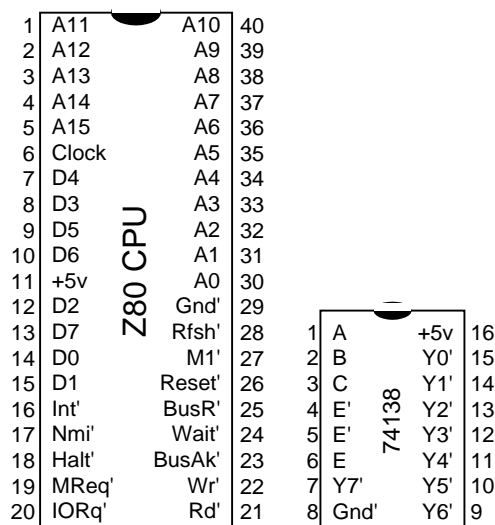


**UNIVERSITY OF CALIFORNIA, RIVERSIDE**  
**Department of Computer Science and Engineering**  
**Department of Electrical Engineering**  
**CS/EE120B – Logic Design**  
**Homework 3**

**Given May 30, Due June 8, 2001**

**10**

1. Draw the circuit schematic to interface the Z80 CPU with the RTC-62421 real-time clock module. Your schematic must be drawn with a computer drawing or CAD program. The pins for all chips in your schematic must be clearly label with both the pin number and the pin name. Connect the RTC so that it is accessed as an I/O device and its first register address at 80 hex. You must use the following three ICs. The datasheet and pin-outs for the RTC, Z80, and 74LS138 decoder are shown below.



The 74LS138 is a 3-to-8 decoder with three enable pins. A, B, & C are the input pins. Y0 to Y7 are the output pins. The three E pins are the enable pins. Note that some are active high and some are active low.

**Answer**

