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))
```

a) 10

b) 20

c) 15

d) 0

Answer: It is 15 because a is not equal to zero, the function will return the remainder of 75/30 and it is 15

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))
```

a) Int

b) Filter

c) List

d) Tuple

Answer: It is Filter

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

a) Tuple

b) List

c) Dictionary

d) none

Answer: It is Tuple

4)
```
set1 = {14, 3, 55}
set2 = {82, 49, 62}
set3= {99,22,17}
```

print (len(set1 + set2 + set3))

a) 105

b) 270

c) 0

d) Error

Answer: It is going to give error unsupported operand type(s) for +: to avoid the error, we can write #print(len(set1) +len(set2) +len(set3))

5) What keyword is used in Python to raise exceptions?

a) raise

b) try c

) goto

d) except

The answer is raise keyword.

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

The answer is datetime modules.

7) What will be the output of the following code snippet?

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

a) 248

b) 169

c) 208

d) 233

The answer is 208, 7+5=12, 1+1=2 so 12**2 =144 and 4**3=64 and the addition of 144 and 64 =208

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

a) strptime

b) strftime

c) both a) and b)

d) None

Both strptime and strftime converts string datetime to date and vice versa. So, the answer is none.

9) The python tuple is _____ in nature.

a) mutable

b) immutable

c)unchangeable

d) none

They are immutable because they support the same sequence operation as strings .

10) The ___ is a built-in function that returns a range object that consists of series of integer numbers, which we can iterate using a for loop.

A. range ()

B. set ()

C. dictionary {}

D. None of the mentioned above

The answer is range.

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

Lambda function does not have any name when it is defined.

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

Pickle function is used for serializing and de-serializing in python.

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

Dump () method is the answer.

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.

Load () is the answer.

15). A text file contains only textual information consisting of ___.

A. Alphabets

B. Numbers

C. Special symbols

D. All of the mentioned above.

Textual information consists of Alphabets, Numbers and Special symbols.

16) Which Python code could replace the ellipses (...) 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

The answer is both and b.

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 = {}

The answer is captains= {}.

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

The correct answer is b and it is going to print
The Enterprise is captained by Picard.
The Voyager is captained by Janeway.
The Defiant is captained by Sisko.
Discovery is captained by unknown.

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()

The answer is c, and it will remove Discovery from the dictionary.