國 立 中 山 大 學

資 訊 工 程 學 系 所

Introduction to EDA&Testing – Spring 2022

Homework Assignment #1
Due Date: March 9, 2022

1. (25%) If the yield of good dice is 90%, and we want a defect level not to exceed 0.1%, what level of testing in terms of fault coverage must be achieved?

2. (50%) Given the market entry time verse revenue curves as shown in Figure 1, fill in the following formula

   a. (25%) Lost Revenue = Total Expected Revenue * [ ];

   The answer should be in term of d and w.
   d is the delay entry, 2w is the product life.
   The two market growth rates are the same.

   b. (25%) Given a product with total expected revenue $100M, product life is 20 months. What is the revenue loss due to the one month late to the market?

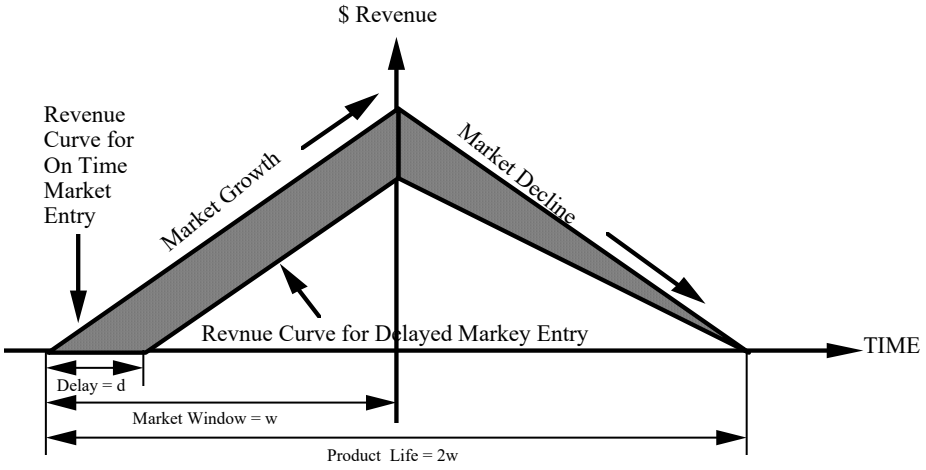

Figure 1. Market Entry Time vs. Revenue

3. (25%) Try to derive the test pattern for the fault *f* (sa1). Explain your result. Try to simply the circuit.