Home Exercise 1

In Theory Lecture; *SDOF with damping,* the deformation response factor R_d and corresponding phase angle is expressed by using complex numbers. Use MATLAB and the functions *abs* and *angle* to reproduce the diagram shown below. Also use your MATLAB code to determine the vibration amplitude in the example with a rotating unbalance if the engins angular velocity is changed to $10 \cdot 2\pi$ rad/s and the damping ζ is set to 5%.

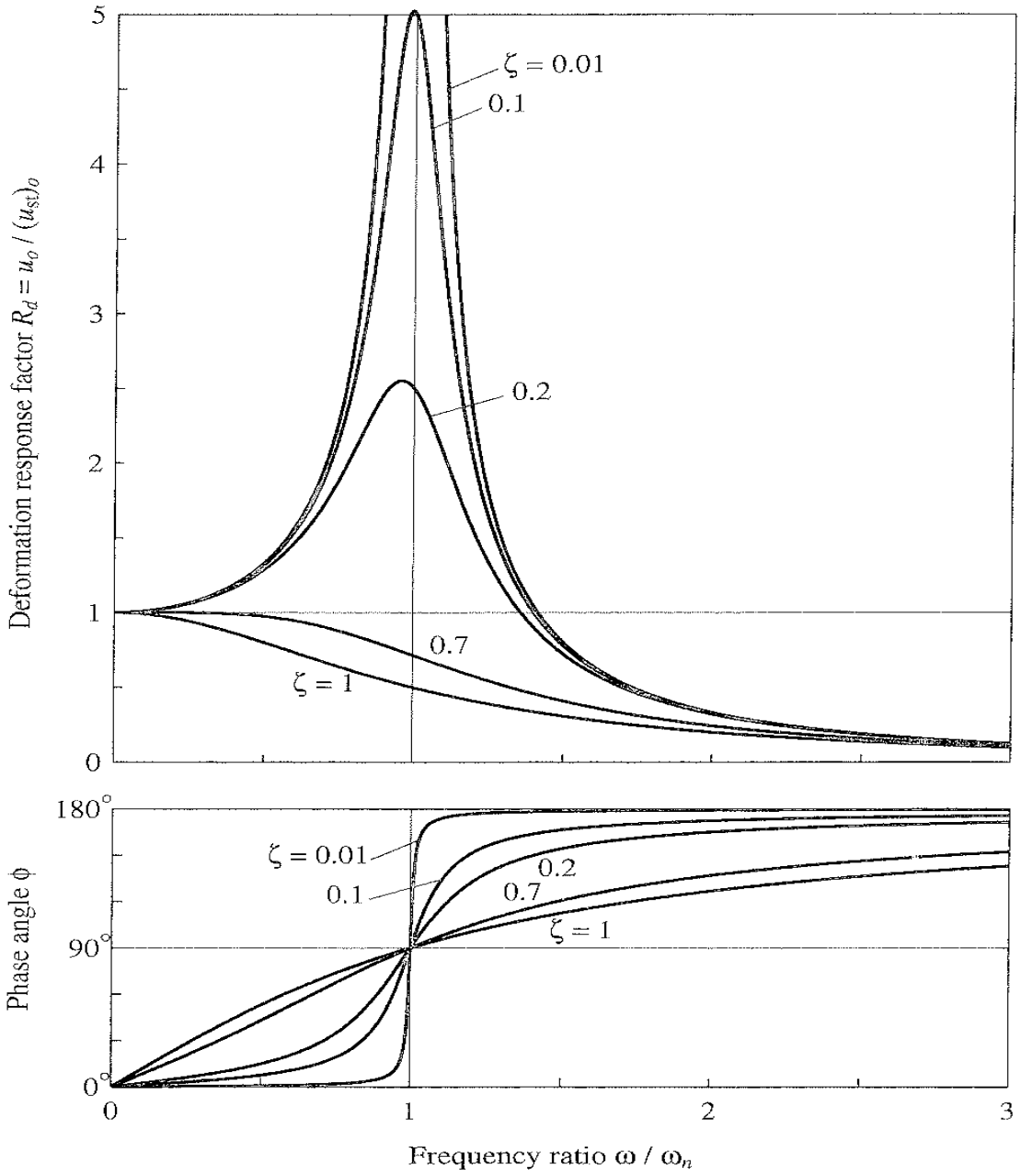

Figure 3.2.6 Deformation response factor and phase angle for a damped system excited by harmonic force.