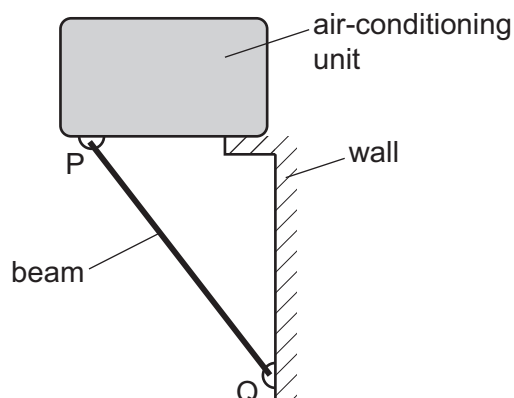
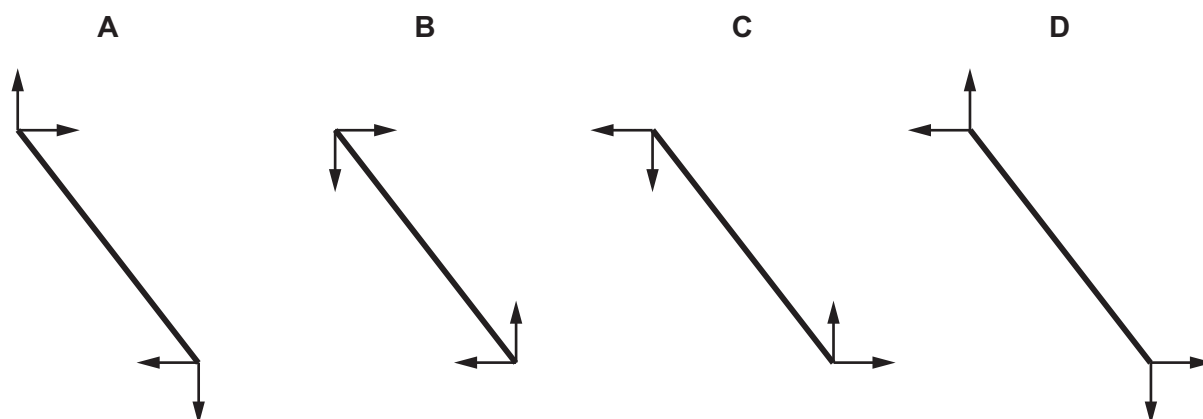


- 16** An air-conditioning unit is supported by a rigid beam PQ, as shown.



Which diagram shows the directions of the horizontal and vertical forces acting on the ends of the beam?



- 17** A hydroelectric power station uses the gravitational potential energy of water to generate electrical energy.

In one particular power station, the mass of water flowing per unit time is  $1.5 \times 10^5 \text{ kg s}^{-1}$ . The water falls through a height of 120 m.

The electrical power generated is 100 MW.

What is the efficiency of the power station?

- A** 5.6%      **B** 43%      **C** 57%      **D** 68%