Question 1: What will be the output of the following code snippet?

```
def func(a, b):
    return b if a == 0 else func(b % a, a)
print(func(30, 75))
```

Answer 1: First func(30,75) with value a=30 and b=75
Verify if a==0 i.e not true then it comes to else part i.e. func(b % a,a)
So func(75%30,30) gives func(15,30)
Now a=15 and b=30
Control move to print(func(15,30)) because process is not end
Verify if a==0 i.e (15==0) not true then it comes to else part i.e. func(b % a,a)
So func(30%15,15) gives func(0,15)
Now a=0 and b=15
Answer - Return b i.e 15

Question 2: numbers = (4, 7, 19, 2, 89, 45, 72, 22) sorted_numbers = sorted(numbers) even = lambda a: a % 2 == 0 even_numbers = filter(even, sorted_numbers) print(type(even_numbers))
Answer 2: Filter

Question 3: As what datatype are the *args stored, when passed into
Answer 3: Tuple

Question 4:

```
set1 = {14, 3, 55}
set2 = {82, 49, 62}
set3={99,22,17}
 print(len(set1 + set2 + set3))
```
Answer 4: Error

Question 5: What keyword is used in Python to raise exceptions?
Answer 5: raise

Question 6: Which of the following modules need to be imported to handle date time computations in Python?
Answer 6: datetime

Question 7: What will be the output of the following code snippet?

```
print(4**3 + (7 + 5)**(1 + 1))
```
Answer 7: 208

Question 8: Which of the following functions converts date to corresponding time in Python?
Answer 8: strptime

Question 9: The python tuple is _____ in nature.
Answer 9: Immutable

Question 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
Answer 10: range()

Question 11: Amongst which of the following is a function which does not have any name?
Answer 11: Lambda function

Question 12: The module Pickle is used to ___.
Answer 12: Both A and B

Question 13: Amongst which of the following is / are the method of convert Python objects for writing data in a binary file?
Answer 13: dump() method

Question 14: Amongst which of the following is / are the method used to unpickling data from a binary file?
Answer 14: load()

Question 15: A text file contains only textual information consisting of ___.
Answer 15: All of the mentioned above

Question 16: Which Python code could replace the ellipsis (...) below to get the following output?
Answer 16: d) both a and b

Question 17: Which of the following lines of code will create an empty dictionary named
Answer 17: d) captains = {}

Question 18: Now you have your empty dictionary named captains. It's time to add some data!
Answer 18: c) captains = {
            "Enterprise": "Picard",
            "Voyager": "Janeway",
            "Defiant": "Sisko",
                    }

Question 19: You're really building out the Federation Starfleet now! Here's what you have:
Answer 19: b) for ship, captain in captains.items():
                    print(f"The {ship} is captained by {captain}.")

Question 20: You've created a dictionary, added data, checked for the existence of keys, and iterated over it with a for loop. Now you're ready to delete a key from this dictionary:

Answer 20: del captains["Discovery"]