the output of above code?

Answer:
In f1
AttributeError

QUIZ

```
def f2():
        print("in f2")
def f1():
        print("in f1")
        global f2
def ff2():
        print("in ff2")
f1()
f2()
ff2()
```

What is the output of above code?

Answer:

in f1

in f2

in ff2

QUIZ

```
def f1():
        global f2
        f2 = 100

print(f1())
print(f2)
```

What is the output of above code?

Answer:
None
100

QUIZ

```
def f1():
        x = 10
def f2():
        print(" x is ",x)


f2()
f1()
```

What is the output of above code?

Answer:
NameError

QUIZ

```
def f1():
        x = 10


def f2():
        x = x+10
        print(" x is ",x)
f1()
f2()
```

What is the output of above code?

Answer:
Error

QUIZ

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```
f2 = 200
def f1(F2):
        global F2
        F2 = 100

print(f1(f2))
print(f2)
```

What is the output of above code?

Answer: Error
Parameter cannot be global

QUIZ

```
c = [11,22]
def f1(a, b=c):
        b.append(a)
        return b
c = [14,33]
print(f1({2}))
```

What is the output of above code?

Answer: [11, 22, {2}]

QUIZ

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```
def f1(a,b):
        print(a,b, end = " ")
        print(*a,*b)

d= {(23,78):"900",(89,88):[90,78,55]}
f1(*d)
```

What is the output of above code?

Answer:
(23,78) (89,88) 23 78 89 88
* In the function call unpacks the collection

QUIZ

```
def f1(a,b,c):
        print(type(*a))
d= ([44],66,22)
f1(*d)
```

What is the output of above code?

a) list
b) Error
c) int
d) str

Answer:
c) int

QUIZ

```
def f1(a,b,c):
        print(type(*a))
d= ([[44]],66,22)
f1(*d)
```

What is the output of above code?

a) list
b) Error
c) int
d) str

Answer:

a) list

QUIZ

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How to assign a tuple of length 1 to a variable v ?

Answer:
v = (anythin_here,)

QUIZ

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What is the result of this code in python interactive mode ?

```
a = {'a':1,'b':2,'c':3}
a['a','b']
```

a) 1,2
b) IndexError
c) KeyError
d) {'a':1,'b':2}

Answer: c) KeyError

QUIZ

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What gets printed when the below code is executed ?

```
a = {(1,2):1,(2,3):2}
print(a[1,2])
```

Answer: 1

QUIZ

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a = {'a': 1,'b':2, 'a':3}
What happens when a is printed?

a) Syntax Error
b) TypeError
c) Hash value of a is printed
d) A gets printed with two elements within it

Answer: d) A gets printed with two elements within it

QUIZ

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a = {11,12,33}
a[-3:-1] = 10,30,20,40

What will be plced in a ?

a) [10,30,20,40,33]
b) [10,30,20]
c) Error
d) [[10,30,20,40],33]
e) None of these

Answer: c) Error
Set doesn't support slicing and indexing both

QUIZ

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What is the output?

```
print("universitypesuniversitypes".count('pes', 11, 100))
```

a) 0
b) 1
c) 2
d) Error

Answer: b) 1

QUIZ

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What is the output of below code?
print(‘xyyzxyzxzxyy’.count('xyy', -10, -1))

a) 2
b) 0
c) 1
d) Error
e) xyy

Answer: b) 0

QUIZ

Given s={23,45,12,67,23}
What is the output of s.count(23) ?

Ans: Error.
Reason: count() function doesn't exist in set object
Check using "count" in dir(set) returns False

QUIZ

Non-sequence types in Python are stored based on the principle of _____

Answer: Hashing

QUIZ

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```
var_1 =(34,23,120,45,120)
var_1.pop(4)
```

What is the output of above code when executed in an interactive mode?

a) No output
b) Error
c) 120
d) 0

Answer: b) Error
Tuple is immutable

QUIZ

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```
food_items={"a":"apple","b":"beetroot",“[c]":("chees e", "carrot")}
print(food_items["c"][1])
```

a) ("cheese", "carrot")
b) (‘cheese’, ‘carrot’)
c) KeyError
d) cheese
e) carrot

Answer: c) KeyError

QUIZ

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D1={1:”A”,2:”B”,3:{23:45}}
What is the output of above code in interactive mode?

a) ValueError
b) {1:’A’,2:’B’,3:{23:45}}
c) Prompt >>> is returned
d) SyntaxError
e) KeyError

Answer: c) Prompt >>> is returned

QUIZ

Given s1={34,56,False,0.0}
Output of len(s1) is _____

Answer: 3
Hash of False and 0.0 is same

QUIZ

Given s1={1,True,0.0,0}
Output of len(s1) will be

Answer: 2

QUIZ

Given t1={34,56,"whatsapp",None}
What is the output of all(t1) ?

Answer: False
All returns boolean . It checks whether all the elements are Non-zero values and returns True if so

QUIZ

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```
d1={2:22,3:33,4:44,(5,6):(55,66)}
print(max(d1))
```

a) (55,66)
b) (5,6)
c) 5
d) 6
e) Error

Answer: e) Error

QUIZ

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s1={12,23,45} and s2={12,23}
print(s2<s1)

a) True
b) False
c) {12,23}
d) {23,12}
e) Error

Answer: a) True
Is s2 a proper subset of s1

QUIZ

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```
d1={“i”:”ice cream”,”f”:“fun”}     #line #1
d2=d1.copy()                #line #2
d2[“i”]=“ice”      #line #3
```

Does line #3 make any changes to d1 ?

Answer: No changes made to d1

QUIZ

What gets printed?

```
d1={“i”:”ice cream”,”f”:“fun”,”i”:”ice  cream”}
d2=d1.copy()
print(len(d1), d1==d2)
print(d1<d2)
```

Answer: 2 True
TypeError

QUIZ

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Pick the incorrect statement about functions in python.

a) Function can be created without name
b) Functions are expressions
c) Define keyword is used to define a user defined function
d) b & c

Answer:
c) Define keyword is used to define a user defined function

QUIZ

Say True or False

Parameter passing is always by value in python

Answer:
True.
Value can be any type: value type or reference type

QUIZ

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Which file mode raises an error if the specified file does not exist at the given path?

a) r
b) w
c) a
d) x

Answer: a) r

QUIZ

What gets printed?

```
def fun():
        print(x,y)
fun()
x=12;y=24
```

a) 12 24
b) NameError
c) 1224
d) Syntax Error

Answer:
b) NameError

QUIZ

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What is the output of below code?

```
def f1(a,b,*arg):
        print(a,b,arg)

f1(b=12,a=22,2)
```

a) 22 12 (2,)
b) 22 12 2
c) 22 12 (2)
d) Error

Answer :d) Error
Positional follows keyword argument

QUIZ

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What is the output of below code?

```
def f1(a,b,c,d):
        print(a,b,c,d)

f1(b=12,a=22,2,6)
```

a) 22 12 2 6
b) 12 22 2 6
c) Error
d) 22 12 (2, 6)

Answer: c) Error

Positional follows keyword argument

QUIZ

PES UNIVERSITY

What is the output of below code?

```
def f1(a,b,*arg):
        print(a,b,*arg)

f1(12,22,2,6)
```

a) 22 12 2 6
b) 12 22 2 6
c) Error
d) 22 12 (2, 6)

Answer: a) 22 12 2 6

QUIZ

What is the output of below code?

```
def f1(x=2,b=[]):
        b.append(x)
        return b

f1(7)
f1(33,[3,2,4])
print(f1(8))?
```

a) [3, 2, 4, 33, 8]
b) [7,8]
c) Error
d) [7, 3, 2, 4, 33, 8]

Answer: b) [7,8]

QUIZ

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What does the non-value returning function return?

a) False
b) None
c) “”
d) 0
e) True

Answer: b) None

QUIZ

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What gets printed?

```
d1={“i”:”ice cream”,”f”:“fun”,”i”:{12:23}}
d2=d1.copy()
d2[“i”][12]=300
print(d1)
```

a) {'f': 'fun', 'i': {12: 300}}
b) {'f': 'fun', 'i': {12: 23}}
c) ValueError
d) TypeError

Answer: a) {'f': 'fun', 'i': {12: 300}}

QUIZ

```
>>> result = 3 * 'AB' + 2 * 'C'
>>> print(result)
```

What gets printed ?

a) ABABABC
b) ABCABC
c) ABABABCC
d) ABABABCCC

Answer: c) ABABABCC

QUIZ

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```
x = [1, 2, 3, 4]
y = x
y[2] = 100
print(x)
```

What is the output?

a) [1, 2, 100, 4]
b) [1, 2, 3, 4]
c) [1, 100, 3, 4]
d) [1, 2, 3]

Answer: b) [1, 2, 100, 4]

QUIZ

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Which of the following operations are NOT allowed on a set in Python?

a) Adding a new element
b) Removing an existing element
c) Accessing elements by index
d) Checking membership of an element

Answer: c) Accessing elements by index

QUIZ

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What will be the output of following code ?

```
a, b, *c, d = [10, 20, 30, 40, 50]
print(a, b, c, d)
```

a) 10 20 [30, 40] 50
b) 10 20 30 50
c) 10 20 [30, 50] 40
d) 10 [20, 30, 40] 50

Answer: a) 10 20 [30, 40] 50

QUIZ

What is the output?

```
def check_value(a, b, c=3):
    print(a + b + c)

check_value(1, 2, 4)
```

a) 6
b) 7
c) 3
d) 9

Answer: b) 7

QUIZ

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Which of the following is a mutable data type in Python?

a) str
b) tuple
c) list
d) frozenset

Answer: c) list

QUIZ

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```
names = ["Alice", "Bob", "Charlie"]
print(names[-1])
```

Predict the output of above code.

a) Alice
b) Charlie
c) Bob
d) IndexError

Answer: b) Charlie

QUIZ

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What is the output?
my_tuple = (1, 2, 3)
print(my_tuple * 2)

a) (2, 4, 6)
b) (1, 2, 3, 1, 2, 3)
c) (1, 4, 9)
d) (1, 2, 3, 3)

Answer: b) (1, 2, 3, 1, 2, 3)

QUIZ

What gets printed?

```
s = {1, 2, 3}
s.add(4)
s.remove(2)
print(s)   #Ignoring the order
```

a) {1, 2, 3, 4}
b) {1, 3, 4}
c) {2, 3, 4}
d) {1, 2, 4}

Answer: b) {1, 3, 4}

QUIZ

Predict the output.

```
def func(a, L=[]):
    L.append(a)
    return L

print(func(1))
print(func(2))
print(func(3))
```

a) [1] [2] [3]
b) [1] [1, 2] [1, 2, 3]
c) [1, 2, 3]
d) Error

Answer: b) [1] [1, 2] [1, 2, 3]

QUIZ

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What is the output?

```
my_list = [5, 3, 2, 1, 4]
print(sorted(my_list)[-1])
```

a) 1
b) 2
c) 4
d) 5

Answer: d) 5

QUIZ

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Choose the incorrect statement about List.

a) immutable
b) mutable
c) B & D
d) Should have only unique elements
e) A & D

Answer:

e) A & D

QUIZ

Given s1={34,56,False,0.0}
Output of print(len(s1[3])) will be

Answer: This code throws Error

QUIZ

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Given s1=[34,56,False,False]
Output of print(len(s1)) will be

a) 4
b) 3
c) Error
d) None

Answer: a) 4

QUIZ

What gets printed?

```
T1=[1,5,2]
i=0
for i in T1:
   pass
while(i<len(T1)):
   print(T1[i],end="")
   i=i+1
```

a) 152

b) 1

c) 012

d) 2

e) 5

Ans: d) 2

QUIZ

What gets printed?

```
T1=[1,5,2]
i=0
for i in T1:
   i=5
while(i<len(T1)):
      print(T1[i],end="")
      i=i+1
```

a) 5

b) Error

c) No output

d) 2

Ans: c) no output

QUIZ

What is the output of below statement?

```
s2= "work is worship"
a,b,c = s2.split()
print(a,b,c)
```

a) ValueError
b) [work is worship]
c) work is worship
d) 'work' 'is' 'worship'

Answer: c) work is worship

QUIZ

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What is the output of "('23'*2)"*3?

a) 6 times 23 as a string
b) Twice 23 and thrice ‘23’*2 as a string
c) 1 as an integer
d) Thrice (‘23’*2) as a string
e) 1.0 as a string

Answer: d) Thrice (‘23’*2) as a string

QUIZ

What will the following code output?

```
def func(x=[]):
    x.append(1)
    return x
print(func())
print(func())
```

a) [1] [1]
b) [1] [1, 1]
c) [1, 1] [1, 1, 1]
d) Error

Answer: b) [1] [1, 1]
Explanation: The default list x persists between function calls.

QUIZ

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Given s = {1, 2, 3}, what is the output of s.add([4, 5])?

a) {1, 2, 3, [4, 5]}
b) {1, 2, 3, 4, 5}
c) Error
d) {1, 2, 3}

Answer: c) Error
Explanation: Sets cannot contain mutable items like lists.

QUIZ

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Which of these statements will correctly open a file for writing, truncating any existing content?

a) open("file.txt", "r")
b) open("file.txt", "a")
c) open("file.txt", "w")
d) open("file.txt", "x")

Answer: c) open("file.txt", "w")
Explanation: "w" mode opens a file for writing and truncates the file if it exists.

QUIZ

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What will be the output of the following code?

```
x = [1, 2, 3]
y = x
y.append(4)
print(x)
```

a) [1, 2, 3]
b) [1, 2, 3, 4]
c) [1, 2, 3, 4, 4]
d) Error

Answer: b) [1, 2, 3, 4]
Explanation: y and x refer to the same list in memory.

QUIZ

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What is the output of print(bool(""))?

a) True
b) False
c) Error
d) None

Answer: b) False
Explanation: An empty string evaluates to False in a Boolean context.

QUIZ

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What is the output of the following code?

```
x = {"a": 1, "b": 2}
y = x.get("c", "Key not found")
print(y)
```

a) Key not found
b) None
c) Error
d) 0

Answer: a) Key not found
Explanation: The get method returns the specified default value if the key is not present.

QUIZ

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Which of these is not true about Python's set data structure?

a) Sets are unordered collections.
b) Sets allow duplicate elements.
c) Sets are mutable.
d) Sets cannot contain other sets.

Answer: b) Sets allow duplicate elements
Explanation: Sets only store unique elements.

QUIZ

What will the following code output?

```
x = "abcdef"
print(x[1:4:2])
```

a) "abc"
b) "bd"
c) "be"
d) "bf“

Answer: b) "bd"
Explanation: The slice takes characters from index 1 to 3 with a step of 2.

QUIZ

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What is the output of the following code snippet?

```
a = [1, 2, 3]
print(a * 2)
```

a) [1, 2, 3]
b) [1, 2, 3, 1, 2, 3]
c) [2, 4, 6]
d) Error

Answer: b) [1, 2, 3, 1, 2, 3]
Explanation: Multiplying a list by 2 repeats its elements.

QUIZ

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What is the output of the following code snippet?

```
x = list(range(5))
x[2] = 10
print(x)
```

a) [0, 1, 2, 3, 4]
b) [0, 1, 10, 3, 4]
c) [0, 1, 2, 10, 4]
d) [0, 10, 2, 3, 4]

Answer: b) [0, 1, 10, 3, 4]
Explanation: The element at index 2 is replaced with 10.

QUIZ

What does the following code output?

```
def modify(n):
    n += 1
    return n
x = 10
modify(x)
print(x)
```

a) 11
b) 10
c) Error
d) None

Answer: b) 10
Explanation: Since integers are immutable, x remains 10; the modified value is not reflected outside the function.

THANK YOU

If any queries, contact sindhurpai@pes.edu

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