(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

ANS. :- (C) 15

Because , The above function basically calculates the gcd of 2 numbers recursively.

The gcd of 30 and 75 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

ANS. :- (b) Filter

The code defines a tuple numbers with some values. It then sorts the tuple using the sorted() function and assigns the sorted result to a new variable sorted_numbers.

The code defines a lambda function even that returns True if a given number is even. (i.e., the remainder of the number divided by 2 is 0.)

The code applies the filter() function to sorted_numbers and even function.

The filter() function creates a new iterator with all elements from sorted_numbers for which the even function returns True.

The resulting filtered numbers are assigned to a new variable even_numbers.

Finally, the code prints the type of the even_numbers variable, which is >class 'filter'>.

(3) .

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

(a) Tuple

(b) List

(c) Dictionary

(d) none

Ans. :- (a) 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

ANS. :- (D) Error

The unsupported operand type(s) for + : ‘set1’ , ‘set2’and ‘set3’.

(5).

What keyword is used in Python to raise exceptions?

a) raise

b) try

c) goto

d) except

ANS. :- (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

ANS. :- (C) Datetime

(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

ANS. :- (C) 208

In the above code snippet (4**3) means 4 raise to power 3 results : (4*4*4 = 64)

Similarly, (7+5)**(1+1)

- 12**2
- 12*12 = 144

Finally, 64 + 144 = 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

ANS. :- (A) strptime

(9).

The python tuple is _____ in nature.

(a) mutable

(b)immutable

(c)unchangeable

(d) none

ANS. :- (A) 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

ANS. :- (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

ANS. :- (C) Lambda 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

ANS. :- (C) Both A & B

(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

ANS. :- (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

ANS. :- (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

ANS. :- (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

ANS. :- (d) both A & 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 = {}

ANS. :- (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?

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

ANS. :- (B) captains[“Enterprise”] = “Picard”

Captains[“Voyager”] = “Janeway”

Captains[“Defiant”] = “Sisko”

(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

ANS. :- (B) for ship, captain in captains.items():

```
        Print(f" The{ship} is captained by {Captained}.")
```

(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()

ANS. :- (C) del captains[“Discovery”]