Q1]
Answer : c) 15
The initial call is func(30,75)
since a is not equal to 0,it goes into the recursive call with arguments(75%30,30), which is equivalent to func(15,30).
Again, since a is not equal to 0, it goes into another recursive call with
arguments (30 % 15, 15), which is equivalent to func(0, 15)
Now, since a is equal to 0, it returns the value of b, which is 15.
Therefore, the output of the code snippet for the input (30, 75) is 15

Q2]
Answer : b) Filter
numbers = (4, 7, 19, 2, 89, 45, 72, 22) - Defines a tuple of numbers.
sorted_numbers = sorted(numbers) - Creates a new list containing the sorted numbers.
even = lambda a: a % 2 == 0 - Defines a lambda function even that returns True for even numbers and False for odd numbers.
even_numbers = filter(even, sorted_numbers) - Uses the filter function
to filter out the even numbers from sorted_numbers.
print(type(even_numbers)) - Prints the type of the object resulting from the filter operation.
Therefore, the output of the code will be:
<class 'filter'>

Q3]
Answer: a) Tuple
When *args is used in a function definition, it collects any additional positional arguments into
a tuple. Therefore, the correct answer is tuple

Q4]
Answer : d) Error
this will result in a TypeError because the + operator is not supported for sets. To fix this, you can use
the union method or the | operator to combine the sets

Q5]
Answer : a)raise
The raise keyword in Python is used to explicitly raise an exception.

Q6]
Answer : c) datetime
To handle date and time computations in Python, you need to import the datetime module

Q7]
Answer : c) 208
64+144=208

Q8]
Answer : b) strftime
The strftime function in Python is used to convert a date object into a string representing the date,controlled by format codes

Q9]
Answer : a) immutable
A Python tuple is an immutable data type, meaning its elements cannot be changed after the tuple is created

Q10]
Answer : a) range()
The range() function in Python is a built-in function that returns a range object representing a sequence of numbers. It is commonly used for iterating over a sequence of numbers in a for loop

Q11]
Answer : c) Lambda function
A lambda function in Python is an anonymous function that can have any number of input parameters ,but can only have one expression. It is defined using the lambda keyword and doesn't have a name like a regular function

Q12]
Answer : c) Both a and b
The pickle module in Python is used for serializing and deserializing Python object structures. Serializing
refers to the process of converting a Python object into a byte stream, and deserializing is the reverse
process of reconstructing the original object from a byte stream

Q13]
Answer : b) dump() method
The dump() method is part of the pickle module in Python and is used to convert Python objects into a binary format and write them to a file. This is commonly used for serialization, especially when saving data structures to a file in a binary format

Q14]
Answer : a) load()
To unpickle data from a binary file, you can use the pickle.load() function. This function reads a pickle file and deserializes the data, converting it back into an object in your Python program.

Q15]
Answer : d) All of the mentioned above
A text file can contain a combination of alphabets, numbers, and special symbols. It is a type of file that
stores plain text information without any formatting or binary data

Q16]
Answer : d) Both a and b
Both of these options will produce the specified output:
Enterprise Picard,
Voyager Janeway
Defiant Sisko

Q17]
Answer : d) captions = {}
This line of code creates an empty dictionary named captains. The {} syntax is used to denote an empty
dictionary in Python

Q18]
Answer : b) captains[“Enterprise”] = “picard”
captains[“Voyager”] = “janeway”
captains[“Defiant”] = “Sisko”
Option A is incorrect because it uses the wrong syntax for defining dictionary key-value pairs. In Python, you should use colons : instead of equal signs = to separate keys and values.
Option C is also incorrect because it creates a new dictionary with the key-value pairs, but it does not modify the existing captains dictionary
Therefore, the correct answer is option B

Q19]
Answer : b) for ship, captain in captains.items():
print(f”The{Ship} is captained by {captain}.”)
The Enterprise is captained by Picard.
The Voyager is captained by Janeway.
The Defiant is captained by Sisko.
The Discovery is captained by unknown.

Q20]
Answer : c) del captains[“Discovery”]
This statement will remove the entry for the key "Discovery" from the captains dictionary