

## Take Home Project 1

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### 1 Question 1

The rates of change of  $C_e$  and  $C_m$  are given by the system of differential equations:

$$\begin{cases} \frac{dC_e}{dt} = k_1 C_p - (k_2 + k_3) C_e + k_4 C_m \\ \frac{dC_m}{dt} = k_3 C_e - k_4 C_m \end{cases} \quad (1)$$