5.12.2 Block Diagram of IOP

- The Fig. 5.12.1 shows the block diagram of computer system with an I
  processor. The CPU and I/O processor work independently and communi
  with each other using centrally located memory and DMA. The CPU does
  processing of needed in the solution of computational tasks and IOP does the c
  transfer between various peripheral devices and the memory unit.
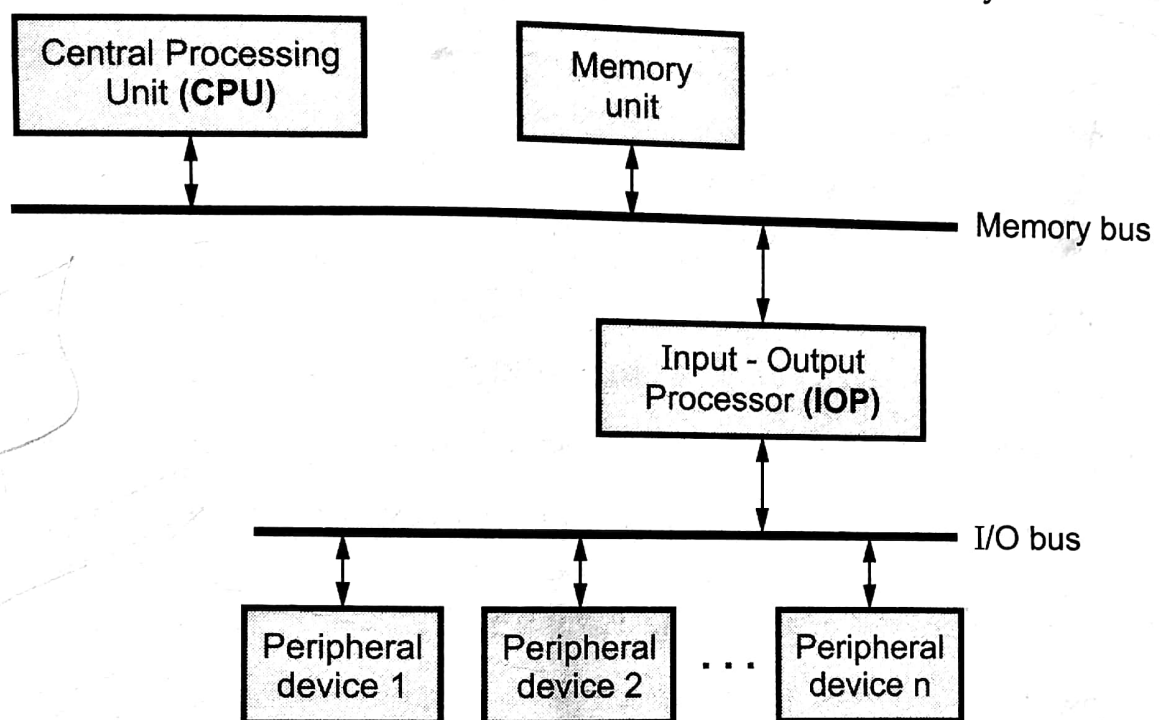

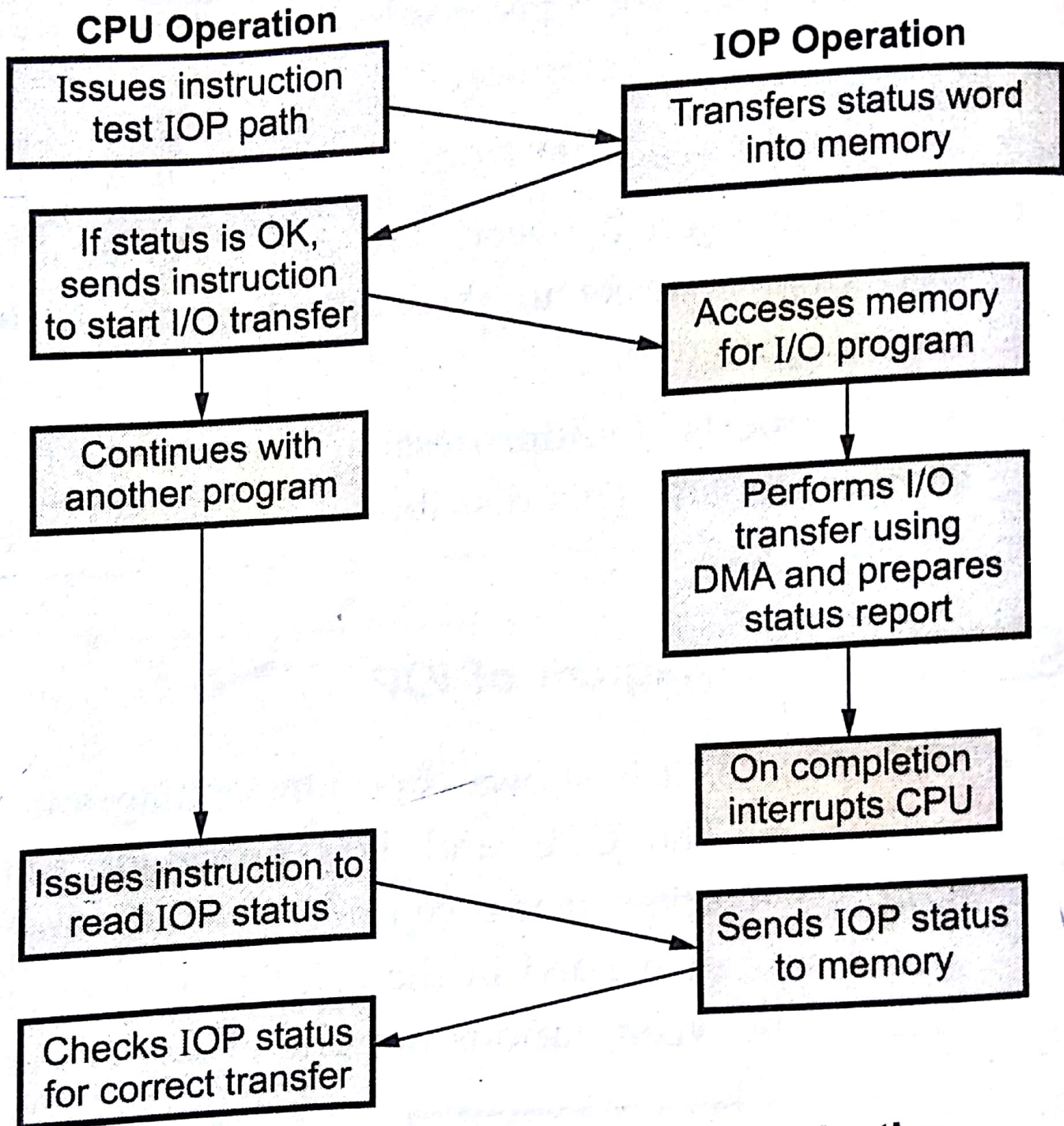
Fig. 5.12.1 Block diagram of a computer with I/O processor

CPU Operation

IOP Operation

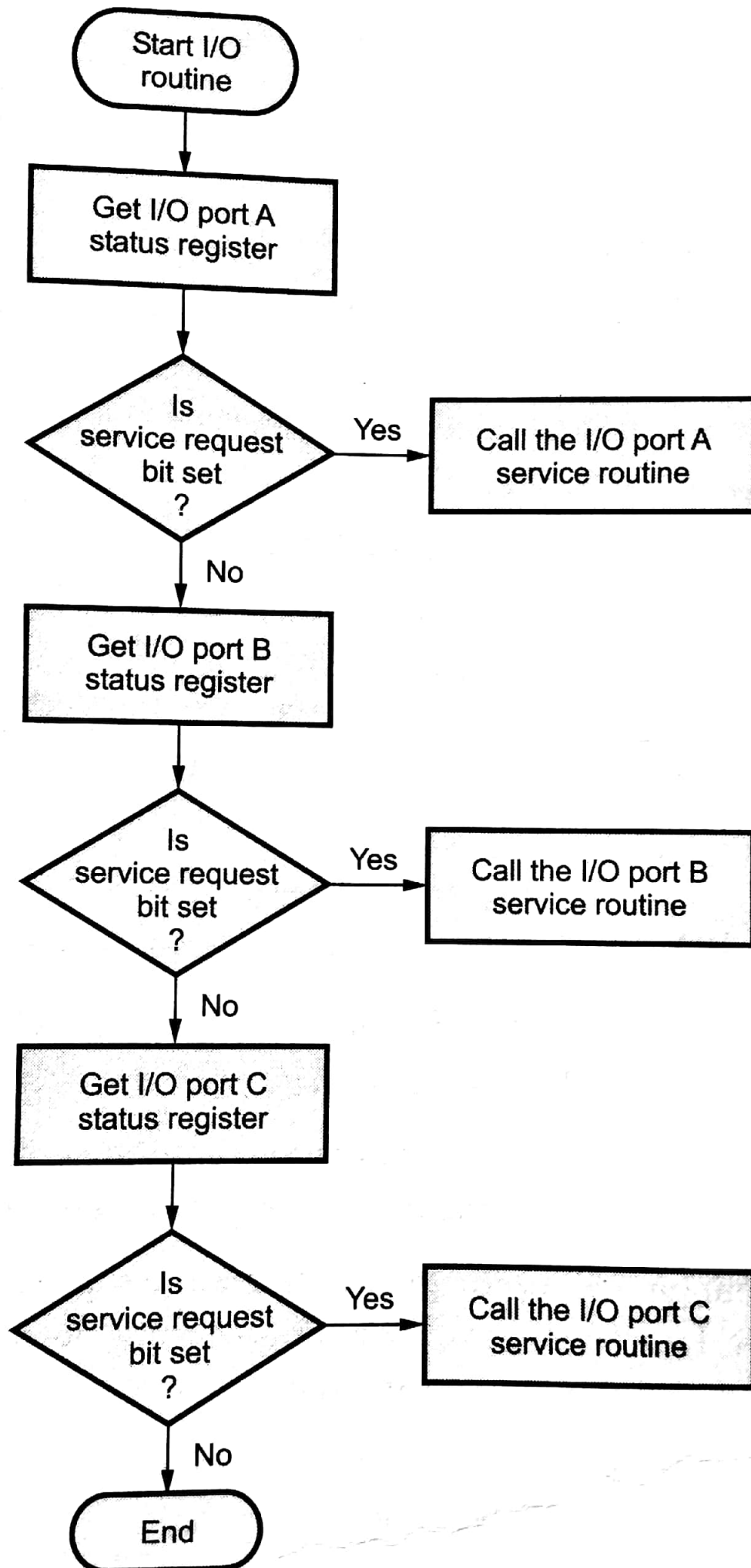| CPU Operation	IOP Operation
Issues instruction test IOP path	Transfers status word into memory
If status is OK, sends instruction to start I/O transfer	Accesses memory for I/O program
Continues with another program	Performs I/O transfer using DMA and prepares status report
	On completion interrupts CPU
Issues instruction to read IOP status	Sends IOP status to memory
Checks IOP status for correct transfer	

Fig. 5.12.2 CPU and IOP communication

Fig. 5.8.1 Flowchart for I/O service routine