SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)

COIMBATORE-35

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Anna University, Chennai

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

COURSE NAME: 19EEB303 - MICROCONTROLLER AND ITS APPLICATIONS

III YEAR / VI SEMESTER

Unit 1 – INTRODUCTION

UNIT-1
INTRODUCTION

Introduction to Microprocessors and Microcontrollers, Architecture of 8086, Intel MCS-51 family features – ATMEL Processor – 8051 -organization and architecture, Addressing modes, Instruction set format, Interrupts.

CONTENTS

- Introduction to Microprocessors and Microcontrollers
- Architecture of 8086
- Intel MCS-51 family features
- ATMEL Processor
- 8051 -organization and architecture
- Addressing modes
- Instruction set format
- Interrupts

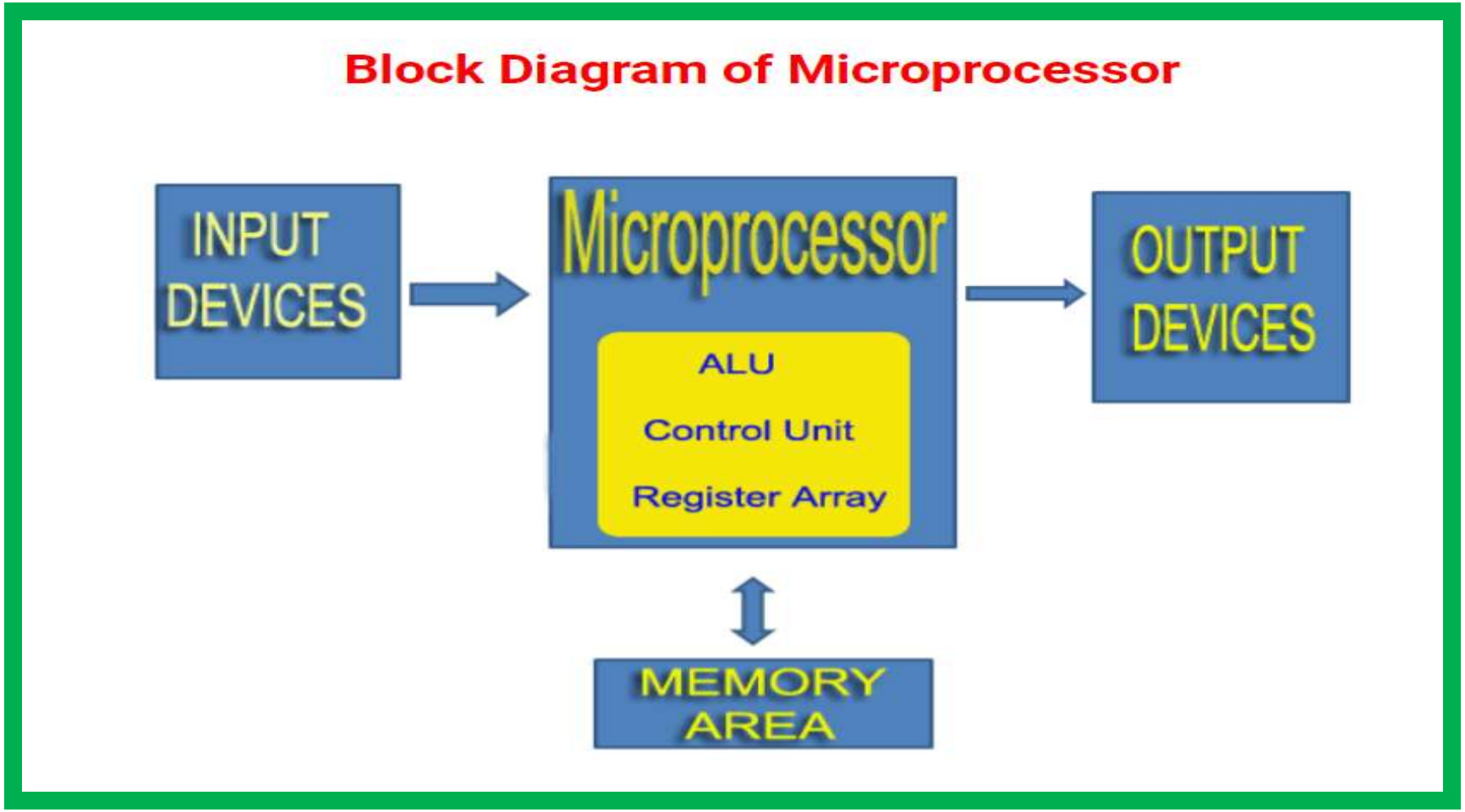
MICROPROCESSOR

• controlling unit of a micro-computer, fabricated on a small chip capable of performing ALU operations and communicating with the other devices connected to it.

• consists of

- ALU - arithmetical and logical operations on the data received from the memory or an input device.
- Register array- consists of registers identified by letters like B, C, D, E, H, L and accumulator.
- Control unit- controls the flow of data and instructions within the computer.

MICROPROCESSOR



WORKING OF MICROPROCESSOR

- The microprocessor follows a sequence:
  - Fetch,
  - Decode
  - Execute.
- Initially, the instructions are stored in the memory in a sequential order.
- The microprocessor fetches those instructions from the memory, then decodes it and executes those instructions till STOP instruction is reached.
- Later, it sends the result in binary to the output port.
- Between these processes, the register stores the temporarily data and ALU performs the computing functions.