Brandon Lim
Pre-Lab

1. Arduino basics
   a. Where in the Arduino IDE (version 2 or later) do you set the Arduino board and port to connect to a device?

      In the menu bar through tools and then board managers there will be packages for the specific Arduino board being used.

   b. How do you import a new library into the Arduino IDE and what is the syntax for adding the library to a specific sketch?

      Some libraries are already in the Arduino Ide, to add a new library, find them online and extract their folders into the same folder as the Arduino Ide system files or add them through the the Arduino Ide menu. The syntax for adding a new library is #include

   c. How many times do the setup and loop functions run in a sketch?

      Setup is called once at the beginning of the code and the loop runs repeatedly until the Arduino is powered off.

   d. If you want to declare analog pin 7 as a variable, what is the syntax (assume pin variable name is inputPin)?

      Placing would be at the top of the code before trying to use it
      const int inputPin = A7;

   e. Where do you place and what is the syntax to setup a digital pin as an input? (assume digital pin 10 is the pin being used).

      pinMode(10, INPUT);

   f. What is the syntax that is used to prepare the Serial monitor for display at a baud rate of 115200?

      Serial.begin(115200);

   g. If you want to light up the UNO onboard LED, what is the pin you would use?

      Pin 13

   h. What is the maximum current that can be supplied through any I/O Arduino pins?

      40mA

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i. What is the syntax to print the value of the variable “val” to the serial monitor with a new line each time it prints?

Serial.println(val);

2. Arduino Serial communication

a. The USB connection between an Arduino and a computer uses the board’s primary dedicated serial port. Which digital pins are associated with this primary serial port?

TX Pin for transmitting data
RX Pin for receiving data

b. What does the function Serial.available() do?

Returns the number of bytes that are available to read

c. What are the numeric values of the bytes of data being sent based on the following code: Serial.println(“I’m 22!”);

I - 73
‘ - 39
M - 109
Space - 32
2 - 50
2 - 50
! - 33
Newline - 10

d. What will appear in the Serial Monitor based on the following code? (This code assumes an Arduino Uno sending info across the mySerial channel which was set up using the SoftwareSerial.h library, and an Arduino Mega receiving that information on the Serial1 channel):
Sending Code:
mySerial.print(9);

Receiving Code:
int data = Serial1.read();
Serial.print(data);

The number 9 will be printed