Assignment 1

Q.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

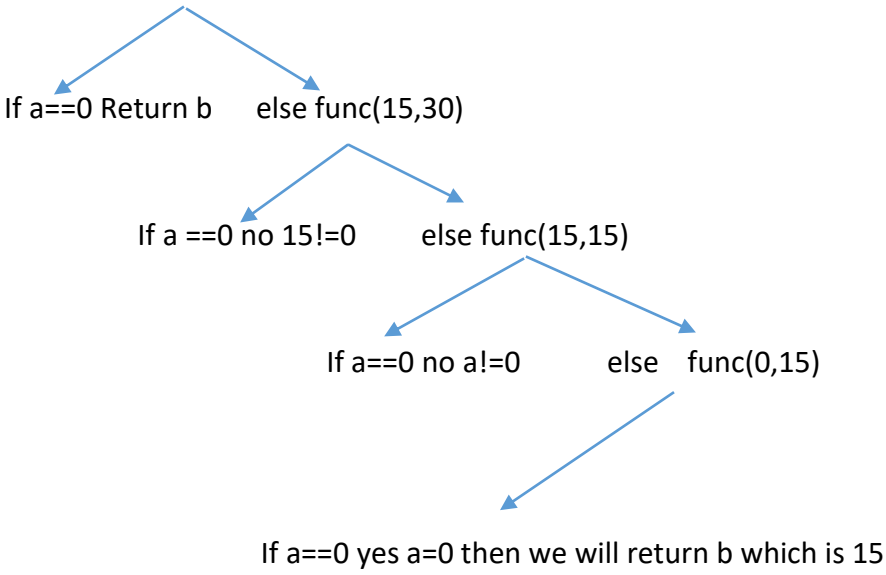
c) 15

d) 0

Answer:-This code is in a recursive form where if a==0 then return b is a stopping condition

The code executes in a following manner:-

1.function calling :- func(30,75)



So answer to this question is **15**

Q2. 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

numbers = (4, 7, 19, 2, 89, 45, 72, 22)

Line 1- numbers is a tuple data structure which stores 6 numbers.

Line 2- Numbers are sorted in an increasing order with help of sorted function

Line 3 and 4:- even = lambda a: a % 2 == 0

even_numbers = filter(even, sorted_numbers)

in this filter function takes a function and iterable as arguments in this case lambda function is used and and iterable is sorted_numbers . It takes each element from sorted_numbers and checks if number is even or not and then filter function returns the iterator which is a list **so correct answer is c)List**

Q3. As what datatype are the *args stored, when passed into

a) Tuple

b) List

c) Dictionary

Ans:- a) Tuple

Q4.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

Q.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:-a)timedate

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:-b)169

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:-d)None

Strptime is used to convert string to datetime object and strftime is used to convert datetime object to string

9)The python tuple is _____ in nature.

a) mutable

b)immutable

c)unchangeable

d) none

Ans:-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

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 and 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:-C)load() method

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

print(ship, captain)

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 {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"?

a) del captains

b) captains.remove()

c) del captains["Discovery"]

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

Ans:-c) del captains["Discovery"]