Yakeen NEET 2.0 2026

Physical Chemistry By Amit Mahajan Sir

Some Basic Concept of Chemistry

DPP: 3

Q1 An element, X has the following isotopic composition,
$^{200}\mathrm{X}: 90\%$
$^{199}\mathrm{X}: 8\%$
$^{202}\mathrm{X}: 2\%$
the weighted average atomic mass of the naturally occuring element ' X ' is closest to
(A) 201 amu (B) 202 amu
(C) 199 amu (D) 200 amu

Q2 The atomic weight of chlorine is 35.5. It has two isotopes of atomic weight 35 and 37. What is the percentage of the heavier isotope in the sample?
(A) 5 (B) 10
(C) 25 (D) 20

Q3 B has two isotopes $^{10}\mathrm{B}(19\%)$ and $^{11}\mathrm{B}(81\%)$. The atomic mass of B is
(A) 10.81 (B) 11.5
(C) 11 (D) 10.5

Q4 If an element Z exist in two isotopic form Z^{50} and Z^{52}. The average atomic mass of Z is 51.7. Calculate the abundance of each isotopic forms
(A) $Z^{50}(15\%), Z^{52}(85\%)$
(B) $Z^{50}(85\%), Z^{52}(15\%)$
(C) $Z^{50}(5\%), Z^{52}(95\%)$
(D) $Z^{50}(95\%), Z^{52}(5\%)$

Q5 Atomic mass of boron is 10.81 . It has two isotopes with 80% and 20% abundance respectively. The atomic mass of the isotope having 80% abundance is 11.01. The atomic mass of the other isotope is
(A) 10.80 (B) 11.01
(C) 10.01 (D) 21.82

Q6 Carbon occur in nature as a mixture of C 12 and C 13. Average atomic mass of carbon is 12.011 what is the $\%$ aboundance of $\mathrm{C}12$ in nature?
(A) 99.8% (B) 98.9%
(C) 97.6% (D) 98.5%

Q7 Boron has two isotopes boron-10 and boron-11 whose percentage abundances are 19.6% and 80.4% respectively. What is the average atomic mass of boron?
(A) 10.8 (B) 10.6
(C) 9.6 (D) None of these

Q8 'He' has two naturally occurring isotopes He-3 and He –4 . The average atomic mass of helium is 3.98 amu. Which isotope is more abundant in nature?
(A) $\mathrm{He}-4$
(B) $\mathrm{He}-3$
(C) both are equally abundant
(D) none of these

Q9 Given that the abundances of isotopes $^{54}\mathrm{Fe}$, $^{56}\mathrm{Fe}$ and $^{57}\mathrm{Fe}$ are $5\%, 90\%$ and 5%, respectively, the atomic mass of Fe is
(A) 55.85 (B) 55.75
(C) 55.95 (D) 56.05

Q10 Atomic weight of Ne is 20.2. Ne is mixture of $^{20}\mathrm{Ne}$ and $^{22}\mathrm{Ne}$, relative abundance of heavier isotope is
(A) 90 (B) 20
(C) 40 (D) 10

Answer Key

Q1	(D)
Q2	(C)
Q3	(A)
Q4	(A)
Q5	(C)
Q6	(B)
Q7	(A)
Q8	(A)
Q9	(C)
Q10	(D)