1. Create an assert statement that throws an AssertionError if the variable spam is a negative integer.

Ans=> x = -1

assert x >= 0

2. Write an assert statement that triggers an AssertionError if the variables eggs and bacon contain strings that are the same as each other, even if their cases are different (that is, 'hello' and 'hello' are considered the same, and 'goodbye' and 'GOODbye' are also considered the same).

Ans=> eggs = 'goodbye'

bacon = 'GOODbye'

assert eggs == bacon

3. Create an assert statement that throws an AssertionError every time.

Ans => assert 12 == 42

4. What are the two lines that must be present in your software in order to call logging.debug()?

Ans => import logging

logging.basicConfig(level=logging.DEBUG)

5. What are the two lines that your program must have in order to have logging.debug() send a logging message to a file named programLog.txt?

Ans=> import logging

logging.basicConfig(filename= programLog.txt, filemode='w', format='%(name)s - %(levelname)s - %(message)s')

6. What are the five levels of logging?

Ans=> CRITICAL ,ERROR, WARNING, INFO,exception

7. What line of code would you add to your software to disable all logging messages?

Ans => logging.disable(sys.maxsize)

8.Why is using logging messages better than using print() to display the same message?

Ans=>because it logs each and everything to separate file and code is not get interrupted.

9. What are the differences between the Step Over, Step In, and Step Out buttons in the debugger?

Ans=> step over=> If there are breakpoints inside the skipped methods, the debugger will stop at them. To skip any breakpoints on the way

Step in => Steps in the method to show what happens inside it. Use this option when you are not sure the method is returning a correct result.

Step out=> it is use to Steps out of the current method and takes you to the caller method.

10.After you click Continue, when will the debugger stop ?

Ans => right now

11. What is the concept of a breakpoint?

Ans => breakpoint() provide convenience in using a debugger because we don’t have to explicitly import pdb module