Consider a rigid body with \( I_1 > I_2 > I_3 \) as the three principal moments of inertia (centroidal). Write the Euler’s equations of motion for the angular motion of the rigid body using the body-fixed angular velocities \( \omega_1, \omega_2, \omega_3 \). Show that \( \omega_1 = 0, \omega_2 = \Omega, \omega_3 = 0 \), is a steady-state solution. Determine the stability of the motion to small perturbation.