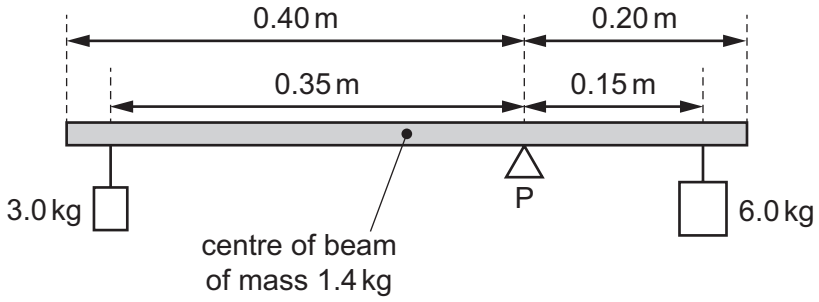
11 A uniform beam of mass 1.4 kg is pivoted at P as shown. The beam has a length of 0.60 m and P is 0.20 m from one end. Loads of 3.0 kg and 6.0 kg are suspended 0.35 m and 0.15 m from the pivot as shown.



What is the torque that must be applied to the beam in order to maintain it in equilibrium?

A 0.010 N m **B** 0.10 N m **C** 0.29 N m **D** 2.8 N m

12 An air bubble is rising through a liquid at a constant speed. The forces on it are the upthrust *U*, the viscous drag *D* and its weight *W*.

Which diagram shows the directions and relative sizes of the forces?