Ainu Lailla Syawa
XII A-2

No. :
Date : 22 -2 -2022

Latihan soal.

1. Dik : A = 7 mp = 1,0078 sma $m^{7}_{3}Li$ = 7,018 sma.
Z = 3 mn = 1,0086 sma

- $\Delta m = [Z.mp + (A.Z)\,mn - m^{7}_{3}Li]$
$= [3.1,0078 + (7.3).1,0086 - 7,018]$
$= 0,004$

$\Delta E = \Delta m\,(931,5\ MeV)$
$= 0,004(931,5\ MeV)$
$= 3,7\ MeV$

2. Dik : $m^{16}_{8}O$ = 15,99051 sma mn : 1,008665 sma
mp : 1,007825 sma A : 16 Z : 8

- $\Delta m = [Z.mp + (A-Z)mn - m^{16}_{8}O]$
$= [8.1,007825 + (16-8).1,008665 - 15,99051]$
$= 0,14141$ sma

$\Delta E = \Delta m\,(931,5\ MeV)$
$= 131,723415\ MeV$

3. Dik : $T_{1/2}$ = 1620 th

$\frac{Nt}{No} = \frac{1}{16}$

- $\frac{Nt}{No} = \left(\frac{1}{2}\right)^{t/T_{1/2}} \cdot No$ $\frac{1}{16} = \left(\frac{1}{2}\right)^{t/1620}$

$\frac{Nt}{No} = \left(\frac{1}{2}\right)^{t/T_{1/2}}$ $4 = \frac{t}{1620}$

$t = 1620 . 4 = 6480$ th

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4. Dik : t = 7,5 th

$\frac{At}{A0} = \frac{1}{8}$

- $At = \left(\frac{1}{2}\right)^{t/T'_{1/2}} . A0$

$\frac{At}{A0} = \left(\frac{1}{2}\right)^{t/T'_{1/2}}$

$\frac{1}{8} = \left(\frac{1}{2}\right)^{7,5/T'_{1/2}}$

$\left(\frac{1}{2}\right)^3 = \left(\frac{1}{2}\right)^{7,5/T'_{1/2}}$

$3 = \frac{7,5}{T'_{1/2}}$

$T'_{1/2} = \frac{7,5}{3} = 2,5$ th

5. Dik - m : 6 mg : $6 . 10^{-3}$ gr

$T'_{1/2}$: 3,8 hari : 328.320 sekon

Mr Rn : 222

- $A = \lambda . N = \frac{0,693}{T'_{1/2}} . N \rightarrow N = \frac{m}{Mr} . NA$

$A = \frac{0,693}{328.320} \times \frac{6.10^{-3}}{222} \times 6,02.10^{23}$

$= 2,1.10^{-6} \times 2,7.10^{-5} \times 6,02.10^{23} = 3,4.10^{13}$