

國立中山大學
資訊科學與工程學系
電子設計自動化及測試導論

ELECTRONIC DESIGN AUTOMATION & TESTING

Spring 2022

Homework Assignment #6

Due Date: May 18, 2022

About Path-Oriented Decision Making (**PODEM**), please answer the following questions according to Figure 1.

1-4 PODEM (See Figure 1)

1. (15%) Derive the effective test set for G5 SA0 by PODEM
2. (15%) Derive the effective test set for G5 SA0 by PODEM with More Intelligent Backtracing
3. (15%) Derive the effective test set for G5 SA0 by PODEM with Unguided Backtracing
4. (15%) Please compare the above (1), (2), (3). [Chapter 10, slides 7-23]
 - A. (7%) What are the differences between (1) and (2)/(3)?
 - B. (8%) What are the differences between (2) and (3)?

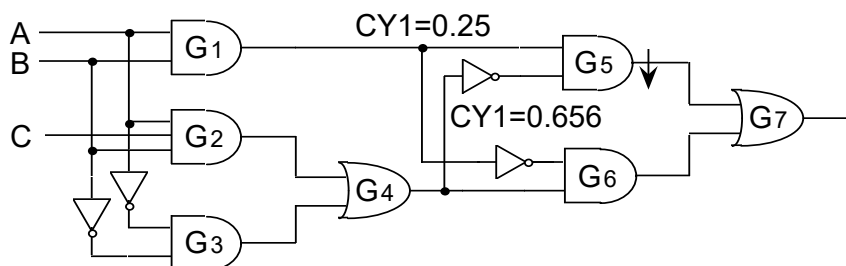


Figure 1.

5. (15%) **Backtracking and Backtracing**
 - A. (5%) What are the difference between Backtracking and (10%, 5% for each) Backtracing? Please show by example.
6. (25%) **FAN** (See Figure 2)
 - A. (15%) Generate a test for the fault f-sa1 by using FAN algorithm.

B. (10%) What are the differences between PODEM and FAN?

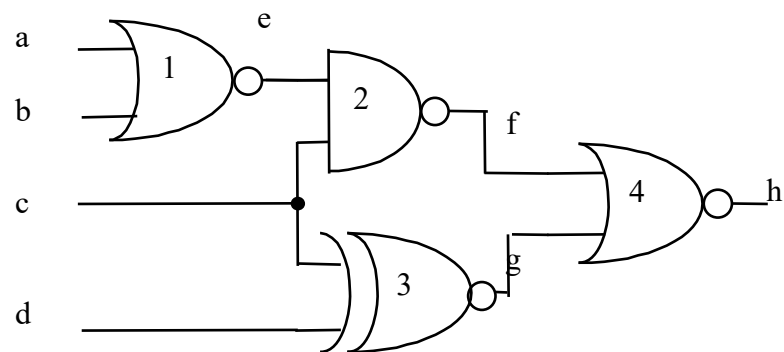


Figure 2