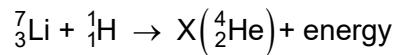


- 29** In the following induced nuclear reaction, when one Lithium-7 nucleus reacts with one Hydrogen-1 nucleus, X number of Helium-4 nuclei are produced.



During the reaction,  $1.6 \times 10^{12}$  J of energy is released when 1.0 g of Hydrogen-1 (mass of 1 Hydrogen-1 nucleus =  $1.008 \mu$ ) and sufficient Lithium-7 are used. The binding energy of a Helium-4 nucleus is 28.3 MeV.

What is the binding energy of a Lithium-7 nucleus?

**A** 11.6 MeV

68.2 MeV

**B** 39.9 MeV

**C** 56.6 MeV

**D**