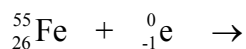
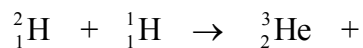
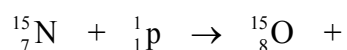


Marks
3

- Balance the following nuclear reactions by identifying the missing nuclear particle or nuclide.







2

- Calculate the atomic mass of silicon from the isotope information provided.

Isotope	Mass of isotope (a.m.u.)	Relative abundance
${}^{28}\text{Si}$	27.97693	92.21%
${}^{29}\text{Si}$	28.97649	4.70%
${}^{30}\text{Si}$	29.97376	3.09%

Answer:

3

- Calculate the molar activity of ${}^3\text{H}$ (in Curie), given its half-life of 12.26 years.

Answer: