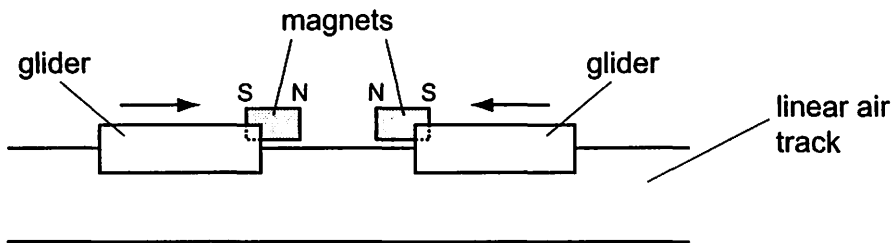


- 9 Two gliders of equal mass, each fitted with a magnet, move along a linear air track without friction.



They move towards each other with equal initial speeds. As they approach, the magnets repel each other. Each glider decelerates to rest, then accelerates and moves off in the opposite direction.

Which statement is true throughout the whole motion?

- A** Kinetic energy is conserved because none is converted to heat.
- B** Kinetic energy is not conserved because neither moves at constant speed.
- C** Momentum is conserved because no external force acts on the gliders.
- D** Momentum is not conserved because, at the instant of the closest approach, both gliders are at rest.