# 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

Solution:- c)15
This recursive function finds the greatest common divisor(GCD) of the two numbers using Euclid's algorithm.
a=30,b=75
Since a is not equal to 0, it goes to else part
func(75%30,30)
a=15,b=30
The same procedure would be repeated again
(15,30)
Since a is not equal to 0,it would go to else part
func(30%15,15)
a=0,b=15
Now a==0,so b=15

So the correct option 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

Solution:- b)filter

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

Solution:- 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

Solution:- d)Error
The '+' operator isn't valid for sets.
To find the total number of unique elements in the three set,we should use the union operation ('|')
The correct code is:-
set1={14,3,55}
set2={82,49,62}
set3={99,22,17}
print(len(set1|set2|set3))

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

Solution:- 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

Solution:- 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

Solution:- c)208
4**3 means 4 raised to power 3 which is 4^3=64
(7+5)**(1+1)=12^2=144
print(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

Solution:- a)strftime

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

Solution:- 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

Solution:- 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

Solution:- 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

Solution:- c) both a and b

The ‘pickle’ module in python is used for serializing and deserializing python object structures,making it possible to save complex data type to a file and then reconstruct them later.

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

Solution:- b) dump()method
dump()method is part of pickle module and is used to serialize python objects and write the serialized data 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

Solution:- a)load
load()method is part of the pickle module and is used for reading serialized data from a binary file and reconstructing the original python objects.

15. A text file contains only textual information consisting of ___.
A. Alphabets
B. Numbers
C. Special symbols
D. All of the mentioned above

Solution:- a)alphabets

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
Solution:- d)both a and b
Both of these loops iterate over the items of the ‘captains’ dictionary and print the ship name and its respective 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 = {}

Solution:- 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

Solution:-

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

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

This option correctly utilizes the ‘items()’ method to iterate over key-value pairs in the ‘captains’ dictionary and prints the desired output with ship and captain names.

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()

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