

3 (a) State what is meant by the *moment of a force*.

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.....

[1]

- (b) A traffic light hangs from a uniform metal pole AB, freely pivoted at point A, as shown in Fig. 3.1. The pole is 7.5 m long and has a mass of 8.0 kg. The mass of the traffic light is 12.0 kg.

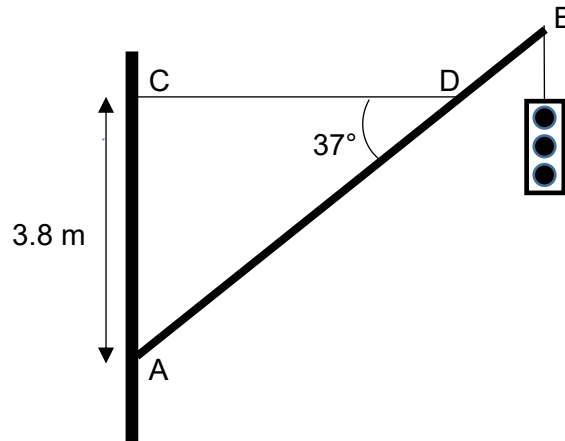


Fig. 3.1

- (i) Determine the tension in the horizontal cable CD. Assume the mass of cable CD is negligible.

tension = N [2]

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- (ii) Determine the force exerted on the metal pole at pivot A.

force = N

direction: [3]

[Total: 6]