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PROJECT : MCQ

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MCQ ANSWERS

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 is C

The first call of the function will produce the values below:

Func(30,75) => a=75%30=15, b=30 (initial value of a)

The second call of the function will produce the values below:

Func(15,30)=> a=30%15=0, b=15 (initial value of a)

The third call of the function will produce the values

Func(0,15)=> b=15 since a==0, the function will return the value of b which 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

Answer is B
After the numbers where sorted. Filter function was applied to extract those numbers that met the conditions (lambda a: a % 2 == 0).

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

a) Tuple
b) List
c) Dictionary
d) none

Answer is A
***The values supplied to *args are stored as 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 is D
The elements in a set cannot be added together using the '+' sign. The operations allowed are either union() and update() to add elements in a set excluding any duplicates.

print(len(set1.union(set2).union(set3))) will print the result 9.

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

a) raise
b) try
c) goto
d) except

Answer is A
The raise keyword is used in python to raise exceptions. It raises the error and also stops the control flow of the program.

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 is C
The datetime module is used to supply the classes for dates and times manipulation.

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 is C

43=>4^3 =64**

(7 + 5)(1 + 1)=>$(7+5)^{(1+1)}$ =12^2=144**

64+144=208

208 will be printed.

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 is A

A date is converted to the appropriate time in Python using the strptime() function. The strftime() method returns a string representing date and time using date, time or datetime object.

9) The python tuple is _____ in nature.

a) mutable

b)immutable

c)unchangeable

d) none

Answer is B

Elements in a tuple cannot be changed.

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 is A

We can loop through a list of numbers using the range() function.

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 is C

Unlike other functions, the lambda function is an anonymous function, meaning it has no name.

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 is C

A Python object structure can be serialised and deserialized using the Python pickle package.

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 is B

Python objects can be turned into binary data and written to a binary file using the 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

Answer is A

The data from a compressed binary file is unpickled using the load() technique.

15) A text file contains only textual information consisting of ___.
A. Alphabets
B. Numbers

C. Special symbols
D. All of the mentioned above

Answer is D

Text files, in contrast to other file formats, only hold textual data that can be represented by letters, numbers, and other unique symbols. Files of this type are saved using extensions like txt,.

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 is A

The variable captain, is a dictionary containing the object keys and their respective values.

dict_keys(['Enterprise', 'Voyager', 'Defiant'])
dict_values(['Picard', 'Janeway', 'Sisko'])

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 is D

The Python language uses curly braces, {} to form dictionaries. Both empty dictionaries and dictionaries with key-value pairs can be created using curly braces.

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 is B

This will add the new items to the empty dictionary containing the keys and their respective values.
Option C will only create a dictionary with the keys and values while option B adds the keys and values to an empty dictionary as shown below.

```
In [39]: captains = {}
         captains["Enterprise"] = "Picard"
         captains["Voyager"] = "Janeway"
         captains["Defiant"] = "Sisko"
         print(captains)

         {'Enterprise': 'Picard', 'Voyager': 'Janeway', '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

```
In [48]: 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.
```

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 is C
The most popular way to remove a key-value pair from a dictionary is to use the del keyword, which can be used to accomplish this. When we need to acquire the value of a key-value pair as well as remove a key-value pair, we can use the pop() method.