

HOMEWORK #11 (Chapter 3 Higher –Order Differential Equations)

In problem, solve equation (4) subject to the appropriate boundary conditions. The beam is of length L and ω_0 is a constant. (where equation (4) is $EI \frac{d^4 y}{dx^4} = \omega(x)$)

1. The beam is embedded at its left end and simply supported at its right end and

$$\omega(x) = \omega_0 \sin\left(\frac{\pi x}{L}\right), \quad 0 < x < L. \quad (\text{Exercises 3.9 Problem 4})$$