Foundation

Time Taken = 2 Minutes
Score = 16/16

Udaan 2025
Chemistry
Chemical Reactions and Equations

DHA: 2

Q 1 We balance the chemical equations so that they obey the:

(A) law of constant proportion

(B) law of conservation of mass ✓

(C) law of multiple proportion

(D) law of reciprocal proportion

Q 2 Find the stoichiometric coefficients for the given chemical equation.

$aAl + bO_2 \rightarrow cAl_2O_3$

(A) a = 3, b = 2, c = 4

(B) a = 2, b = 4, c = 3

(C) a = 4, b = 3, c = 2 ✓

(D) a = 2, b = 3, c = 4

Q 3 Find the stoichiometric coefficients for the given chemical equation.

$aH_2S + bO_2 \rightarrow cH_2O + dSO_2$

(A) a = 2, b = 1, c = 2, d = 3

(B) a = 2, b = 1, c = 1, d = 3

(C) a = 3, b = 2, c = 3, d = 2

(D) a = 2, b = 3, c = 2, d = 2 ✓

Q 4 Find the stoichiometric coefficients for the given chemical equation.

$aNa_2SO_4 + bBaCl_2 \rightarrow cBaSO_4 + dNaCl$

(A) a = 1, b = 1, c = 1, d = 1

(B) a = 2, b = 1, c = 1, d = 2

(C) a = 1, b = 2, c = 1, d = 2

(D) a = 1, b = 1, c = 1, d = 2 ✓

Answer Key

Q1	**B**
Q2	**C**
Q3	**D**
Q4	**D**

Hints & Solutions

Q 1 **Text Solution:**

Mass is neither created nor destroyed in simple chemical reactions.

Video Solution:

Q 2 **Text Solution:**

(i) Use hit-and-trial method to balance the chemical equation.

(ii) Start balancing the compound (reactant or product) that contains the maximum number of atoms. In that compound, balance the element with the maximum number of atoms.

Video Solution:

Q 3 **Text Solution:**

(i) Use hit-and-trial method to balance the chemical equation.

(ii) Start balancing the compound (reactant or product) that contains the maximum number of atoms. In that compound, balance the element with the maximum number of atoms.

Video Solution:

Q 4 **Text Solution:**

(i) Use the hit-and-trial method to balance the chemical equation.

(ii) Balance the polyatomic ion first and then balance the other elements.

Video Solution: