MCQ

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 –
In the specific call func(30, 75), the function is initially called with a = 30 and b = 75. The function proceeds with recursive calls as follows:

a = 30, b = 75 -> a is not 0, so call func(30 % 75, 30) -> func(30, 30)
a = 30, b = 30 -> a is not 0, so call func(30 % 30, 30) -> func(0, 30)
a = 0, so return b which is 30.
Therefore, the output of the code snippet print(func(30, 75)) is:
30

So, the correct answer is:
a) 10

```
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 –
The type of the even_numbers variable will be Filter.

b) Filter

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

a) Tuple

b) List

c) Dictionary

d) none

Answer –

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

Answer – Correct answer is **"D" error**

```
set1 = {14, 3, 55}
set2 = {82, 49, 62}
set3 = {99, 22, 17}
combined_set = set1.union(set2, set3)
print(len(combined_set)).
```

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

a) raise

b) try

c) goto

d) except

Answer –

The keyword used in Python to raise exceptions is:

a) raise

6) Which of the following modules need to be imported to handle date time computations inPython?

a) timedate

b) date

c) datetime

d) time

Answer –

The module that needs to be imported to handle date and time computations in Python is:

c) datetime

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

print(43 + (7 + 5)**(1 +**

1))a) 248
b) 169
c) 208
d) 233

Answer –
The calculation simplifies to 64 + 12, which equals 76.

Therefore, the correct answer is:
d) 233

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 –
The strftime function is used to convert a date object to a formatted string representation of time based on a specified format. It allows you to customize the output of the time representation.

Therefore, the correct answer is:
b) strftime

9) The python tuple is____in nature.

a) mutable

b)immutab

le

c)unchangeable

none
Answer –
A tuple in Python is an ordered collection of elements enclosed in parentheses. Tuples are immutable, meaning that once a tuple is created, its elements cannot be changed. Tuple elements cannot be added, removed, or modified after the tuple is created.

Therefore, the correct answer is:
b) immutable

10)

The___is a built-in function that returns a range object that consists series of integer numbers, whichwe can iterate using a for loop.

A. range()
B. set()
C. dictionary{}
D. None of the mentioned above

Answer –
The range() function in Python generates a sequence of numbers based on the specified start, stop, and step values. It is commonly used in for loops to iterate over a specific range of numbers.

Therefore, the correct answer is:
A. range()

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 –
A lambda function, also known as an anonymous function, is a function without a specific name. It is defined using the lambda keyword and is typically used for short, one-line functions. Lambda functions are often used when a small, temporary function is needed for a specific task.

Therefore, the correct answer is:
C. Lambda function

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 –
The pickle module provides functionality for serializing (converting) and de-serializing (restoring) Python object structures. It allows you to convert complex Python objects into a byte stream, which can be stored in a file, transferred over a network, or saved in a database. Later, the byte stream can be de-serialized to reconstruct the original object structure.

Therefore, the correct answer is:
C. Both A and B

Question 13

Amongst which of the following is / are the method of convert Python objects for writing data ina binary file?

A. set() method
B. dump() method
C. load() method
D. None of the mentioned above

Answer –
The dump() method is part of the pickle module in Python. It is used to serialize Python objects and write them to a binary file. The dump() method takes the Python object and a file object as parameters and writes the serialized object to the file in a binary format.

Therefore, the correct answer is:
B. dump() method

Question 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 –
The load() method is part of the pickle module in Python. It is used to deserialize data from a binary file and reconstruct the original Python object structure. The load() method takes a file object as a parameter and reads the serialized data from the file, converting it back into Python objects.

Therefore, the correct answer is:
A. 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

Answer –
A text file can contain alphabets, numbers, and special symbols. It is a file format used for storing and representing textual information. The content of a text file can consist of any combination of alphabets, numbers, and special symbols, making it versatile for representing various types of textual data.

Therefore, the correct answer is:
D. All of the mentioned above.

16

Which Python code could replace the ellipsis (...) below to get the following output?
(Select all thatapply.)

```
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 –
a) for ship, captain in captains.items(): print(ship, captain)
b) for ship in captains: print(ship, captains[ship])

Option a) uses the .items() method to iterate over the key-value pairs of the captains dictionary and assigns the ship name to the ship variable and the captain name to the captain variable. It then prints the ship and captain names using the print() function.

Option b) iterates over the keys of the captains dictionary and assigns each key (ship name) to the ship variable. It then accesses the corresponding captain name using the captains[ship] syntax and prints the ship and captain names using the print() function.

Therefore, the correct answer is:
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 –
In Python, curly braces {} can be used to create an empty dictionary. By assigning an empty pair of curly braces to the variable captains, we create an empty dictionary.

Therefore, the correct answer is:
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 theexisting `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 -

The code snippet that will successfully add the key-value pairs "Enterprise": "Picard", "Voyager": "Janeway", and "Defiant": "Sisko" to the existing captains dictionary is:
b) captains["Enterprise"] = "Picard" captains["Voyager"] = "Janeway" captains["Defiant"] = "Sisko"

Option a) is incorrect because it uses the incorrect syntax for adding key-value pairs to a dictionary.

Option c) is incorrect because it redefines the captains dictionary instead of adding new key-value pairs to the existing dictionary.

Option d) is incorrect because there is a valid option available.

Therefore, the correct answer is:
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 alsowant 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 –
Option a) is incorrect because it uses a placeholder [ship] and [captain] instead of the actual variables ship and captain.

Option c) is incorrect because it swaps the order of the captain and ship variables in the print statement, resulting in incorrect output.

Therefore, the correct answer is:
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 witha `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 –

Option a) del captains will delete the entire captains dictionary.
Option b) captains.remove() is not a valid method for removing a key from a dictionary.
Option c) del captains["Discovery"] will specifically delete the key-value pair with the key "Discovery" from the captains dictionary.
Option d) captains["Discovery"].pop() is not valid syntax for removing a key from a dictionary.

Therefore, the correct answer is:
c) del captains["Discovery"]