Part

2

Interface Experiments using 8086 Microprocessor Kits & Application Boards

I In this part, students will be carrying out interfacing experiments using 8086 microprocessor kits and interfacing boards. These kits need to be interfaced to the PCs for downloading programs. In this part, students will get an opportunity to use professionally designed microprocessor system kits and application boards which would enable them to gain enough knowledge and experience in interfacing external circuits to microprocessors for performing different applications.

The lab experiments in this part consist of the following :

1. Studying the microprocessor kit capabilities and interfacing to PC (in order to familiarize with the kit commands for entering, assembling, debugging and running the programs using the kit).

2. Conducting the Interfacing experiments using application boards interfaced to the kits. The interface experiments include configuring and programming the peripheral chips 8253(PIT – Programmable Interval Timer), 8255(PPI – Programmable Peripheral Interface), 8251(PCI – Programmable Communication Interface), 8259(PIC- Priority Interrupt Controller) for different applications. The application boards provided with the microprocessor kits are designed to teach a wide variety of control experiments. Circuits provided in the application board include: **digital switches**, **temperature sensor**, **optical speed/position sensor**, **light sensor**, **potentiometer**, **A/D** and **D/A converter**, **DC motor**, **LEDs**, **bargraph**, and **heater**.