

In doing your homework, please make sure you follow the following guidelines. Failure to follow them, will result in 0 grade:

- *Only write on one side of your paper.*
- *Problem solutions must follow in order i.e. Start with Problem 1, then Problem 2 and etc. The solutions to each section must also be in order.*
- *Unless explicitly specified, you should not explain your solution – just provide your solution.*
- *Make sure that the papers are stapled and your name is on the paper. Make sure your name appears exactly as shown on your registration.*

Problem 1 (10 Points)

Find the following paper in IEEE Digital Library, read it and write a maximum one page summary of some aspect of the paper.

Avižienis, J. Laprie, B. Randell, and C. Landwehr, "Basic Concepts and Taxonomy of Dependable and Secure Computing", IEEE Transactions on Dependable and Secure Computing, Vol. 1, No. 1, pp. 11-33, January -March 2004, ([PDF](#))

Problem 2 (10 Points)

Design a one-bit 5MR voter using basic gates.

Problem 3 (10 Points)

Transform the circuit with the function $F = \overline{AB} + C$ into a self-dual circuit with the additional input D.

Problem 4 (10 Points)

Design a self-dual circuit of a full adder.

Due 2/11/10