Week 10 Assignment 10

The due date is currently the assignment has been posted. An extension has not been granted for this assignment.

1. To detect a stuck-open fault in a wire in a circuit, the required test vector T must satisfy the following:
   a. The fault value of a wire must be 1.
   b. The fault value of the wire must be 0.
   c. The fault value of the wire with the primary output must be the same.
   d. The fault value and fault logic value at the primary output must be different.
   
   a. None of these
   
2. Which of the following removes the Boolean difference of the function F = A'B + AC + BC with respect to variable C?
   a. A'B
   b. A'B'C
   c. AB'C
   d. None of these
   
3. Which of the following statements is true for detecting a fault V in a circuit?
   a. During the forward path, the output at node B is the same as the input at node A.
   b. During the backward path, the output at node B is the same as the input at node A.
   c. The output at node B is the same as the input at node A.
   d. None of these
   
4. Which of the following is the correct name for the chip pins in the following circuit?
   
   a. A' B' C' D' E' F' G' H' I' J' K' L' M' N' O' P' Q' R' S' T' U' V' W' X' Y' Z'
   
5. Which of the following test patterns must be applied to the input of a scan chain to test faults in the scan flip-flops?
   a. 0000 0000 0000 0000
   b. 0101 0101 0101 0101
   c. 1111 1111 1111 1111
   d. None of these
   
6. Which of the following statements is true for the IEEE 3141 standard?
   a. The IEEE 3141 standard is used to test the interconnections among the flip-flops in a circuit.
   b. The IEEE 3141 standard is used to test the interconnections among the flip-flops in a circuit.
   c. The IEEE 3141 standard is used to test the interconnections among the flip-flops in a circuit.
   d. None of these
   
7. For an 8-bit USB generating an n-wave, the number of distinct patterns that can be presented before they are repeated is ________
   
8. For a 6-bit UART connecting a 9600 baud serial bit stream, the probability of taking is given by ________
   
9. Which of the following test methods allow us to very easily test the maximum-rated clock frequency?
   a. Built-in self test
   b. Dynamic testing
   c. Automatic testing
   d. None of these
   
10. The advantage of BST over conventional test application using an external ACE is:
   a. The number of required test patterns is less.
   b. The test data can be tested with the clock circuitry.
   c. The hardware overhead is low.
   d. All of these