

**Lab 10:** Obtain the first five natural frequencies for in-plane vibration of the turbine blade as shown using four isoparametric quadrilateral elements. The end of the blade at  $x = 0$  is clamped. Take  $\rho = 7800 \text{ kg/m}^3$ ;  $E = 200 \text{ GPa}$  &  $\nu = 0.3$

