Problem 1

- Discuss the differences between the parallel ports in the 8051.
- Discuss the alternate functions of the individual bits of port 3.

Problem 2

Figure 1 show memory interface using the 8051.
- What is the role of the 8051 pins?
- What is the role of the 74139?
- What is the role of the pins CS, OE and WE in the 6264?
- What would be the major difference if we were using a ROM?
Figure 2: Interfacing LED

**Problem 3**

Figure 2 shows the interface of 8051 with LED. What is the role of the inverter? What happen when the pin has a logic 1?
Figure 3: Interfacing seven segment display with the 8051

PROBLEM 4

Figure 3 shows interfacing seven segment display with the 8051. What is the role of the 74LC240 IC?
Figure 4 shows the block diagram for the serial port of 8051. Explain the role of each component and signal in the block diagram.

**Problem 5**

Figure 4 shows the block diagram for the serial port of 8051. Explain the role of each component and signal in the block diagram.