

27 The nuclear reaction  $P + Q \rightarrow X + Y$  proceeds with a release of energy. Which of the following statement must be correct?

- A Mass of X and Y is larger than mass of P and Q.
- B Momentum of X and Y is larger than momentum of P and Q.
- C Total binding energy of X and Y is larger than total binding energy of P and Q.
- D Binding energy per nucleon of both X and Y are larger than binding energy per nucleon of P or Q.

28 The binding energy of a nucleus is  $10^{-11}$  J. The mass of the nucleus is  $10^{-26}$  kg. The binding energy per nucleon is