

# Chapter 05: Basic Processing Units ... Control Unit Design

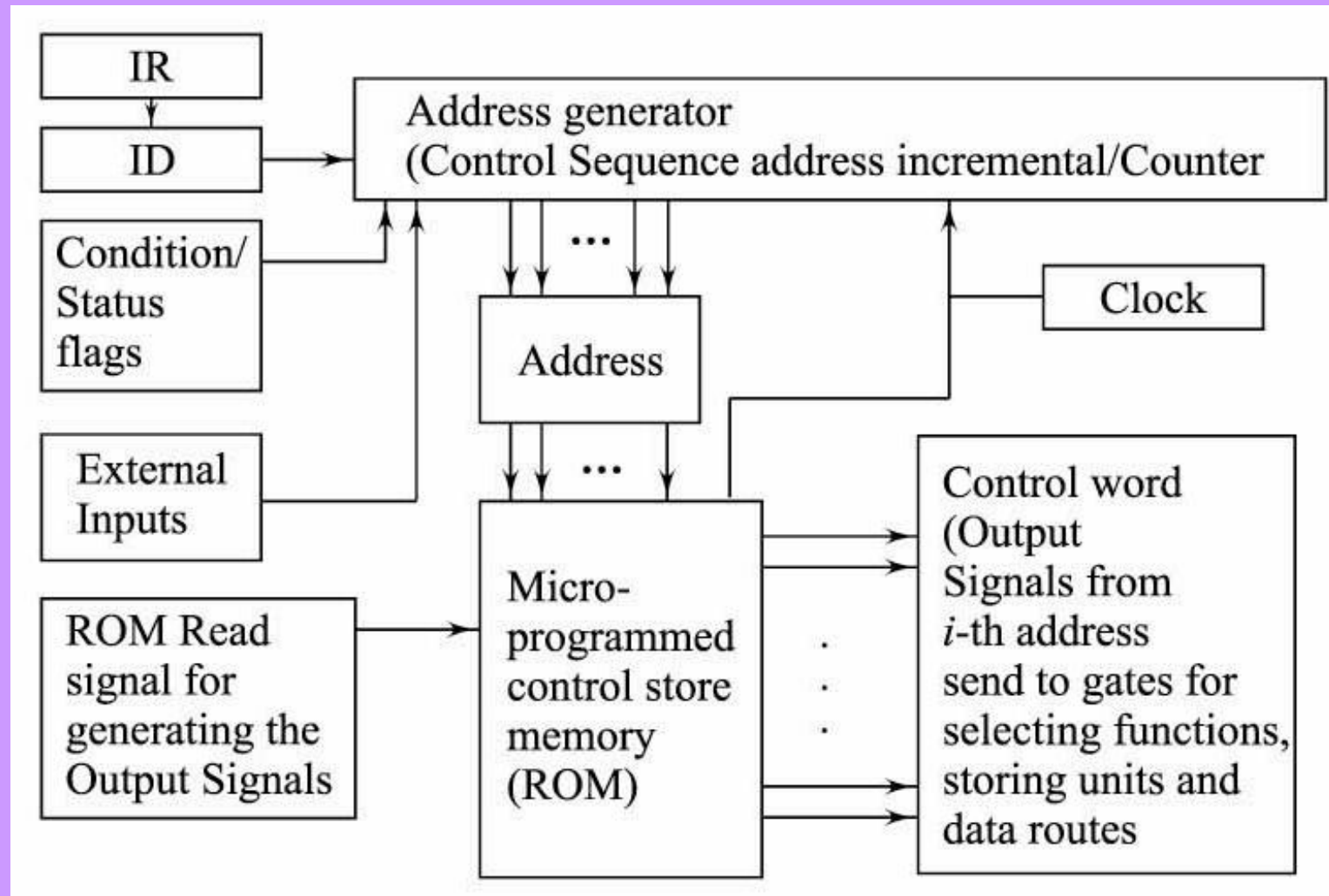
## Lesson 18: Nanoprogramming

# Objective

- Learn concept of nanoprogramming
- Learn use of nanoinstructions in secondary control memory

# Microprogrammed Control Unit Organization

# Generating a Set of Outputs for the Given Set of Microinstructions (Set of Control-Signal Sequences)

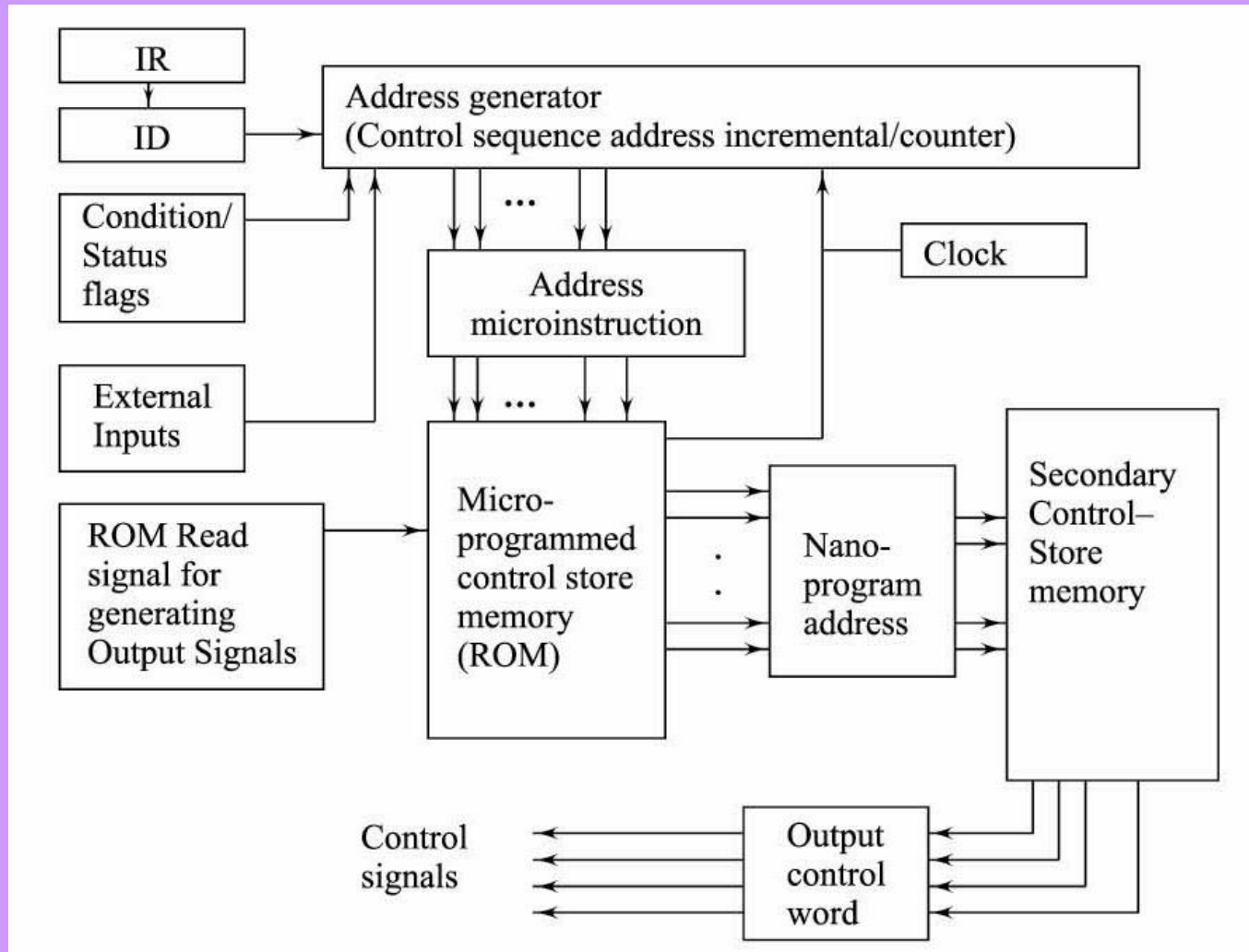


# Nanoinstructions

# An alternative strategy to generate control signals

- Having the concept of a secondary control memory
- A microinstruction is in primary control-store memory, it then has the control signals generated for each microinstruction using a secondary control store memory
- The output word from the secondary memory is called nanoinstruction

# Two levels Microprogrammed and Nanoprogrammed control Units organisation



# Summary



# We Learnt

- Learn concept of nanoprogramming
- Learn use of nanoinstructions in secondary control memory

End of Lesson 18 on  
**Nanoprogramming**