Solution 1: In the specific example, func(30, 75) is called. Let's go through the execution of the function:

1.a is not equal to 0, so the function enters the recursive call with b % a (75 % 30 = 15) and a (30).
2.In the recursive call, a is not equal to 0, so the function enters another recursive call with b % a (30 % 15 = 0) and a (15).
3.Now a is equal to 0, so the function returns the value of b, which is 15.
The value 15 is returned back to the previous recursive call.
4.The previous recursive call also returns 15.
5.Finally, the initial call to func(30, 75) receives the value 15, which is the output of the code snippet.
Therefore, the output of the code snippet print(func(30, 75)) is 15.

Solution 2: The filter() function returns an iterator object of type filter.

Solution3: Inside the function, *args behaves as a tuple that contains all the positional arguments passed to the function. You can iterate over the args tuple, access individual elements using indexing, or perform any other operations typically allowed on tuples.

Hence the answer is tuple.

Solution 4: The union method is used to combine multiple sets into a new set. In this case, set1.union(set2, set3) creates a new set that contains all the elements from set1, set2, and set3. The len function is then used to determine the length of the combined set.
The correct answer is:
d) Error

Solution 5: In Python, the raise keyword is used to raise exceptions explicitly.

Solution 6: To handle date and time computations in Python, you need to import the datetime module. The datetime module provides classes for working with dates, times, timedeltas (differences between dates or times), and other related functionalities.

Solution 7: The code snippet performs the following calculations:

4**3 evaluates to 4 raised to the power of 3, which is 64.
(7 + 5) evaluates to 12.
(1 + 1) evaluates to 2.
(7 + 5)**(1 + 1) evaluates to 12 raised to the power of 2, which is 144.
4**3 + (7 + 5)**(1 + 1) is equivalent to 64 + 144, which results in 208.
Therefore, the correct answer is:

c) 208

Solution 8: In this example, the strftime method is used to convert the current datetime object current_time to a string representation of the time in the format "%H:%M:%S". This format represents the hour, minute, and second components of the time.

Solution 9: Python tuple is an immutable data structure.

Solution 10: The built-in function in Python that returns a range object, which consists of a series of integer numbers that can be iterated using a for loop, is called range().

Solution 11: Lambda Function

Solution 12: Both A and B

Solution 13: dump() method

Solution 14: load() method

Solution 15: All of the mentioned above

Solution 16: both a and b

Solution 17: captains = {}

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

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

Solution 20: c) del captains["Discovery"]