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))
```

Solution: print(func(30, 75))
- 75 % 30 = 15
- func(15, 30)
- 30 % 15 = 0
- func(0, 15)
- since a = 0, return b
Answer C: 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))
```

Solution: print(type(even_numbers))
- sorted_numbers = (2, 4, 7, 19, 22, 45, 72, 89)
- even_numbers = filter(even, sorted_numbers)
- print(type(even_numbers))
Answer B: Filter

3) As what datatype are the *args stored, when passed into
a) Tuple
b) List
c) Dictionary
d) none

Answer : Datatype of the arg itself

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

Solution: We cannot add set with + sign.
We can use .add for a single item or .update for a collection

Answer D: Error

5) What keyword is used in Python to raise exceptions?
a) raise
b) try
c) goto
d) except

Answer A: raise

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 module

7) What will be the output of the following code snippet?
Print(4**3 + (7 + 5)**(1 + 1))

Solution:
4**3 = 64
7+5 = 12**2 = 144
64 + 144 = 208

Answer C: 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

While strftime takes a datetime object and converts it into the corresponding time, strptime takes a string in the right format and extracts desired date and time.

Answer: B

9) The python tuple is _____ in nature.
a) mutable
b)immutable
c)unchangeable
d) none

Answer B: Immutable.

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()

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 B: Show function

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: Serializing and De-serializing python object

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

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()

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

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

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: captains = {}

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?

Answer B and C:

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?

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

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"?

Answer C: del captains["Discovery"]