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ENEE 244 Problem Set 4

(Due: Mon. Feb. 24, 2014 at your Discussion/Recitation section immediately preceding Class 9, (Tues., Feb. 25))

Read Chapter 4, of Givone, Digital Principles and Design, Sections 4-1 through 4-8.2, 4.9 excluding 4.9.1 and .2, and read 4.10 through 4.10.3; then work the following problems from Chapter 4:

- 1. Prob. 4-1.
- 2. Prob. 4-2. a., c.,& e.
- 3. Prob. 4-4. a. & c.
- 4. Prob. 4-6. a. & b.
- 5. Prob. 4-7. a.
- 6. Prob. 4-8. a. & h.
- 7. Prob. 4-9. a. & h.
- 8. Prob. 4-10. a. & b.
- 9. Prob. 4-11. a.
- 10. Prob. 4-12. b.
- 11. Prob. 4-14. a.
- 12. Prob. 4-15.
- 13. Prob. 4-16.
- 14. Prob. 4-22.
- 15. Prob. 4-25. a.

Note: In class and on exams we will use the following equivalent terminology and notation: "simplest sum of products form (or expression)" means the same as the Givone's use of the term "minimal sum"; "simplest product of sums form (or expression)" means the same as the Givone's use of the term "minimal product". Letting the symbol " ϕ " denote "don't cares" then the notation

"f(w, x, y, z) =
$$\Sigma(4, 5, 8, 9, 12, 13) + \Sigma_{\phi}(0, 3, 7, 10, 11)$$
"

means the same as the Givone's use of

"f(w, x, y, z) =
$$\Sigma m(4, 5, 8, 9, 12, 13) + dc(0, 3, 7, 10, 11)$$
".

Furthermore,

"f(w, x, y, z) =
$$\Pi(4, 5, 8, 9, 12, 13) + \Pi_{\phi}(0, 3, 7, 10, 11)$$
"

means the same as the Givone's use of

"f(w, x, y, z) =
$$\Pi M(4, 5, 8, 9, 12, 13) + dc(0, 3, 7, 10, 11)$$
".