Top of Form

Question 1:

Guess the output of this program:

1. st = {1, 2, 3}
3. del st[1]
4. del st[2]
6. print(st)

{3}

Error

Bottom of Form

[] is not supported in sets

Top of Form

Question 2:

Guess the output of this program:

1. st = {}
3. st.add(1)
4. st.add(2)
5. st.add(3)
7. print(sum(st))

6

Error

{} is a dict not set

Top of Form

Question 3:

Guess the output of this program:

1. st = {0}
3. st.add(1)
4. st.add(2)
5. st.add(3)
7. print(sum(st))

6

Error

Top of Form

Question 4:

Guess the output of this program:

1. st1 = {2, 4, 6, 8, 10, 12, 14, 16}
2. st2 = {3, 6, 9, 12, 15, 18}
4. print([i for i in range(100) if i in st1 and i in st2])

[6, 12]

[6, 9, 12]

Error

Top of Form

Question 5:

Guess the output of this program:

1. st1 = {2, 4, 6, 8, 10, 12, 14, 16, 18}
3. for i in range(3, 20, 3):
4. st1.discard(i)
6. print(sorted(st1))

[2, 4, 8, 10, 14, 16]

[2, 4, 8, 10, 16, 14]

No guarantee

Top of Form

Question 6:

Guess the output of this program:

1. st1 = {1, 5, 7, 8}
2. st2 = {1, 5, 3, 10}
3. st3 = {1, 7, 6}
4. print((st1 & st2) ^ (st1 & st3))

{1, 5}

{5, 7}

{1, 7}

Error

Top of Form

Question 7:

Guess the output of this program:

1. st1 = {1, 5, 7, 8}
2. st2 = {1, 5, 3, 10}
4. id1 = id(st1)
5. st1 &= st2
6. id2 = id(st1)
7. print(id1 == id2)

True

False

Top of Form

Question 8:

Guess the output of this program:

1. st1 = frozenset({1, 5, 7, 8})
2. st2 = frozenset({1, 5, 3, 10})
4. id1 = id(st1)
5. st1 &= st2
6. id2 = id(st1)
7. print(id1 == id2)

True

False

Top of Form

Question 9:

Guess the output of this program:

1. dct = {1:2, 4:5, 7:8}
2. st = {3, 6, 9, 10}
4. total\_sum = 0
5. for (k1, v1), v in zip(dct.items(), sorted(st)):
6. total\_sum += k1 + v1 + v
8. print(total\_sum)

45

55

Error

Good job!

[1, 2, 3] the del has no effect on global st. Also we print list not set

Top of Form

Question 10:

Guess the output of this program:

1. def f(mst):
2. del mst
4. st = {1, 2, 3}
5. f(st)
6. print(sorted(st))

{1, 2, 3}

None

Error

Something else

Top of Form

Question 11:

Guess the output of this program:

1. school = {
2. 'grade1' : {
3. 2020 : {
4. 'semster1' : {
5. 'Math' : {('Mostafa', 10), ('Belal', 20), ('Ziad', 30)},
6. 'Science' : {('Mostafa', 11), ('Belal', 21), ('Ziad', 31)},
7. },
8. 'semster2': {
9. 'Math': {('Mostafa', 70), ('Belal', 80), ('Mostafa', 90)},
10. 'Science': {('Mostafa', 71), ('Belal', 81), ('Ziad', 91)},
11. }
12. }
13. }
14. }
16. print(sorted(school['grade1'][2020]['semster2']['Science']))

Error

[('Belal', 81), ('Mostafa', 71), ('Ziad', 91)]

{('Mostafa', 71), ('Belal', 81), ('Ziad', 91)}

{('Belal', 21), ('Ziad', 31), ('Mostafa', 11)}

[('Belal', 21), ('Mostafa', 11), ('Ziad', 31)]

Top of Form

Question 12:

Guess the output of this program:

1. school = [
2. {
3. 2020 : {
4. 'semster1' : {
5. 'Math' : {('Mostafa', 10), ('Belal', 20), ('Ziad', 30)},
6. 'Science' : {('Mostafa', 11), ('Belal', 21), ('Ziad', 31)},
7. },
8. 'semster2': {
9. 'Math': {('Mostafa', 70), ('Belal', 80), ('Mostafa', 90)},
10. 'Science': {('Mostafa', 71), ('Belal', 81), ('Ziad', 91)},
11. }
12. }
13. }
14. ]
16. school \*= 3
18. print(len(school[1][2020]))

Error

1

2

3

Top of Form

Question 13:

Guess the output of this program:

1. def f(iterable):
2. st = set()
3. return not any(i in st or st.add(i) for i in iterable)
5. print(f([10, 20, 30, 10, 40]))

What does this function do?

True

False

Error

It checks if e.g. list is unique. Observe or st.add(i) return None when called. Observe: any receives a generator object, not a list.

Top of Form

Question 15:

Guess the output of this program:

1. def f(\*items):
2. return tuple(sorted(set(items)))
4. print(f((1, 5, 7, 8, 2, 8, 7, 1, 6)))

Describe the function f

(1, 5, 7, 8, 2, 8, 7, 1, 6)

((1, 5, 7, 8, 2, 8, 7, 1, 6),)

(1, 2, 5, 6, 7, 8)

[1, 2, 5, 6, 7, 8]

The function takes a variable number of items, and remove duplicate using set, then return tuple of sorted items. Observe the call is a single tuple. To sort numbers, you should use: print(f(1, 5, 7, 8, 2, 8, 7, 1, 6))

Top of Form

Question 14:

Guess the output of this program:

1. def f(d):
2. d.update(dict(zip(d.values(), d.keys())))
4. d = {1:'Most', 2:'Belal', 3:'Ziad'}
5. f(d)
6. print(d)

What does this function do?

{1: 'Most', 2: 'Belal', 3: 'Ziad', 'Most': 1, 'Belal': 2, 'Ziad': 3}

{1:'Most', 2:'Belal', 3:'Ziad'}

{'Most': 1, 'Belal': 2, 'Ziad': 3}

{'Most': 1, 'Belal': 2, 'Ziad': 3, 1: 'Most', 2: 'Belal', 3: 'Ziad'}

Top of Form

Question 15:

Guess the output of this program:

1. def f(d):
2. return {i:j for j, i in d.items()}
4. print(f({1:'Most', 2:'Belal', 3:'Ziad'}))

What does f() do ?

{'Most': 1, 'Belal': 2, 'Ziad': 3}

{1:'Most', 2:'Belal', 3:'Ziad'}

Bottom of Form

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