MTHE 235, Homework #9

Part I

Please do the following problems from the Textbook.

Section 7.1:

Problem 10, 12, 17, 18, 19, 23, 28, 32, 38, 42

Part II

1. A coupled spring-mass system consists of two masses connected between three springs. Suppose the masses are $m_1 = m_2 = m$ and the spring constants are $k_1 = k_2 = k_3 = k$. Let $x_1, x_2$ be the displacements of the masses from their equilibrium positions respectively. Suppose initially $x_1(0) = 2, x_2(0) = 0$ and then both masses are released from rest. Set up the differential equation for this system and find the solution.