



# **SNS COLLEGE OF TECHNOLOGY**

**Coimbatore-35**  
**An Autonomous Institution**

Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A+' Grade  
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai



## **DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**

### **19ECT221 – MICROPROCESSORS AND MICROCONTROLLERS**

**II YEAR - IV SEM**

#### **UNIT 2 – PERIPHERAL INTERFACING**



# Interfacing Requirements

- Microprocessor based system design involves interfacing of the processor with one or more peripheral devices for the purpose of communication with various input and output devices connected to it.
- They are also programmable devices. Hence these peripheral devices are found to be of tremendous use to a system designer.
- Peripheral devices can broadly be classified into two categories.
  - (a) General purpose peripherals and
  - (b) Special purpose peripherals (Dedicated function peripherals)



# General Purpose Devices



General purpose peripheral devices that perform a task but may be used for interfacing a variety of I/O devices to microprocessor. The general purpose devices are given below:

- Simple I/O -- (Non-programmable)
- Programmable peripheral Interface (PPI) – (8255)
- Programmable Interrupt Controller – (8259)
- Programmable DMA Controller – (8237/8257)
- Programmable Communication Interface – (8251)
- Programmable Interval Timer – (8253/8254)



# Special Function Devices



Special function peripherals are devices that may be used for interfacing a microprocessor to a specific type of I/O device. These peripherals are more complex and therefore, relatively more expensive than general purpose peripherals.

- Programmable CRT Controller
- Programmable Floppy Disc Controller
- Programmable Hard Disc Controller
- Programmable Keyboard and display interface.

The functioning of these devices varies depending on the type of I/O device they are controlling.



# References

[https://www.tutorialspoint.com/microprocessor/microprocessor\\_io\\_interfacing\\_overview.htm](https://www.tutorialspoint.com/microprocessor/microprocessor_io_interfacing_overview.htm)

<https://www.javatpoint.com/peripheral-devices>

Ramesh S.Gaonkar," Microprocessor – Architecture, Programming and Applications with the 8085", Penram International Publisher,7<sup>th</sup> Ed., 2016

*Thank You*