

# **16.317: Microprocessor Systems Design I**

Spring 2012

Lecture 20: Key Questions  
March 19, 2012

1. What are the benefits offered by protected mode operation on the 80386?
2. What are the major differences between real mode and protected mode?

3. Explain the purpose and format of selectors.

4. Explain the purpose and general organization of descriptors.

5. Explain the general memory address calculation used in protected mode.

6. Explain the difference between global and local memory.

7. Describe the global descriptor table register (GDTR).

a. What is the GDT base address and limit if

- GDTR = AAB B11221F0FH?

c. What is the maximum GDT size and number of descriptors?

d. What property must the GDTR limit always satisfy? Why?

9. Show how selectors and the GDTR are used to access global memory.