Problem 1: Problem 4.6 in Notes (Spacecraft Kinematics, in Control of Aerospace Vehicles).

Problem 2: Problem 5.2 in Notes (Moments and Products of Inertia, Rotational Dynamics).

Problem 3: Problem 8.2 in Notes (Linearized Flight Dynamics).

Problem 4: Problem 9.7 in Notes (Flight Modes for F4).