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

Execution steps:

1. Def func(30,75)
2. a!=0
3. func(75 % 30, 30)
4. func(15,30)
5. a!=0
6. func(30 % 15 , 15)
7. fun(0,15)
8. a==0
9. returns b =15

Solution:

Right answer is c =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:

```
[1]: 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))

     <class 'filter'>

[ ]:
```

Right answer is **b = filter**

---

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

a) Tuple

b) List

c) Dictionary

d) none

Solution:

The arguments are stored in tuple

The right answer is **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:

In python '+' concatenate is not supported for sets according to the above provided snippet the result will be Typeerror

The correct answer is **d =Error**

---

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

a) **raise**

b) try

c) goto

d) except

Solution:

The raise keyword is used to throw an exception in python

The correct answer is **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) tim

Solution:

The **datetime** module is the correct module to use for handling date and time computations

The correct answer is **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:

According to precedence

Print (4** 3 + (7 + 5) ** (1+1))

Precedence is **; parenthesis; addition

64 + (7+5) ** 2

64 + 12 ** 2

64 + 144

208

The correct answer is **c =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:

strptime function converts date to corresponding time in python

The correct answer **is a = strptime**

---

9. The python tuple is _____ in nature.

a) mutable

b) immutable

c)unchangeable

d) none

Solution:

Python tuple is unchangeable once created its element cannot be added or removed , this features is known as immutable

The correct answer is **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 :

Range () is used for loops to iterate over sequence of numbers

The correct answer is 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

Solution:

In above given all function

- del function the del keyword is used
- show function the built-in function named show in Python
- the function that does not have any name is **lambda**

The correct answer **is 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

Solution:

The module pickle is used for converting object into byte stream as well converting byte stream into python object

The correct answer is **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

Solution:

Pickle method for converting object for writing data to a binary file method used for this case is dump()

+Syntax : pickle.dump(data,file)

The correct answer is **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

Solution :

For deserialize data from a binary file load() method is used

Syntax : pickle.load(file)

The correct answer is **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

Solution:

A file file contains textual information consisting of alphabets, numbers and special symbols

The correct answer is **d = All 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

Solution:

- According to option (a) item method in dictionaries iterates both key value pair we can access both ship & captain
- According to option (b) iterating directly provides access for value i.e. Captain

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 = {}

Solution:

Dictionaries contains key – value pair to initialize an empty dictionary syntax should be a ={}

The coorect answer is **d = captians = {}**

---

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",

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

c) captains = { "Enterprise": "Picard", "Voyager": "Janeway", "Defiant": "Sisko", }

d) None of the above

Solution :

The correct way to add key value pair in dictionary 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 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}.")

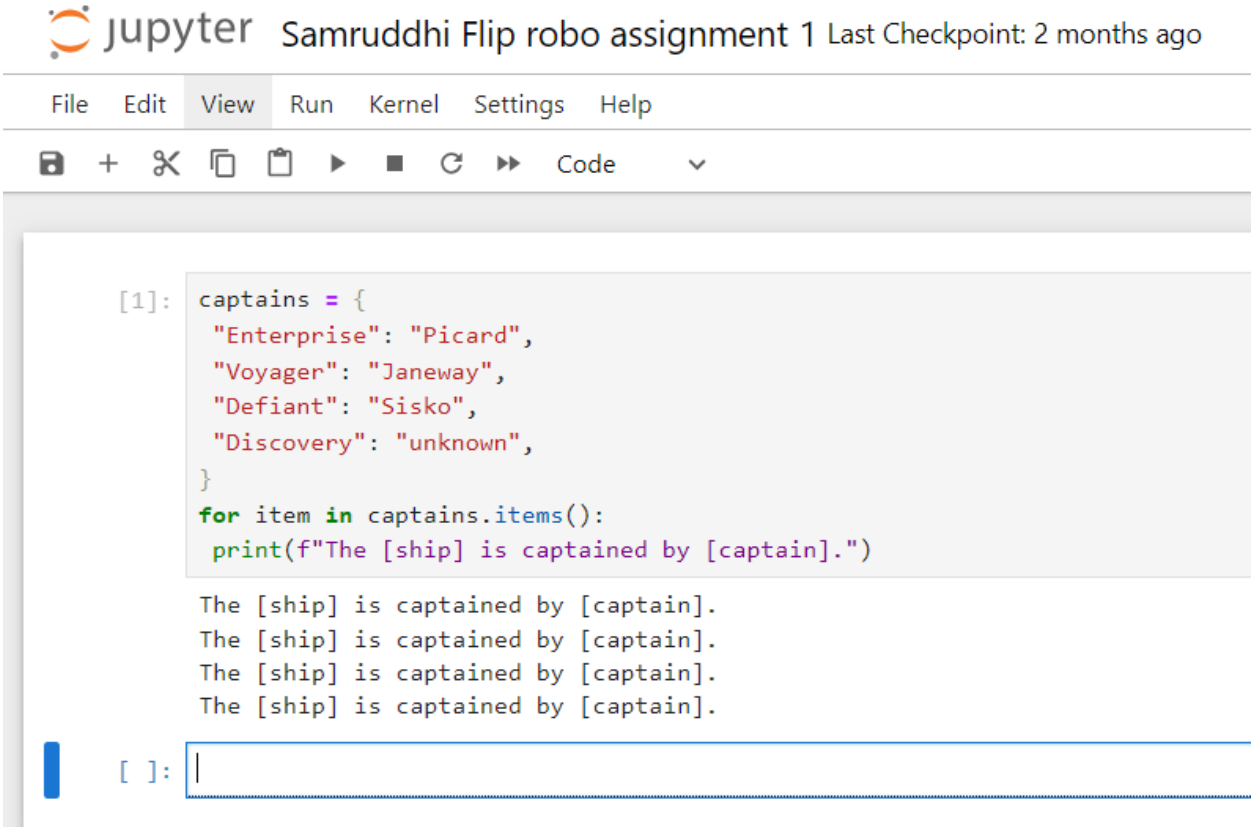
c) for captain, ship in captains.items(): print(f"The {ship} is captained by {captain}.")

d) All are correct

Solution :

For option (a) in ithe code The placeholders [ship] and [captain] are not evaluated and remain as literal text.

Execution :



Option (b) it correctly displays key-value pairs from the dictionary

```
captains = {
 "Enterprise": "Picard",
 "Voyager": "Janeway",
 "Defiant": "Sisko",
 "Discovery": "unknown",
}
for ship, captain in captains.items():
    print(f"The {ship} is captained by {captain}.")
```

```
The Enterprise is captained by Picard.
The Voyager is captained by Janeway.
The Defiant is captained by Sisko.
The Discovery is captained by unknown.
```

Option (c) it incorrectly displays key value pair from the dictionary

[2]:
```
captains = {
 "Enterprise": "Picard",
 "Voyager": "Janeway",
 "Defiant": "Sisko",
 "Discovery": "unknown",
}
for ship, captain in captains.items():
 print(f"The {ship} is captained by {captain}.")
```

```
The Enterprise is captained by Picard.
The Voyager is captained by Janeway.
The Defiant is captained by Sisko.
The Discovery is captained by unknown.
```

The correct answer according to all option is (b)

---

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 :

Option b and option c seems to correct

----------END----------