ME333 Introduction to Mechatronics

2021 Quiz 3: Chapter 2 Name _____Numair Ahmed_____

1. The PIC32MX795F512H has how much **flash** memory?

512KB flash memory

2. The PIC32MX795F512H has how much **RAM**?

128KB RAM

3. What is the **sys clock frequency** of the PIC32MX795F512H on the NU32?

80 MHz

4. What type of memory is used to set the function of a pin on the PIC32?

Flash memory is where the program is stored, so any code you write to program the function of a pin will be stored in flash

5. What is the purpose of prefetch cache module, and why is its path to flash 128 bits wide?

It stores frequently used instructions that are likely to be used again by the CPU and can fetch the next set of instructions from the flash memory before the CPU requests it. The prefetch cache module does this because flash memory is 32bits wide and cannot feed instructions to the CPU as fast as the CPU is requesting them at 80MHz. Therefore, the prefetch cache module is needed to store program instructions from flash memory, before CPU requests them.

6. What voltage should pin F0 output to turn on LED1? What logic level does pin D7 read when the USER button is not pushed?

To turn LED1 ON, we need to turn the pin F0 “off”, thereby bringing the voltage to 0.

Not pushing the USER button tells us the voltage at pin D7 is HIGH at 3.3V. Logic level 1.