

Midterm Exam – COEN 140 Computer Hardware Laboratory

Instructions

First be sure to write your name, initials, and MU ID number in the places provided. Next please check to make sure this exam has all the pages.

The exam consists of 15 problems worth 9 points each for a total of 135 possible points.

Remember smart test taking.

1. Don't waste time on a problem you get stuck on. Try other problems and come back.
2. Show your work. Even if your answer is wrong you'll get credit for correctly attacking the problem. And even if your answer is correct you'll lose points for not showing your work.
3. Read all questions carefully to be sure you know what is being asked.

The exam is open Internet, but closed notes and book. Certain activities will be considered as academically dishonest. These include:

1. Communicating with anyone, except the professor and TAs, by any means during the exam.
2. Posting or viewing on the web any form of answer or crib sheet for the exam.

The only objects on your desk should be this exam and a writing instrument. Put your book bag and other belongings along the front wall. Sit only in a seat with an exam.

You have the full 50 minutes to complete the exam. Be sure to show all work so I can give partial credit where applicable.

Good Luck!

Name: _____ MU ID #: _____

Initials: _____

1. What causes most errors in testing the XS boards using GXSTEST?

2. What two ways can I/O pins be assign?

3. Name five (5) features that exist on the XSV-100 board that are not available on the XS40/XStend 1.3.2 boards.

Initials: _____

4. What is the gate count on the two boards used in class?

5. How do you create a brand new implementation for a project in Project Manager to allow for a change, if the implementation has already been allowed to run to completion?

6. How does one set the clock frequency on the XS4010 board?

7. Where would you go after running a simulation to verify that a circuit's inputs and outputs were assigned to the correct pins, or if you have any other problems during simulation?

8. After generating and checking the netlist for your logic circuit, how would you make your netlist available in a format that can be used by implementation tools?

9. How much additional RAM does the XStend Board add to the XS Board when connected? How is each bank of SRAM in the XSV-100 organized (in terms of K by bits)?

13. When a keyboard (PS/2) is connected to the XS40 board or XSV100 board what two signals are passed through? Describe the signals and give there pin connections for both boards.

14. What are the IPAD, OPAD, and BUFG components in the schematic editor used for?

15. How does the stereo codec on the XSV board work in terms of output and input?