

- Q.2. A beam of length  $L$  ( $=1\text{m}$ ) and square cross section (of side  $10\text{ mm}$ ) is shown in Figure 2. Calculate the primary and secondary variables by using four beam elements. Young's modulus  $E = 200\text{ GPa}$  and Poisson's ratio  $= 0.3$ . The nodes must be numbered as shown in Figure 2. Use Matlab software for computations. **[10 marks]**

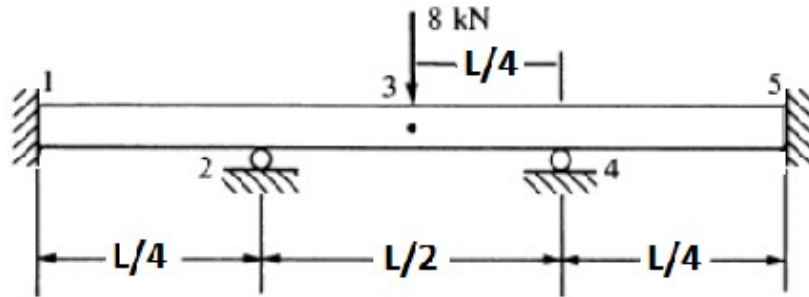


Figure 2

