Questions for self assessment

Module 8--Lecture 1, 2,3

1. Enumerate the steps to generate random test patterns.

2. What are the termination conditions that can be used in test pattern generation using the random procedure?

3. What are the three steps that are involved to generate a test pattern by the deterministic procedure?

4. Why test pattern generation using the random procedure is not applied to cover all faults in a circuit?

5. What are the two basic techniques of circuit simulation? Compare the techniques.

6. What is fault simulation? How does simulation help in test pattern generation?

7. How are stuck-at faults inserted in circuits for fault simulation?

8. By what factor, parallel fault simulation speeds up serial fault simulation?

9. Write the fault deduction rules for 3 input AND, OR, NAND, OR and XOR gates.

10. What are the advantages of concurrent fault simulation over deductive fault simulation?

Module 8--Lecture 4

1. What does SCOAP stand for?

2. What is the basic motivation of using SCOAP algorithm for test pattern generation?

3. CCO(c) is higher than CC1(c) of an AND gate (with output "c"). Why?

4. What are the controllability rules for an *n*-input XOR gate?

5. What is the combinational controllability of a primary input? What is the combinational observability of a primary output?