1)

A) What is an IDE?

IDE stands for Integrated Development Environment. IDE’s bring together many different aspects of writing a computer program. IDE’s allow for editing code, syntax highlighting, autocomplete, building executables, and debugging [1].

B) What are the key words to handle exceptions in Python?

When dealing with exceptions in python one can use the key words “try” and “except”. One can use multiple except statements with different types of error like IndexError and ValueError.

C) How do you define a function in Python?

To define a function in python you need to put the def keyword in front of the Python’s function name. Then have parentheses with the parameters of the function. End the function declaration with a colon.

D) True or False - when calling a specific function, the number of arguments is fixed.

False- The function can have multiple parameters passed or none depending on how the function was created.

E) What are two methods that can be used with list objects, and what do those methods do?

Method 1) sort() – This will sort the list

Method 2) copy() – This will copy the list to a new list without pointing back to the old list.

F) Carefully describe all the differences between the example state machine implemented with if statements, and the example state machine implemented with function pointers. How do pointers make it easier to add new states?

The main difference between the example state machine with if statements and function pointers is the different variable tracking the current state. In the if statements case a int is tracking the case while in the pointer example the name of the state is the tracker. I find it easier to follow if you use the name of the state to track. Pointers make it easier because very little code needs to be implemented in your main function and all the activity happens in each of the states. The if statement case needs to call every different state depending on the state variable. This can be tedious and hard to track.

2) Commented Code.

[1] https://www.codecademy.com/article/what-is-an-ide