Q1. Is an assignment operator like += only for show? Is it possible that it would lead to faster results at the runtime?

No operator is for show in python . It has their own benefits and uses . It would not lead to any faster results at the runtime .It should be used where it is needed

Q2. What is the smallest number of statements you'd have to write in most programming languages to replace the Python expression a, b = a + b, a?

Minimum 4 to 5 number of statements if written in different languages

Q3. In Python, what is the most effective way to set a list of 100 integers to 0?

[list[i]=0 for i in list] is the most effective way to set the integers in the list to 0

Q4. What is the most effective way to initialise a list of 99 integers that repeats the sequence 1, 2, 3? S If necessary, show step-by-step instructions on how to accomplish this.

b=1

c=[]

while(b<34):

a=1

while(a<=3):

c.append(a)

a+=1

b+=1

print(c)

Q5. If you're using IDLE to run a Python application, explain how to print a multidimensional list as efficiently?

Using a library known as numpy, we can print multidimensional list

a=np.array([[1,2,3],

[1,2,3]])

Q6. Is it possible to use list comprehension with a string? If so, how can you go about doing it?

[i for i in "apurva"] yes it is possible .

Q7. From the command line, how do you get support with a user-written Python programme? Is this possible from inside IDLE?

If user has followed the standard industry level procedure of coding, then he may have define docstring for the support of another person while understanding his program . IDE helps us access that. Also IDE helps us to understand all the function which are defaulty used in the program

Q8. Functions are said to be “first-class objects” in Python but not in most other languages, such as C++ or Java. What can you do in Python with a function (callable object) that you can't do in C or C++?

In Python function returns the datatype of output also. So this function can be used as many times as possible without writing another code again for the same purpose. In C or C++ it is not possible. The best example of function property here is recursion in which we can use same function in same function only.

Q9. How do you distinguish between a wrapper, a wrapped feature, and a decorator?

Decorator Allows objects to be composed/add capabilities by wrapping them with a class with the same interface

Q10. If a function is a generator function, what does it return?

A generator is a function that returns **an object (iterator)** which we can iterate over (one value at a time)

Q11. What is the one improvement that must be made to a function in order for it to become a generator function in the Python language?

The keyword “yield” is the one improvement that must be made to a function in order for it to become a generator function

Q12. Identify at least one benefit of generators.

Generator functions **allow you to declare a function that behaves like an iterator**. They allow programmers to make an iterator in a fast, easy, and clean way.