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

Answer: No, += increments value appropriately at loop time and i++ is faster than i+=1at runtime in general

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?

Answer: The above expression is already the smallest expression that I know can be used to write the required expression for replacing value.

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

Answer: new\_list = [100 for i in range(100)]

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.

Answer: We can use a simple for each loop in python to initialize values in a single line.

New\_list = [i for I in range(1,99)]

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

Answer. If the values are already assigned to all the cells in list, we can use print statement to print all the values within 2D list or matrix.

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

Answer: Yes we can split the string based on spaces split(“”) if the string contains more than 1 word.

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

Answer: We can call and execute a python file from command line using “python filename.py” .

To execute a file in IDLE , Press run from menu bar or press F5.

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++?

Answer: We can create a generator function which will behave as an iterator to give the required value when needed and called.

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

Answer: Wrapper functions are something that calls original function that gives some additional functionalities to it. Decorator functions are just kind of some wrapper functions designed to perform specific requirements.

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

Answer: A generator function is one function which called for every value and generates and return one value at a time rather than a series of values.

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?

Answer: We use yield keyword to return one value at a time and return it to location from where the function is called.

Q12. Identify at least one benefit of generators.

Answer: It helps in becoming a function as one iterator at a time.