

1) `print(fun(30,75))`

----> 1. Initially, a is 30 and b is 75.

2. Since a is not equal to 0, it enters the else part of the function.

3. It calculates $b \% a$, which is $75 \% 30 = 15$, and a, which is 30.

4. Now, a becomes 15, and b becomes the previous value of a, which is 30.

5. It repeats the process since a is still not equal to 0.

6. $b \% a$ now becomes $30 \% 15 = 0$, and a becomes 15.

Since a is now equal to 0, the function returns the value of b, which is 15.

So, the output of the code snippet is:15

2) The code creates a tuple of numbers, sorts them, then filters out the even numbers using a lambda function and the 'filter' function.

1. 'numbers' is a tuple.

2. 'sorted_numbers' is a list resulting from sorting the 'numbers' tuple.

3. 'even' is a lambda function that returns 'True' if a number is even.

4. 'even_numbers' is a filter object resulting from filtering the 'sorted_numbers' list using the 'even' lambda function.

5. Finally, it prints the type of 'even_numbers'.

The 'filter' function returns a filter object, so the output type will be the type of this object.

So, the correct answer is:Filter

3) When you use the '*args' syntax in a function definition in Python, it collects any number of positional arguments into a tuple. So, the correct answer is Tuple.

4) The code will raise a TypeError because you cannot directly use the '+' operator to concatenate sets like you can with lists or strings.

So, the correct answer is>Error

5) The keyword used in Python to raise exceptions is:Raise

6) The module needed to handle date and time computations in Python is:Datetime

7) `print(4**3 + (7 + 5)**(1 + 1))`
Output of the following code:208

8) The function used to convert a date to its corresponding time in Python is:strftime

9) The Python tuple is immutable in nature.

10) Range is a built-in function that returns a range object that consists series of integer numbers, which we can iterate using a for loop.

11) Lambda is a function which does not have any name.

12) The module Pickle is used to ____.

A. Serializing Python object structure

B. De-serializing Python object structure

C. Both A and B

D. None of the mentioned above

-----> The correct answer is: Both A and B.

13) dump() method is the method of convert Python objects for writing data in a binary file.

14) Load method is the method used to unpickling data from a binary file.

15) A text file consisting of alphabets, numbers, special symbols.

16) A) for ship, captain in captains.items():
 print(ship, captain)

B) for ship in captains:
 print(ship, captains[ship])

Both A and B are correct.

17) Lines of code will create an empty dictionary named captains is captains={}, option D is correct.

18) captains["Enterprise"] = "Picard"
captains["Voyager"] = "Janeway"
captains["Defiant"] = "Sisko"

Option 'B' is correct.

19) for ship, captain in captains.items():
 print(f"The {ship} is captained by {captain}.")

Option 'B' is correct.

20) del captains["Discovery"] remove the entry for key "Dictionary".