

1st Assessment.

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Subject - Data Associates.
Date - 29/06/2024.

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Q1. Explain

List

- List is a collection which is ordered & ~~change~~ changeable.

- Square brackets `[]` are used in list.

- List is a mutal.

- eg - `L = [1, 2, 3, 4, 5]`
`print(L)`

Tuple.

- Tuple is a collection which is ordered, and unchangeable.

- ~~Round~~ Round brackets `()` are used in tuples.

- Tuple is immutable.

- eg - `Tup = ("Cherry", "Orange", "Apple")`
`print(Tup)`

Q2.

① Sets are used to store multiple items in single variable.

② Set is one of 4 built in data type in python.

③ A set is a collection which is unordered and unchangeable and unindexed

④ Duplicates are not allowed in sets.

⑤ sets are defined in $\{ \}$.

⑥ Eg -

⑦ $L = \{1, 2, 3, 4, 5\}$
`print(L)`

Q3. \rightarrow - Integer is most commonly used data types in python.

- An integer is a number without a decimal point.

- Float is a number with floating point.

② Float division gives a decimal.

- Integers are the values that have decimal point.

- Integer Eg - (6.06, 2.543, 2.440, 1.101)

- Float Eg - (8, 9, 10, 11)

Q4.

→ The Key difference is that lists and tuples are ordered collections in python.

- List are mutable, while tuples are immutable.

- Sets are unordered collection of unique elements.

- While dictionaries are key value pairs for efficient data retrival.

②

-Eg-

my_dict

Q5.

→ ① A docstring is a string used to document a python module class or function or method.

② It's specified in source code that is used like a comment to document a specific

① segment of code.

Q6 → ① The // operator represents a specific mathematical or logical action or process.
 ② // means a double-slash.

③ This operator perform Floor division.

④ This // operator divides the first number by the second number and rounds the result down to integer.

①

Q7.
 →

- While comparing objects in Python, the identity operator is frequently used in contexts where the equality operator `==` should be.

- To compare objects based on their values, Python's equality operators (`==`) are employed.

- (`==`) this is known as equality operator.

- The `==` operator compares the value or equality of two objects.

②

- Eg - `x = 2`, then value of ~~`x == 2`~~ `x` is 2.

`x = 3 y = 3 ==`

Q8.

→ ① The Python `+=` operators lets you add two values together and assign the resultant value to a variable.

② This operator is often referred to as the addition assignment operator.

③ `+=` operators adds two value together and assign the final value to a variable.

④

④ Syntax -

variable-name `+=` value.

⑤ Eg -

```
a = 10.
a += 7.5
print(a).
```


Q9. → ① In Python, the `in` operator is used to check whether a given element exists in a sequence or not.

② The `in` operator can be used in conditional statements, loops, etc.

③ Syntax -

④ `element in sequence`

④ Eg - `print(1 in list)`. prints True if the value 1 is found in list, and False otherwise.

Q10. → ① Ternary operator is a conditional operator in programming.

② It takes 3 operands and evaluates expression based on condition.

③ It is commonly represented by "`Condition ? expression 1 : expression 2`".

④

Q11.

→ ① The if statement is a conditional statement in python used to determine whether a block of ~~to~~ code will be executed

② If the program finds the condition defined in the if statement true it will execute the code block inside the if statement.

③ Syntax-

```
num = 5 if if num > 0:
    print ("The number is positive")
```