



ENEE 244 Problem Set 4

(Due: Class 9, Wed., Oct. 1, 2014)

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

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