

CHEMISTRY

- Which one of the following pairs of compounds illustrates the law of multiple proportion?
(1) H_2O , Na_2O
(2) MgO , Na_2O
(3) Na_2O , BaO
(4) SnCl_2 , SnCl_4
- Boron has two stable isotopes, ^{10}B (19%) and ^{11}B (81%). The atomic mass that should appear for boron in the periodic table is
(1) 10.8 (2) 10.2
(3) 11.2 (4) 10.0
- What is the concentration of nitrate ions if equal volumes of 0.1 M AgNO_3 and 0.1 M NaCl are mixed together
(1) 0.1 M (2) 0.2 M
(3) 0.05 M (4) 0.25 M
- The oxide of a metal has 32% oxygen. Its equivalent weight would be
(1) 34 (2) 32
(3) 17 (4) 8
- What should be the equivalent weight of phosphorous acid, if $\text{P} = 31$; $\text{O} = 16$; $\text{H} = 1$?
(1) 82 (2) 41
(3) 20.5 (4) 14
- What is the weight of oxygen required for the complete combustion of 2.8 kg of ethylene?
(1) 2.8 kg (2) 6.4 kg
(3) 9.6 kg (4) 96 kg
- 4.4 g of an unknown gas occupies 2.24 L of volume at standard temperature and pressure. The gas may
(1) Carbon dioxide
(2) Carbon monoxide
(3) Oxygen
(4) Sulphur dioxide
- The number of oxygen atoms in 4.4 g of CO_2 is approx.
(1) 1.2×10^{23} (2) 6×10^{22}
(3) 6×10^{23} (4) 12×10^{23}
- Number of molecules in 100 ml of each of O_2 , NH_3 and CO_2 at STP are
(1) In the order $\text{CO}_2 < \text{O}_2 < \text{NH}_3$
(2) In the order $\text{NH}_3 < \text{O}_2 < \text{CO}_2$
(3) The same
(4) $\text{NH}_3 = \text{CO}_2 < \text{O}_2$
- 19.7 kg of gold was recovered from a smuggler. How many atoms of gold were recovered ($\text{Au} = 197$)?
(1) 100 (2) 6.02×10^{23}
(3) 6.02×10^{24} (4) 6.02×10^{25}