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

**Ans** : spam = int(input("Enter a number"))

assert spam>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 = input("Enter a string : ")

bacon = input("Enter a string : ")

assert eggs != bacon

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

**Ans** : assert False

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

**Ans** : we first need to import the logging module & second step is to setup the configuration of the file where we want to send the log.

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=”a”,format=”%(asctime)s %(levelname)s-%(message)s , datefmt=”%Y-%m-%d %H:%M:%S”)

6. What are the five levels of logging?

**Ans** : CRITICAL, INFO, WARNING,DEBUG,ERROR

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

**Ans** : logging.disable(level=CRITICAL)

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

**Ans** : logging messages can be filtered, sent to files, we can format them, add time stamps and use them as we want but similar things can’t be easily done with print statements.

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

**Ans** : Step into causes the debugger to go into next function & break there. Step over causes the debugger to execute the next function & break afterwards, step out causes the debugger to finish the current function and break after it.

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

**Ans** : when we click continue, it causes the program to run normally without pausing for debugging

11. What is the concept of a breakpoint?

**Ans** : breakpoint is used in debugging. Its point in program where the code stops or suspends the execution. We can set these breakpoints at desired location. It lets us check the state of the code till that particular point.