**Python Mega Assignment # 1**

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**1. Which of the following terms are related to dictionaries?**

a. value

b. item

c. index

d. key

Answer : Option A and Option D

**2. Just like lists, + operator is used to extend dictionaries?**

a. True

b. False

Answer : False , we cannot extend dictionaries with ‘+’ operator it gives error.

**3. To access items from a dictionary, we specify the index of that item within [] like myDict[0]?**

a. True

b. False

Answer : False, we use keys or values to access item from dictionary.

**4. When we use [] to access the value from a dictionary which does not exist in that dictionary….?**

a. Value within [] is added to the dictionary

b. Value None is returned

c. New dictionary is created

d. None of above

Answer : None of Above (It give us error)

**5. What does return the pop method of a dictionary?**

a. list

b. Tuple containing the pair of last item of the dictionary

c. dictionary

d. value of the key, if it exists in the dictionary

Answer : Option D, value of the key, if it exists in the dictionary.

**6. What does return popitem method return?**

a. dictionary

b. tupple containing the pair of last item of the dictionary

c. list

d. value of key, if it exists in the dictionary

Answer : Option B, tuple containing the pair of last item of the dictionary.

**7. Which of the following 2 methods can be used to iterate through the items of a dictionary?**

a. items()

b. values()

c. indexes()

d. keys()

Answer : Option B and Option D

**8. Which one of the following is used to enclose a dictionary?**

a. () parenthesis

b. {} curly brackets

c. [] square brackets

d. “” quotation marks

Answer : Option B , {} curly brackets

**9. Write Python Program add key-value pair in dictionary and check if a Given Key or Value or Both Exists in a Dictionary or Not.**

**Answer :**

ict1 = {"Key1":"value1","key2":"value2"}

ict1["Key3"]="value3"

print(ict1.keys())

print(ict1.values())

"value3" **in** ict1.values()

"Key3" **in** ict1.keys()

**10. Write a Python Program to Count the Frequency of Words Appearing in a String Using a Dictionary and print only the words having Even (divisible by 2) frequency.**

**Answer :**

string = input("Enter String:")

l = string.splitp()

d = {}

**for** i **in** l:

**if** i **not** **in** d.keys():

d[i] = 0

d[i] = d[i]+1

**if** d[i]%2==0:

print(" The Frequency of Words Appearing ",d[i])

**else**:

print("The Frequency of Words Appearing 0")

**11. X = ["Feb", Apr, Mar, May, Jun, Jul, Aug, Jan]. What will be output of following?**

['Feb', 'Apr', 'Mar']

['Mar', 'May', 'Jun', 'Jul', 'Aug', 'Jan']

['Jun', 'Jul', 'Aug', 'Jan']

['Apr', 'May', 'Jul']

[]

['Apr', 'Mar', 'May', 'Jun', 'Jul', 'Aug']

['Jan', 'Jul', 'May', 'Apr']

['Feb', 'Apr', 'Mar', 'May']

**12. Remove the correct number from the list X.**

X = [ 9,2,8,4,5]

X.remove(9)

print(X)

Answer : .remove(9) is correct .

**13. p = 3**

**q = 'hello! '**

**print( q \_\_?\_\_ p)**

**hello! hello! hello!**

p = 3

q = 'hello!'

print(q \* p)

Answer : using one \* give us correct answer.

**14. y = "this is a random sentence"**

**print (y\_\_?\_\_)**

**Output: THIS IS A RANDOM SENTENCE**

y = "this is a random sentence"

print(y.upper())

Answer : .upper()

**15.**

p = **True**

q = 'True'

r = 2

s = 2.0

print(type(p))

print(type(q))

print(type(r))

print(type(s))

Answer :

<class 'bool'>

<class 'str'>

<class 'int'>

<class 'float'>

**16. What are the optional arguments to the function?**

**function\_1(R1, q, p=None, R2= None)**

1) q and R2

2) p and R2

3) p and R1

4) R1 and q

Answer : p and R2 is optional argument in this function.

**17. Which command invokes method X() of the object p?**

1) X(p)

2) p$x()

3) X().p

4) p.x()

Answer :

**18. X=4 , Y= 2**

print(X % Y)

print(X / Y)

print(X // Y)

print(Y % X)

Answer :

0

2.0

2

2

**19. x = [[4, 1, 1], [5, 9, 0]]**

**a)**

x = [[4, 1, 1], [5, 9, 0]]

**for** i **in** x:

**for** j **in** i:

print(j)

**b)**

x = [[4, 1, 1], [5, 9, 0]]

**for** i **in** range(3):

**for** j **in** x:

print(j[i], end ="**\t**")

print('')

**c)**

x = [[4, 1, 1], [5, 9, 0]]

**for** i **in** x:

**for** j **in** i:

print(j, end='**\t**')

print()

**d)**

x = [[4, 1, 1], [5, 9, 0]]

**for** i **in** x:

**for** j **in** i:

print(j, end='**\t**')

**20. q = [10.62, 16.14, 6.45, 17.11]**

q = [10.62, 16.14, 6.45, 17.11]

**for** j , z **in** enumerate (q) :

print( 'Item' + str( j ) + ' -' , str ( z ))

Answer : J is correct answer.

**21. Which of these about a dictionary is false?**

a) The values of a dictionary can be accessed using keys

b) The keys of a dictionary can be accessed using values

c) Dictionaries aren’t ordered

d) Dictionaries are mutable

Answer : b) The keys of a dictionary can be accessed using values .

**22. What is the output of the following:**

D = dict()

for i in range (3):

for j in range(2):

D[i] = j

a. {0: 1, 1: 1, 2: 1}

b. {1: 0, 1: 1, 1: 2}

c. {0: 1, 1: 2, 2: 3}

d. {1: 2, 1: 1, 1: 0}

Answer : {0: 1, 1: 1, 2: 1} This output is correct.

**23. You are writing a function that increments player score in a soccer game**

If no value is specified for points, then point must start with 1

If no value is specified for bonus, then bonus should be True

01 def increment\_score ( bonus , score , points ):

To meet the first requirement line 01 must be change to

* def increment\_score ( bonus , score , points = 1 ): (True or False)
* To meet the second requirement line 01 must be change to def increment\_score ( bonus = True , score , points = 1 ): (True or False)
* Once a parameter is defined with default value, any parameter to the right must also be defined with default values (True or False)

Answer :

Don’t know what to do.

**24. What will be output?**

def avg ( x , y , z = 50 ):

adding = x + y + z

avg\_value = adding / 3

return avg\_value

y = avg ( x = 5 , y = 9 , z = 20 )

print(y)

Answer : Output will be 11.33333333333333

**25. What will be output? Describe it with reason and logic behind. Do multiple experiments with arguments / parameters to remove error, if occurs.**

def avg ( \*opt\_values , name ):

avg\_value = sum (opt\_values) / len(opt\_values)

print(‘name is: ’ + name + ‘Marks: ’ + str(avg\_value))

avg ( 5 , 9 , 20, 34, 87, 112 , ‘Ali’ )

Answer :

def avg (name,\*opt\_values):

avg\_value = sum (opt\_values) / len(opt\_values)

print(f'Name is:'+name+'AVG Marks:'+str(avg\_value))

avg ("Ali ",45,65,55,44,60)

**26. Final output is not required. Just take copy pencil, think and write the output of each line, write down the link between parameters and arguments. Remove one or two \*\* from other\_info and observe the ouput.**

def display\_result(winner, score, \*\*other\_info):

print("The winner was " + winner)

print("The score was " + score)

display\_result(winner=“Manchester", score="1-0", overtime ="yes", injuries="none")

Answer :

The winner was Manchester

The score was 1-0

If we remove any (staric\* ) from code it give us error and code wont run.

**27. The position of parameters and arguments is re-arranged. Just think and find the logic behind output or error.**

def display\_result(winner, \*\*other\_info, score):

print("The winner was " + winner)

print("The score was " + score)

display\_result(winner=“Manchester", overtime ="yes", injuries="none“ , score="1-0“ )

Answer :

It will give us error because there is a multiple argument defined while calling function and interpreter cannot differentiate b/w fixed and variable argument.

**28. What will be the output of the following Python expression if X=123?**

print(“%06d”%X)

a) 123000

b) 000123

c) 000000123

d) 123000000

Answer : Option B is correct(000123)

**29. What will be the output of the following Python expression if x=22.19?**

print("%5.2f"%x)

a) 22.1900

b) 22.00000

c) 22.19

d) 22.20

Answer : Option C is correct(22.19)

**30. What will be the output of the following Python code?**

**'{0:f}, {1:2f}, {2:05.2f}'.format(1.23456, 1.23456, 1.23456)**

a) Error

b) ‘1.234560, 1.22345, 1.23’

c) No output

d) ‘1.234560, 1.234560, 01.23’

Answer : Option D is correct(‘1.234560, 1.234560, 01.23’)

**31. Write down the output of each line after each iterations. Do multiple experiments to change values**

i = 1

while False:

if i%2 == 0:

break

print(i)

i += 2

#### Answer : while loop not start due to false in condition

#### 32. Write down the output of each line after each iterations. Do multiple experiments to change values

#### x = "abcdef"

#### i = "a"

#### while i in x:

#### x = x[:-1]

#### print(i, end = " ")

Answer : Output will be “a a a a a a “ because while run 6 time.

**33. Write down the output of each line after each iterations. Do multiple experiments to change values**

for i in ''.join(reversed(list('abcd'))):

print (i)

Answer :

d

c

b

a

**34. Flow of the program. Write the output of each line after every iteration of ‘i’**

for i in range(10):

if i == 5:

break

else:

print(i)

else:

print("Here")

Answer :

0

1

2

3

4

**35. What is the output? And understand the functionality of lambda function**

y = 6

z = lambda x: x \* y

print z(8)

Answer : Output of this code is 48.

**36. Write output and give proper logic of whatever the output comes.**

i=0

def change(i):

i=i+1

return i

change(1)

print(i)

Answer : Output is 0 because we already defined value of I is 0 as a global variable and value of I in function is defined as local variable

**40. What will be output? Define this output clearly**

def change(one, \*two):

print(type(two))

print(two)

change(1,2,3,4)

Answer :

<class 'tuple'>

(2, 3, 4)

When we give argument to function with staric \* it store multiple value in tuple ,that why the result of type function is tuple and in next line of code it print the whole tuple values.

**41. What will be output? Define this output clearly**

def find(a, \*\*b):

print(type(b))

find('letters',A='1',B='2')

Answer :

<class 'dict'>

Becaue we put \*\* construct in our functions. In such a case, the function will accept a dictionary and that why type is also dictionary

**42. Write output and define each line’s output for each iteration of ‘i’**

def foo(i, x=[]):

x.append(i)

return x

for i in range(3):

print(foo(i))

Answer :

[0]

[0, 1]

[0, 1, 2]

We define function “foo” in which we pass 2 argument first i and second empty list in variable x . Our function append the value of I in our empty list then we run for loop with range 3 so when loop iterate first time value of I is 0 so 0 is append in our empty list and then print statement run and [0] is printed on screen then loop iterate for second time and the value of I become 1 and it is append in our list X and print the new value of our list x=[0,1] after that loop iterate third time and value of I become 2 and 2 is append in list x then print statement run and print the new value of list x=[0,1,2] on screen

**43. Evaluate the following Python arithmetic expression: and write which segment will execute first? (Brackets, Exponents, Multiplication, Addition / Subtraction, Left to right rule)**

Answer :

(3\*(1+2)\*\*2 - (2\*\*2)\*3)

(3\*3\*\*2 - 4\*3)

(3\*9 - 12)

(27-12)

15

Inner brackets > exponents > multiplication > subtraction

**44.You are creating a function that manipulates a number. The function has the following requirements:**

* A float is passed into the function
* The function must take the absolute value of the float
* Any decimal points after the integer must be removed

A. math.fmod(x)

B. math.frexp(x)

C. math.floor(x)

D. math.ceil(x)

E. math.fabs(x)

Answer : Option C(math.floor(x)) is correct

**45. You are writing code that generates a random integer with a minimum value of 5 and a maximum value of 11.**

**Which two functions should you use? Each correct answer presents a complete solution. (Choose two.)**

A. random.randint(5, 12)

B. random.randint(5, 11)

C. random.randrange(5, 12, 1)

D. random.randrange(5, 11, 1)

Answer : Option B [ random.randint(5, 11) ] & Option D [random.randrange(5, 11, 1) ] is correct

**46. Write a program that receives marks from user and check the grade.**

Marks greater than equal to 90 then A grade

Marks between 80 to 90, B grade

Marks between 70 to 80, C grade

Marks between 60 to 70, D grade

Marks less than equal to 60 then E grade

mark = int(input("Enter your marks :"))

if mark>=90:

print("A Grade")

elif mark>=80:

print("B Grade")

elif mark>=70:

print("C Grade")

elif mark>=60:

print("D Grade")

elif mark>=50:

print("E Grade")