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Q.1
Ans:→ Tuple : tuple is immutable datatype and tuple is defined in paranthesis ().
List : List is mutable datatype and List is defined within square bracket [].

2

Q.2
Ans:→ Set is a special datatype in which a value can appear only once. even if they repeats interpreter automatically dissolves other entries.
e.g. : S1 = {1, 2, 3}

1

Q.3
Ans:→ int : integer datatype can hold only whole numbers values. it can't hold values with decimal point. if decimal point is provided it automatically ignores it.
float : float datatype holds numbers with decimal points. like, 1.8, 7.2. float is more useful when it comes to accuracy as it has more precision than int datatype.
if we want to find the area of circle where pi = 3.14, we can get precise answer only by using float datatype.

2

Q.4
Ans.→ dictionary is a special datatype by python which can hold a 'key' and its 'value' and multiple such combinations. whereas list and tuple can only handle single value as element

(2)

```
dict_variable = {"key" : "value"}
d1 = {"name" : "rushi"}
```

Q.5
Ans.→ docstring is the first statement in function. where we can define the description for function. starts with (""") three double quotes.

(2)

example : def f1 ():
"""this function is defined by rushi"""

Q.6
Ans.→ // is the floor division operator. it divides the number on the left by the number on the right and returns the largest whole number result.

(2)

for example:
5//2 = 2. # 5/2 = 2.5.

Q.7
Ans.→ == (twice equal to) : The == operator check if two objects are often equal it performs comparison on contents of the object.

example :
a = 2

b = 2
a == b # true

is : The is operator checks if two objects are same.

(2)

Q.8

Ans:- the += operator perform addition and then assign it to value at left for example : a = 5
b = 2
a += b
print(a) # 7

(2) it is similar to (a = a + b)

Q.9

Ans.→ Operator in python performs the operation on one or more operands for example:

(1) +(addition) operator:
c = a + b # + operator will add a and b and assign the result to c.

Q.10

Ans.→ 'x if condition else y' is a ternary statement in python it is used for quick condition checking. where x is the value returned when condition true, if is keyword, condition is a expression, else is keyword and y is value to be returned when condition is true.

(2)

Q.11

Ans.→ if statement is a conditional statement in python. which is used to check if an condition is true or false. for example if we want to check if the number is odd or even, we can make a statement:

(2)

```
if (n % 2 == 0):
    print ("even")
```

it will return the "even" as result if the condition 'n%2==0' is true.

Q.12

Ans.→ while: while is entry control loop. in which we can write a condition. if it satisfies it will execute the blocks. it will repeat execution until condition is true

for example:

(2)

```
while (n>10):
    print (n)
    n = n+1
```

we need to write and increament decrement statement within block.

for: for is a loop statement where we can set range and loop will iterate the block of code repeatedly that no. of time for example:

```
for ii in range (0, 10):
    print (" hello ")
```

Q.13

Ans:→ break statement is used to stop the execution of code. generally, it is given within if condition.

(2)

for example:

```
for i in range (0, 10):
    if (i %5 == 0):
        break
    else:
        print("i")
```

this will print number from 0 to 5

Q.14

Ans:→ Continue is used to skip an particular iteration and continue the execution

for example,

```
for i in range (0, 10):
    if (i == 6):
        continue
    else:
        print (i)
```

(2)

output:

0
1
2
3
4
5
7
8
9

Q.15

Ans:→ else clause is used along with if statement to provide the optional blocks when if condition is false

for example:

```
for i in range (0,5):
    if (i ==0):
        continue
    else:
        print (i)
```

in above example it will skip iteration if i=0 else it will print i

output : 1
2
3
4