

MCO
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1. C) 15

The output of this code will be 15 as `func(30,75)` is `a=30` and `b=75`. First function will check if `a=0` and it will give the output as `b` that is 75 but `a=30` so else statement is executed. Else statement says `b%a` and `a`. `%` sign in python means the remainder of the division of two numbers. Now `a=15` as `(75 % 30)` remainder is 15 so `a =15` and `b =30`. Now function again checks if `a = 0` or not. `A=15` , again it will execute the else statement. `(b%a and a)` `(30% 15)` and `b =15`. `A=0` as remainder is 0. Now functions executes the return statement which means result is 15.

2. B) Filter

It is a filter as the `filter()` function is used to filter the sorted numbers based on the even function. It returns a filter object that contains only the even numbers from the sorted list. Sorted function is used to sort numbers in ascending order.

3. A) Tuple

When you pass `*args` as a parameter in a function, the arguments are stored as a tuple data type. The `*args` parameter allows you to pass any number of positional arguments to a function, and Python collects all the positional arguments into a tuple.

4. d) Error

unsupported operand type(s) for +: 'set' and 'set'

5. A) Raise

6. c) datetime

In Python, the `datetime` module is used to handle date and time computations.

7. `print(4**3 + (7 + 5)**(1 + 1))`

c) 208

8. d) None

In Python, the `strftime()` function is used to convert a datetime object into a string representation of the date and time, and the `strptime()` function is used to parse a string representation of a date and time into a datetime object. The correct answer to your question is (d) None, because neither of the given options specifically converts a date to its corresponding time in Python.

9. The python tuple is _____ in nature
b)immutable
10. The ____ is a built-in function that returns a range object that consists series of integer numbers, which we can iterate using a for loop
A) Range
11. C) Lambda function
A) lambda function is a small, anonymous function that can be defined in a single line of code. It is also known as an "anonymous function" because it does not have a name, and can be used inline wherever a function object is expected.
12. The module Pickle is used to ____.
B) Both a and b. Serializing Python object structure and De-serializing Python object structure
13. B and C .
The dump() and load() methods belong to the pickle module in Python and can be used to convert Python objects for writing data in a binary file.
14. A) load
The load() method belongs to the pickle module in Python and is used to unpickle data from a binary file.
15. D) all of the above
A) text file contains only textual information consisting of characters, symbols, and formatting such as line breaks and white spaces.
16. a) for ship, captain in captains.items():
print(ship, captain)
17. a) captains = { } Is the code that will create an empty dictionary.
18. b) captains["Enterprise"] = "Picard"

captains["Voyager"] = "Janeway"

captains["Defiant"] = "Sisko"
19. b) for ship, captain in captains.items():

```
print(f"The {ship} is captained by {captain}.")
```

20. c) `del captains["Discovery"]`