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Courses » Embedded Systems-- Design Verification and Test

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# Unit 14 - Testing for Embedded Software Systems

## 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-12

The due date for submitting this assignment has passed. As per our records you have not submitted this assignment. **Due on 2018-10-24, 23:59 IST.**

1) Which of the following (X,Y) belongs to Unordered Codes? 1 point

- X = 10001, Y = 10000
- X = 11001, Y = 11000
- X = 11000, Y = 00000
- X = 11000, Y = 10001

**No, the answer is incorrect.**  
**Score: 0**

**Accepted Answers:**  
*X = 11000, Y = 10001*

2) Which of the following codes can detect unidirectional errors? 1 point

- X = 11000, Y = 00000
- X = 11000, Y = 10001
- X = 10001, Y = 10000
- X = 11001, Y = 11000

**No, the answer is incorrect.**  
**Score: 0**

**Accepted Answers:**  
*X = 11000, Y = 10001*

3) Which of the following is TRUE about online BIST? 1 point

- Not an efficient technique for OLT because present day circuits have parallelism and pipelining techniques for high utilization of its modules

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**Advances in Embedded System Hardware Testing - II**

**Testing for Embedded Software Systems**

- Testing for Reprogrammable hardware
- Interaction Testing between Hardware and Software
- Quiz : Assignment-12

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*All of the above*

4) A \_\_\_\_ can be configured to realize any possible combinational output for a given number of inputs. **1 point**

- CLB
- IOB
- LUT
- None of the above

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

*LUT*

5) Which of the following is TRUE about Virtual Machines? **1 point**

- Developer can treat it as the real machine
- A software layer very close to the hardware that hides the hardware's details and provides an abstract view to the programmer
- Operating systems are often viewed as virtual machines
- All of the above

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

*All of the above*

6) Which of the following is correct about the current software/hardware design process? **1 point**

- Hardware problems can be fixed with simple software modifications
- Once operational, software rarely needs modification or maintenance
- Valid and complete software requirements are easy to state and implement in code
- Hardware and software cannot be acquired separately and independently, with their successful and easy integration

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

*Hardware and software cannot be acquired separately and independently, with their successful and easy integration*

7) Which of the following is TRUE about the duplication schemes for online testing? **1 point**

- The circuit duplication is for crosschecking the output responses for Similarity
- In identical duplication, circuits are structurally equivalent
- In partial duplication, a minimized version of the circuit under test is replicated.
- All of the above

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

*All of the above*

8) Which of the following is TRUE about online testing techniques? **1 point**

- Self checking design using error detecting codes is non-intrusive

- The hardware overhead for duplication schemes for On-line Testing does not exceed 100%
- On-line BIST depends on the idle time of the modules
- All of the above

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

*On-line BIST depends on the idle time of the modules*

9) The components to be tested in FPGA testing are:

**1 point**

- CLB
- I/O Pins
- Interconnect Networks
- All of the above

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

*All of the above*

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