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Courses » Embedded Systems-- Design Verification and Test

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Unit 12 - Advances in Embedded System Hardware Testing

Course outline

How to access the portal

Introduction and Modeling

Modeling and Synthesis issues

Architectural Synthesis of Hardwares

System-level Design

Temporal Logic

Model Checking

BDD and Symbolic Model Checking

Introduction to Digital Testing

Embedded System Hardware Testing

Embedded System Hardware Testing - II

Assignment-11

The due date for submitting this assignment has passed.

As per our records you have not submitted this assignment. **Due on 2018-10-17, 23:59 IST.**

1) Which of the following is **TRUE** about Delay faults? **1 point**

- Stuck-at fault model generally do not verify the timing correctness
- Real time embedded systems require path delay fault models to test the delay faults
- For high speed circuits stuck-at fault model do not cover much delay faults.
- All of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
All of the above

2) When do delay faults occurs in a combinational circuit? **1 point**

- Clock period > the propagation delay of all paths
- Propagation delay of a combinational path > Clock Period
- Clock Period > Propagation delay of a combinational path
- None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
Propagation delay of a combinational path > Clock Period

3) Only for a few characteristic polynomials the LFSR is maximal length; such polynomials are **1 point** called:

- Non-primitive polynomials
- Primitive polynomials

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Advanced Faults in Real time Embedded Systems

BIST for Embedded Systems

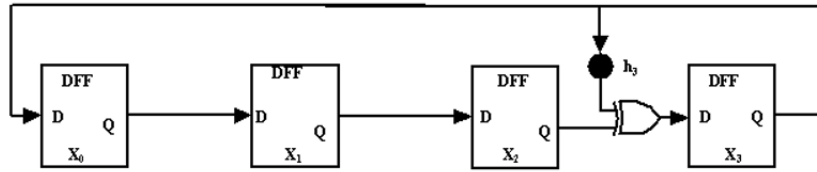
Quiz : Assignment-11

Advances in Embedded System Hardware Testing - II

Testing for Embedded Software Systems

Primitive polynomials

4) Consider a modular LFSR shown below. What is the characteristic function $f(x)$ for the circuit? **1 point**



- $1 + x$
- $1 + x + x^4$
- $1 + x^3 + x^4$
- $1 + x^2 + x^3$

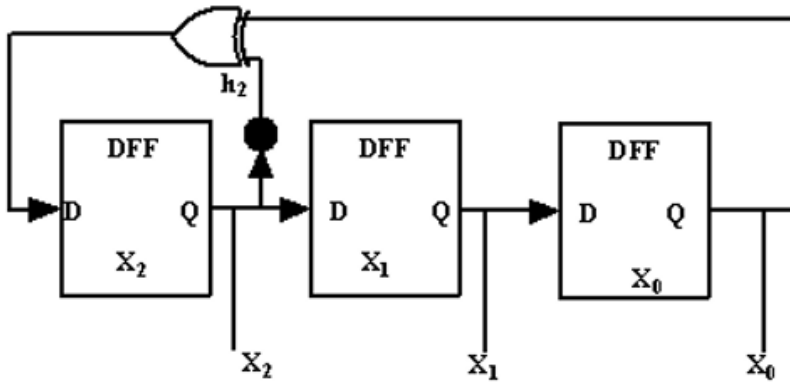
No, the answer is incorrect.

Score: 0

Accepted Answers:

$1 + x^3 + x^4$

5) Consider a circuit representation below of a 3-input Linear feedback shift register (LFSR). **1 point**
What is the characteristic polynomial $f(x)$ of the LFSR?



- $1 + x$
- $1 + x^2 + x^3$
- $1 + x + x^2$
- None of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

$1 + x^2 + x^3$

6) Inertial delay of a gate depends on:

1 point

- input rise or fall times
- input capacitance
- device characteristics
- All of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:*All of the above*

7) Which of the following is not a component for Built-in self-test(BIST)?

1 point

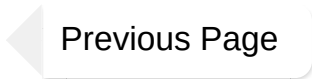
- Hardware test pattern generator
- Output response compactor
- Set and Reset by Shift Register
- Test Controller

No, the answer is incorrect.**Score: 0****Accepted Answers:***Set and Reset by Shift Register*8) In BIST, which of the following component does the lossy compression of the outputs of the CUT? **1 point**

- Input Mux
- Comparator
- Output response compactor
- Test Controller

No, the answer is incorrect.**Score: 0****Accepted Answers:***Output response compactor*9) ____of BIST generates the test patterns required to sensitize the faults and propagate the effect to the outputs. **1 point**

- Hardware Test Patter Generator
- Output Response Compactor
- Comparator
- Test Controller

No, the answer is incorrect.**Score: 0****Accepted Answers:***Hardware Test Patter Generator*Previous PageEnd

