

# **16.317: Microprocessor Systems Design I**

Spring 2012

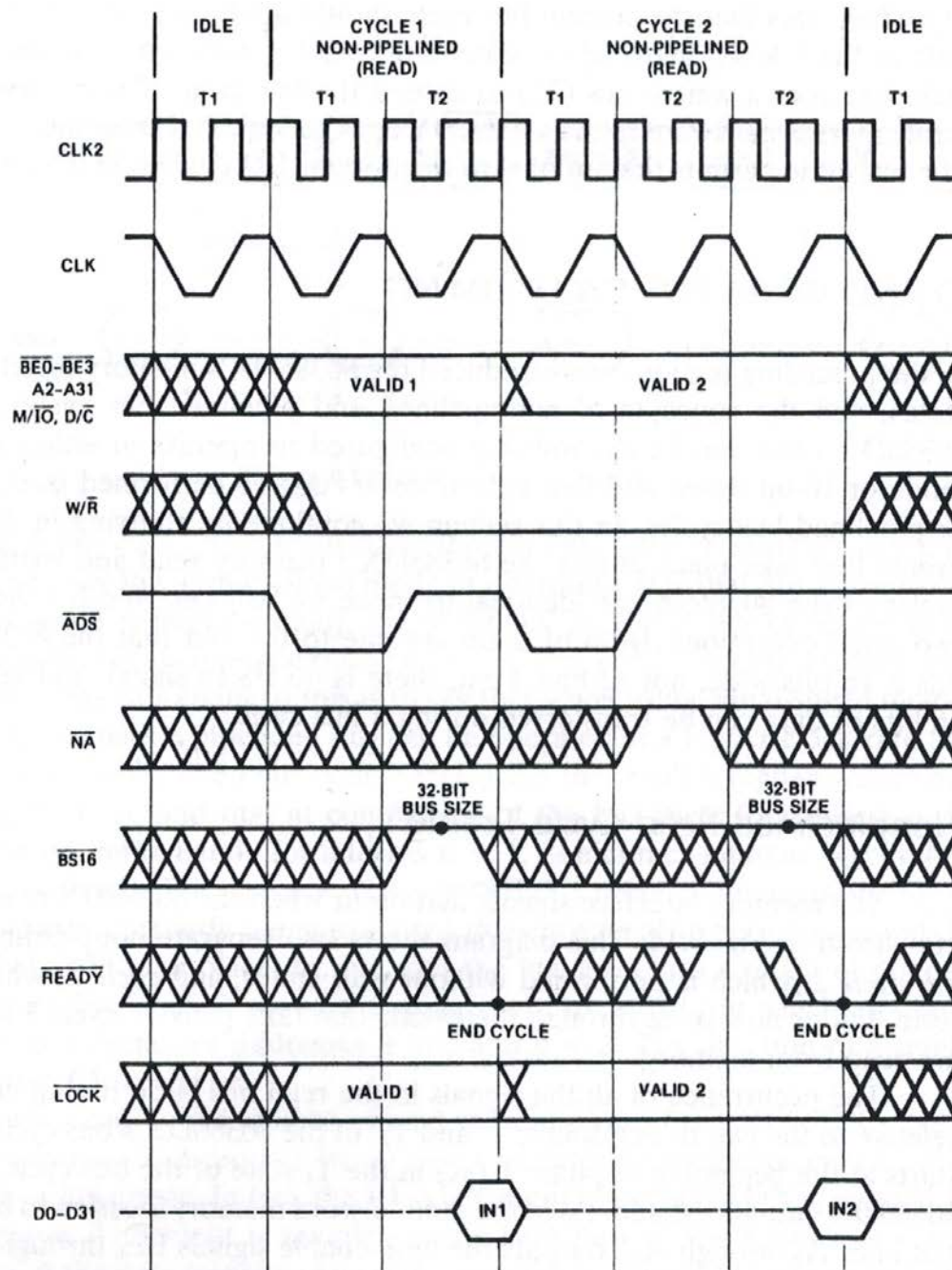
## Lecture 25: Key Questions March 30, 2012

1. Describe the role of the additional memory/IO signals.
2. Describe the role of the signals in the interrupt interface.
3. Describe the role of the signals in the DMA interface. What is a DMA?
4. Describe the role of the signals in the coprocessor interface. Why might a processor need a coprocessor?

- Describe the basic characteristics and functionality of the system clock.
- Describe the basic functionality of a bus cycle, including the difference between pipelined and non-pipelined bus cycles.

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9. Explain the basic characteristics of a read cycle, using the 80386 read cycle timing diagram shown below:



10. Explain the basic characteristics of a write cycle, using the 80386 write cycle timing diagram shown below. What signals have different timing than the read cycle? Why?

