**What is the size of a char data type:**

The size of a char data type is 1 byte long or 8 bits long. Therefore if it is a signed variable it can range from -128 to 127 but if it is unsigned it can range from 0 to 255

**What is the size of a short char data type:**

There is not such thing as a short char data type in C.A char is already 1 byte which is the smallest data type one can take. Adding a short to a char data type would mean it would be ½ of a byte which is impossible.

**What is the difference between a short and long data type:**

A short data type represents a variable that takes less memory then the regular data type, so a 4 byte integer with a short identifier in front of it will result in that integer taking up 2 bytes of memory however will result in the integer having a smaller range, the short byte effectively double the number of bytes per datatype. A long data type is an integer however it has a longer range and takes up more memory so a regular integer that takes up 4 bytes of memory may now take 8 bytes of space with the long identifier. The long data type doubles the number of bytes per datatype.

**Is there a Boolean data type in the c programming language**:

There is no Boolean data type in vanilla C without any libraries. One could create their own Boolean data type and define the data type to have values assigned to true and false. Another option is to include the library

**What is the maximum decimal value for a char type:**

The maximum value of a char is from 127 to -128 or 0 to 255 if its unsigned.

**What is ASCII?**

ASCII is a way to convert decimal numbers to a character value.

**Is char signed or unsigned by default when you declare a char data type in c?**

A char is signed by default

**Is char x = ‘A’ the same as char x = “A” why or why not?**

‘A’ != “A” because single quotes represent one character while double quotes represent an array of characters with a null terminator \0

**Output the decimal value of char x = ‘A’**

The decimal value of char x = ‘A’ is 65

**Output the decimal value of char x = ‘A’ + ‘B’ explain the output.**

The decimal value of A + B is 131 because you are summing the two decimal values of the characters ‘A’ which is 65 and ‘B’ which is 66.