MCQ AND ANS

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
Explanation: The function func(a, b) uses the Euclidean algorithm to find the greatest common divisor (GCD) of a and b. When a becomes 0, b is the GCD. Here, GCD(30, 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:- c) Filter
Explanation: The filter function returns an iterator (filter object), which is not directly a list, tuple, or int.

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

a) Tuple

b) List

c) Dictionary

d) None

Ans: a) Tuple

Explanation: In Python, *args are stored as a tuple.

4) set1 = {14, 3, 55}

set2 = {e82, 49, 62}

st3={99,22,17}

print(len(set1 + set2 + set3))

a) **105**
b) **270**
c) **0**
d) **Error**

Answer:- d) Error

Explanation: You cannot add sets directly using the + operator in Python.

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

a) raise

b) try

c) goto

d) except

Answer: a) raise

Explanation: The raise keyword is used to throw an exception in Python.

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: a) raise

Explanation: The raise keyword is used to throw an exception in Python.

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**

Answer: 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

Answer: b) strftime

Explanation: The strftime function converts date objects to their string representation.

9) The python tuple is _____ in nature.

a) mutable

b)immutable

c) unchangeable

d) None

Answer: b) immutable

Explanation: Tuples in Python cannot be changed after their creation, making them 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()

Explanation: The range() function returns a sequence of numbers that can be iterated over in a for loop.

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

Explanation: Lambda functions are anonymous functions in Python.

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

Explanation: The `pickle` module is used for serializing and deserializing Python object structures.

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

Explanation: The `dump()` method is used to write a Python object to a binary file.

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()

Explanation: The `load()` method is used to read a Python object from a binary file.

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

Explanation: Both options a) and b) will give the expected output.

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 = {}

Explanation: The correct way to create an empty dictionary is using {}.

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) captains["Enterprise"] = "Picard" captains["Voyager"] = "Janeway" captains["Defiant"] = "Sisko"

Explanation: This is the correct way to add key-value pairs to an existing dictionary.

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

Explanation: This option correctly displays the ship and captain names with the provided context.

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) del captains["Discovery"]

Explanation: This is the correct statement to remove a specific key from a dictionary.