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

**Spam=0**

assert Spam>=0, “spam is negative integer”

**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).**

Assert eggs.lower()!=bacon.lower(),” eggs and bacon are same”

Assert eggs.upper()!=bacon. upper (),” eggs and bacon are same”

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

Assert 2\*x==odd number, ”For any value of x it will be even number”

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

import logging

logging.basicConfig(level=logging.DEBUG, format=' %(asctime)s - %(levelname)s - %(message)s')

**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?**

import logging

logging.basicConfig(filename='programLog.txt', level=logging.DEBUG, format=' %(asctime)s - %(levelname)s - %(message)s')

**6. What are the five levels of logging?**

Critical,error,warning,info,debug

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

# logging.disable(sys.maxsize)

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

Logging messages gives timestamp but print() doesn’t also logging message helps to record in file.

And we can disable and enable logging function without removing or adding logging function call.

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

Step over moves to next line of program.

Step In moves to the first line of calling function and proceed until it returns control back to the calling function.

Step out application execute until the currently executed operation implementation is returned.

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

Debugger stop after executing next line.

**11. What is the concept of a breakpoint?**

Breakpoint is used to debug the error in code step by step.