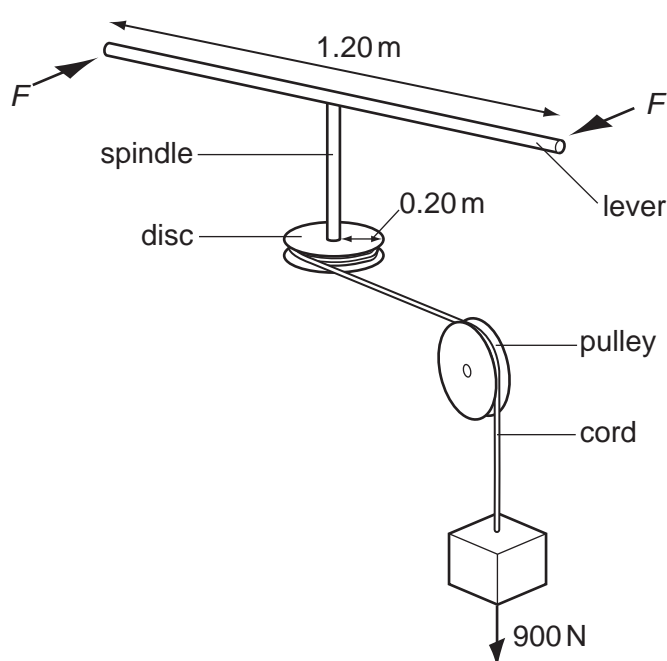


- 12** An object, made from two equal masses joined by a light rod, falls with uniform speed through air.

The rod remains horizontal.

Which statement about the equilibrium of the system is correct?

- A** It is not in equilibrium because it is falling steadily.
- B** It is not in equilibrium because it is in motion.
- C** It is not in equilibrium because there is a resultant torque.
- D** It is in equilibrium because there is no resultant force and no resultant torque.
- 13** A spindle is attached at one end to the centre of a lever 1.20 m long and at its other end to the centre of a disc of radius 0.20 m. A cord is wrapped round the disc, passes over a pulley and is attached to a 900 N weight.



What is the minimum force F , applied to each end of the lever, that could lift the weight?

- A** 75 N **B** 150 N **C** 300 N **D** 950 N

Space for working