QUESTION 1

```
def func(a, b):

return b if a == 0 else func(b % a, a)

 print(func(30, 75))
```

ANSWER C - 15

1. Initial call: `func(30, 75)`
2. Since `a` (30) is not equal to zero, the function calls itself with the values `b % a` (75 % 30 = 15) and `a` (30).
3. Recursive call: `func(15, 30)`
4. Since `a` (15) is not equal to zero, the function calls itself with the values `b % a` (30 % 15 = 0) and `a` (15).
5. Recursive call: `func(0, 15)`
6. Now, `a` (0) is equal to zero, so the function returns `b` (15) as the result.
7. The final result is 15, which is the GCD of 30 and 75.

QUESTION 2

```
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 B - FILTER

You have to use filter to get the even_number from the sorted_number

QUESTION 3

As what datatype are the *args stored, when passed into

ANSWER A - TUPLE

QUESTION 4

```
set1 = {14, 3, 55}

 set2 = {82, 49, 62}

 set3={99,22,17}

 print(len(set1 + set2 + set3)
```

ANSWER D - ERROR

The sets should be combined using the union() method and the combined sets should be stored in a variable named union_set. The len function can then be used to get the length of the union_ set and then print.

QUESTION 5

What keyword is used in Python to raise exceptions?

ANSWER A – RAISE

QUESTION 6

Which of the following modules need to be imported to handle date time computations in Python?
a) timedate

b) date

c) datetime

d) time

ANSWER C – datetime

QUESTION 7

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

ANSWER C – 208

QUESTION 8

) Which of the following functions converts date to corresponding time in Python?

a) strptime

b) strftime

c) both a) and b)

d) None

ANSWER b – strftime

QUESTION 9

The python tuple is _____ in nature.

a) mutable

b)immutable

c)unchangeable

d) none

ANSWER b – 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.

A. range()

B. set()

C. dictionary{}

D. None of the mentioned above

ANSWER A – range

QUESTION 11

Amongst which of the following is a function which does not have any name?

A. Del function

B. Show function

C. Lambda function

D. None of the mentioned above

ANSWER C – Lambda function

QUESTION 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

ANSWER C – 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?

A. set() method

B. dump() method

C. load() method

D. None of the mentioned above

ANSWER B – dump() method

QUESTION 14

Amongst which of the following is / are the method used to unpickling data from a binary file?

A. load()

B. set() method

C. dump() method

D. None of the mentioned above

ANSWER A – load()

QUESTION 15

A text file contains only textual information consisting of ___.

A. Alphabets

B. Numbers

C. Special symbols

D. All of the mentioned above

ANSWER D – All of the mentioned above

QUESTION 16

Which Python code could replace the ellipsis (...) below to get the following output? (Select all that apply.) captains = { "Enterprise": "Picard", "Voyager": "Janeway", "Defiant": "Sisko", } Enterprise Picard, Voyager Janeway Defiant Sisko

a) for ship, captain in captains.items():
   print(ship, captain)
b) for ship in captains:
   print(ship, captains[ship])
c) for ship in captains:
   print(ship, captains)
d) both a and b

ANSWER d -BOTH a AND b

QUESTION 17

Which of the following lines of code will create an empty dictionary named captains?
a) captains = {dict}
b) type(captains)
c) captains.dict()
d) captains = {}
ANSWER d

QUESTION 18

Now you have your empty dictionary named captains. It's time to add some data! Specifically, you want to add the key-value pairs "Enterprise": "Picard", "Voyager": "Janeway", and "Defiant": "Sisko". Which of the following code snippets will successfully add these key-value pairs to the existing captains dictionary?
a) captains{"Enterprise" = "Picard"} captains{"Voyager" = "Janeway"} captains{"Defiant" = "Sisko"}
b) captains["Enterprise"] = "Picard" captains["Voyager"] = "Janeway" captains["Defiant"] = "Sisko"
c) captains = { "Enterprise": "Picard", "Voyager": "Janeway", "Defiant": "Sisko", }
d) None of the above
ANSWER b

QUESTION 19

) You're really building out the Federation Starfleet now! Here's what you have: captains = { "Enterprise": "Picard", "Voyager": "Janeway", "Defiant": "Sisko", "Discovery": "unknown", }Now, say you want to display the ship and captain names contained in the dictionary, but you also want to provide some additional context. How could you do it?

a) for item in captains.items():
   print(f"The [ship] is captained by [captain].")
b) for ship, captain in captains.items():
   print(f"The {ship} is captained by {captain}.")
c) for captain, ship in captains.items():
   print(f"The {ship} is captained by {captain}.")
d) All are correct
   ANSWER b

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: captains = { "Enterprise": "Picard", "Voyager": "Janeway", "Defiant": "Sisko", "Discovery": "unknown", } What statement will remove the entry for the key "Discovery"?

a) del captains

b) captains.remove()

c) del captains["Discovery"]

d) captains["Discovery"].pop()

ANSWER C