Exemplar Problems

Q13. Chlorine exists in two isotopic forms, Cl-37 and Cl-35, but its atomic mass is 35.5. This indicates the ratio of Cl-37 and Cl-35 is approximately

(a) 1 : 2
(b) 1 : 1
(c) 1:3
(d) 3:1

Sol. (c) $^{37}_{17}Cl : ^{35}_{17}Cl$

1 : 3 Ratio

$$\text{Average atomic mass} = \frac{(37 \times 1) + (35 \times 3)}{1 + 3}$$

$$= \frac{142}{4} = 35.5$$