

- 11** A steel ball is falling at a constant (terminal) speed in still air. The forces acting on the ball are upthrust, viscous drag and weight.

What is the order of increasing magnitude of these three forces?

- A** upthrust  $\rightarrow$  viscous drag  $\rightarrow$  weight
  - B** viscous drag  $\rightarrow$  upthrust  $\rightarrow$  weight
  - C** viscous drag  $\rightarrow$  weight  $\rightarrow$  upthrust
  - D** weight  $\rightarrow$  upthrust  $\rightarrow$  viscous drag
- 12** What is a couple?
- A** a pair of equal forces acting in the same direction but along different lines
  - B** a pair of forces that are equal and opposite but acting along different lines
  - C** a pair of forces that produce no resultant force and no resultant moment
  - D** a pair of unequal forces acting in opposite directions but along the same line
- 13** Four coplanar forces act on a rigid rod, as shown. The rod is hinged at P.

Which force produces the greatest moment about point P?

