

**25** Which statement about longitudinal and transverse wave motion for a progressive wave is correct?

- A** All transverse and longitudinal waves require a medium for propagation.
- B** All transverse waves travel at the same speed, but longitudinal waves can travel at different speeds.
- C** In both transverse waves and longitudinal waves, a particle with zero displacement has a maximum speed.
- D** In a longitudinal wave there is a net movement of particles in the direction of travel of the wave, but there is no net movement of particles in a transverse wave.