## **National Taiwan University**

## **Advanced Structural Theory**

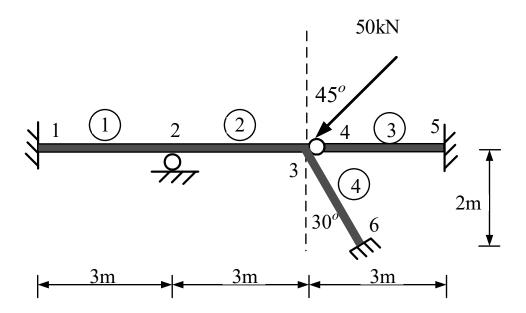
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Program Assignment 1 10/19/2017 Due: 11/2/2017

- 1. Code your FRAME17 as stated in FRAME17.m file.
- 2. Prepare an input file for the structure below and test your program. Note that members 2 and 4 are rigidly connected and member 3 is pinned with them.



## Material properties:

Members 1 and 3:  $E=160 \text{ GPa}, \nu=0.3$ 

Member 2: E=80 GPa, v = 0.35Member 4: E=120 GPa, v = 0.25

## Cross-Sectional properties:

 $A = 80 \times 10^4 \text{ mm}^2$  for members 1, 2 and 3

 $A = 30 \times 10^3 \,\mathrm{mm}^2$  for member 4

 $I = 25 \times 10^8 \text{ mm}^4$  for members 1, 2 and 3

 $I = 90 \times 10^6 \text{ mm}^4$  for member 4