

- 39** Which statement explains why alpha-particles have discrete energies, but beta-particles have a continuous range of energies?
- A** Beta-particles have a much smaller mass than alpha-particles which means beta-particles can be emitted with a larger range of velocities.
 - B** Only alpha-particles experience repulsion from the nucleus which is dependent on the number of protons in the nucleus.
 - C** Only beta-particles are emitted with another lepton and some energy is transferred to the other lepton.
 - D** Only the energy of alpha-particles is discrete because the composition of alpha-particles is always the same.