1) Part of the suspension system

2) Proof mass

3) For the release etch for the proof mass structure

4) Sensing the y-axis (coriolis induced) proof mass motion

5) Comb drive actuator (CDA) to produce proof mass motion along the x-axis

6) z-axis

7) Angular rate

8) $\omega_n^2 = \dfrac{k}{m} \rightarrow k = m\omega_n^2 = (1 \times 10^{-9})(2\pi \times 10{,}000)^2 = 3.95 \; N/m$

$\dfrac{\omega_n}{Q} = \dfrac{c}{m} \rightarrow c = \dfrac{m\omega_n}{Q} = \dfrac{(1 \times 10^{-9})(2\pi \times 10{,}000)}{100} = 6.28 \times 10^{-7} \; Kg/s$

9) $Y_{amp} = \dfrac{2m\Omega A_x}{c^2 \omega_n} = \dfrac{2(1 \times 10^{-9})(300)(2\pi/360)(1 \times 10^{-6})}{(6.28 \times 10^{-7})^2 (2\pi \times 10{,}000)} = 4.23 \times 10^{-7} \; m$

10) $\Omega = \dfrac{Y_{amp} c^2 \omega_n}{2m A_x} = \dfrac{(1 \times 10^{-6})(6.28 \times 10^{-7})^2 (2\pi \times 10{,}000)}{2(1 \times 10^{-9})(1 \times 10^{-6})}$

$= 12.39 \; rad/s$

$= 709.9 \; °/s$