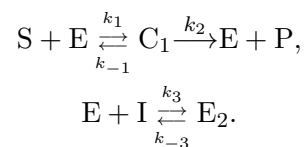


Math 5110 - Fall 2012
Homework Problem Set 7
Due Nov. 27, 2012

1. (a) Use the law of mass action to write the differential equations for the chemical reactions



What are the conserved quantities?

- (b) Find the steady state solution in the case that $k_2 = 0$
- (c) Suppose that the system operates in such a way that this (steady state) balance between the components is always maintained, even when $k_2 \neq 0$. What is the rate of production of product P?
- (d) The quantity I is usually identified as a catalytic poison. Why?