

22.39
Fall 2005

Problem Set 13

1. Calculate the Fussell-Vesely and Risk Achievement Worth component importance at $t = 200$ hours for a 2-out-of-4 voting system using the following failure rates: $\lambda_1 = 10^{-3} \text{ hr}^{-1}$, $\lambda_2 = 2 \times 10^{-3} \text{ hr}^{-1}$, $\lambda_3 = 3 \times 10^{-3} \text{ hr}^{-1}$, $\lambda_4 = 4 \times 10^{-3} \text{ hr}^{-1}$.
2. List the principal strengths and limitations of the structuralist and rationalist interpretations of defense in depth after reading the paper by Sorensen et al.

Sorensen, J. N., G. E. Apostolakis, et al. "On the Role of Defense In Depth in Risk-Informed Regulation." Presented at PSA '99, Washington, DC (August 22-25, 1999).