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.

$$^{7}_{3}\text{Li} + {}^{1}_{1}\text{H} \rightarrow \text{X}\left({}^{4}_{2}\text{He}\right) + \text{energy}$$

During the reaction, 1.6×10^{12} J of energy is released when 1.0 g of Hydrogen-1 (mass of 1 Hydrogen-1 nucleus = 1.008 *u*) 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 **B** 39.9 MeV **C** 56.6 MeV **D** 68.2 MeV