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class Assessment 1st.

Q1.

→ list :- list is defined in square brackets ([]), list is a collection of data, integers, or strings.

Ex. $L = [1, 2, 3, 4, 5]$

`type(L), print(L)`

✓ Tuple :- Tuple is a collection of elements in which it includes integers, float and strings.

Ex. $a = (1, 2, 3, 4, 9)$

①

`type(a)`

`print(a)`

~~list is mutable and Tuple is also mutable.~~

list are mutable and Tuples are immutable.

Q2.

→ set data type :- We use the set data type in Python because set is a collection of same data type.

it defines in the form of curly brackets ({ }).

in set data type we add the string values, float and etc. set has operations like, intersection

✓ union, symmetric difference, etc. And also in the

set data type, we used the different data

③

types.

$s1 = \{1, 2, 3, 4, 5\}$

$s2 = \{6, 7, 8, 9\}$

`type(s1)`

`type(s2)`

`print(s1, s2)`

o/p :- $\{1, 2, 3, 4, 5, 6, 7, 8, 9\}$

Q3.

→ The key difference between a float and an integer data type, when we give the integer it has no decimal points or value and Float has a decimal points or point value.

(2) Ex:- $L = \{1, 2, 3, 4, 5\}$
 $S = \{2.5, 6.5, 3.5\}$
`print(L)`
`print(S)`

Q4.

→ dictionary data type is a differ from list and tuples, in dictionary we will create a sequence, and in the list we can find the list of elements, with the help of list and tuple we can find the dictionaries.

(2) list are mutable and tuples are immutable
~~dict~~ dict: `{ "name": "Nikita", "age": 21, "class": "B" }`
~~→~~ `print(dict)`

o/p: `'name': 'Nikita', 'age': 21, 'class': 'B'`
dict: `{ "clgname": "vivekanand college", "age": 24, "Name": "karan" }`
o/p: `'clgname': 'vivekanand college', 'age': 24, 'Name': 'karan'`

Q5.

→ Doc string, Doc string means documentation string it is used for string data type or characters, to find the Doc. is used to string document and also in html document.

(1)

Q6.

→ The // operator is a Arithmetical operator which is used for division purpose, i.e. floor division, means double division. for the elements or integer, float, strings and or the characters.

(1)

Q6. Ex. `S = [1, 2, 3, 4]`

→ `type(s)`
`s//2`
`print(s).`

Q7.

→ `==` : double equals to operator is used in arithmetical operator is used for elements are same or not. To identify the list, tuple or set. `==` used for both the elements are same or equal. it use the modules.

③ `is` : `is` operator used for, If A and B are two lists, then it defines the A is a B. Means list A is a list B.

Ex. `s1 = [1, 2, 3]`

~~Ex.~~ `s2 = [3, 4, 5]`

~~if i in range s2:~~

`(s1 == s2)`

`print("it is true")`

`(s1 is s2)`

`print("it is true")`

`print("wrong").`

Q8.

→ In python the `+=` operator is used to arithmetical operation used in code, it used for integer, Float, it defined the the elements are equal and also add the element. if A and B values. Firstly add the A and B value and then display the output by using `'='` sign.

②

Q9.

→ There are many types of operators in python like $\&$, Relational operator, Arithmetical operator, bitwise operator, logical operator, and so on. In the arithmetical operators are, $=$, $==$, $>=$, $<=$, $+=$ and etc it uses for the relation between the two list and operation between to list tuple or the elements.

Ex :-

Q9. "in" operator in python is straight-forward to use to check whether value exists in a sequence and return a Boolean value.

```
Ex :- number = [1, 2, 3, 4, 5]
      print(3 in numbers)
      o/p = True.
```

Q10. Ternary operator is a conditional operator in programming that takes three operands and evaluates an expression based on the condition.

Ex: $x = 5$

```
Message = "Hello" if x > 0 else
          'Goodbye'
print (message)
```

o/p = Hello.

Q11.

→ if statements checks the condition is True or False. To check the condition the 'if' statement is used. it is a conditional statement.

Ex :

(2)

```
i = (1, 2, 3, 4)
j = (4, 5, 6)
IF (i >= 0):
    print (i)
if (i <= 0):
    print (j)
```

Q12. While is used used to check conditional
→ it check only once condition - is True then output is True, but the for loop is condition to used and it check the condition if, that condition will not be false, looping is start while condition is False.

(1)

Q13.

→ Break statement is used for to break the statement in python. if the conditions will be not stop used the break statement.

(2)

```
Ex: i = (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
if (i >= 0)
    print (i).
    Break
if (i <= 0)
    print (j).
```

it used current loop or switch statement.

Q14.

→ continue statement, it will write the continue statement, in condition of Breaks statement, after the Breaks statement it will be continue the statement.

①