

**ET285 DIGITAL ELECTRONICS 2  
HOMEWORK ASSIGNMENT #3**

- 1) Which of the following statements is true regarding characteristics of synchronous & asynchronous counters?
  - a) synchronous counters may be clocked at a faster rate than asynchronous counters
  - b) the clock input of each stage of an asynchronous counter is connected to the output of the proceeding stage.
  - c) All of the above.
  
- 2) A MOD 16 asynchronous binary counter has a worst-case propagation delay per stage of 25ns. The maximum clock frequency for this counter is:
  - a) 2.5MHz
  - b) 5.0MHz
  - c) 10.0MHz
  - d) 20.0MHz
  
- 3) The modulus of a 3 stage asynchronous binary counter is:
  - a) 2
  - b) 4
  - c) 8
  - d) 16
  
- 4) A 4-bit binary counter is modulus:
  - a) 4
  - b) 8
  - c) 16
  - d) 10
  
- 5) A register having 3 D-FFs can store data representing \_\_\_\_ different values:
  - a) 3
  - b) 8
  - c) 6
  - d) 9