BE.430/2.795//6.561/10.539/HST.544

Homework Set 5

Handed out: Wednesday Oct. 20

Due: Wednesday Oct. 27 by 5pm

Reading assignment: (a) Chapter 1, Section 1.4 to1.6, and Chapter 2, sections 2.2-2.7 in the Grodzinsky text.

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1. Problem 2.2.1 Coupled Diffusion in a Neutral Membrane (Grodzinsky text):

Do parts (a)-(e). Note: For part (d), you've already done the math (Fourier analysis) in a previous homework problem, so NO NEED to repeat the derivation...you can just write the answer in terms of the correct diffusivity!

2. Problem 2.4.3 An example using Donnan Equilibrium (Grodzinsky text):

Do parts (a)-(c) only. (The algebra may get a little hairy in (b); the main point is the physical interpretation in part (c).

3. Study examples 2.6.1, 2.6.2; Do Problem 2.7.1