

**15** A ball is thrown vertically upwards.

Neglecting air resistance, which statement is correct?

- A** The kinetic energy of the ball is greatest at the greatest height attained.
- B** By the principle of conservation of energy, the total energy of the ball is constant throughout its motion.
- C** By the principle of conservation of momentum, the momentum of the ball is constant throughout its motion.
- D** The potential energy of the ball increases uniformly with time during its ascent.

**16** A bow of mass  $400\text{ g}$  shoots an arrow of mass  $120\text{ g}$  vertically upwards. The potential energy