

6. A frame structure is shown in Figure Q6.

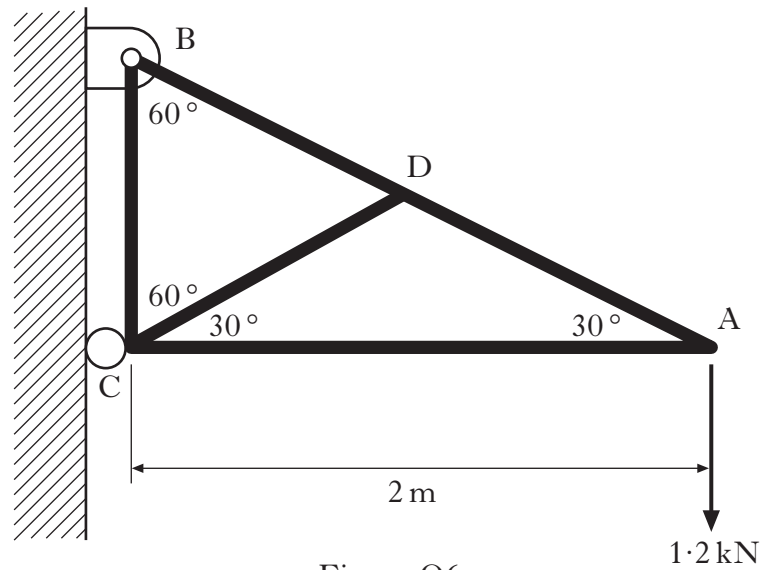


Figure Q6

(a) Calculate the **magnitude** of:

- (i) the reaction force at C, using the Principle of Moments; 2
- (ii) the reaction force at B. 1

CD is a redundant member.

(b) Explain what is meant by the term “redundant member”. 1

(c) Calculate, using *nodal analysis*, the **magnitude** and **nature** of the forces in members AD and AC. 3

(7)

[Turn over