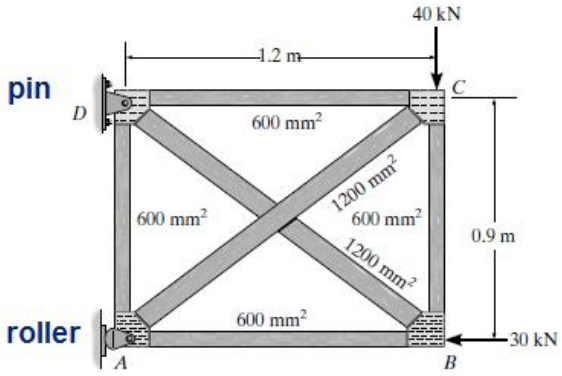
Issued: November 11, 2017
Due: **Monday** November 20, 2017 **@ 5 pm**

T.A: Ahmad Alenezi (AALEN039@uottawa.ca**)**
Marking: marked out of **20 marks**

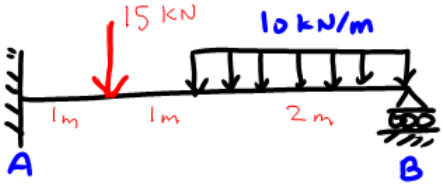
Problem 1 (5 marks)
For the following indeterminate truss (with SI = 1) determine all the member forces using the **Force method**. E is constant for all members. A for all members is shown in the figure.

- Solve by taking the axial force $\mathbf{N_{BC}}$ as the redundant.



Problem 2 (5 marks)
For the following indeterminate beam (with SI = 1) determine the reactions then draw the shear and moment diagrams using the **Force method**. EI is constant for all members.

- Solve by taking the vertical reaction $\mathbf{B_Y}$ as the redundant.
- *Note: use Mohr's tables to solve the integrals.*



Problem 3 (10 marks)
For the following indeterminate frame (with SI = 1) determine the reactions then draw the shear and moment diagrams using the **Force method**. EI is constant for all members.

- Solve by taking the vertical reaction $\mathbf{C_Y}$ as the redundant.
- *Note: use Mohr's tables to solve the integrals.*