ENGR-355 Lab#2
Inclass

1) What are the valid input voltage ranges for a KL25A MCU with Vdd=3V? With Vdd=2V?
    Refer to reference [1] on the class web page.

2) Using the pinout table in section five of [1], page 44, how many bits of port A, B, C, D, and
    E can be used for GPIO on the 80 pin version of the KL25Z MCU?

3) Referring to the schematic [3] for the FRDM-KL25Z board or the user manual [4], how
    many bits of port A, B, C, D, and E identified in question 2 appear on the I/O connectors of
    the FRDM board?

4) Which pins on the 80 pin KL25Z MCU support, in output mode, high drive capability?

5) On the FRDM board is the multi-color LED which actually is just three LEDs with different
    colors constructed in one package. When doing design, each LED is treated as an
    independent LED. The voltage drop across an LED when the LED is on depends on the
    color since different wavelengths of light are produced with different combinations of
    materials. If a red LED has a forward voltage drop of 1.8v and a blue LED 2.7v, what value
    of resistor is needed for each to limit current to 15mA? Assume Vdd is 3.0v.

6) Assume you are writing a program that needs to use bits 0 to 5 on Port E as GPIO outputs
    and bits 16 to 20 as GPIO inputs. What control register settings are needed?