

1. A mixture containing 1 mole of ethane and 4 moles of oxygen is ignited ,in a sealed container at 100°C. the reaction occurring is shown by the equation. $C_2H_4(g) + 3O_2(g) \rightarrow 2CO_2(g) + 2H_2O(g)$. what was the total number of moles of gas at the end of the reaction ? (a) 2 (b) 3 (c) 4 (d) 5
2. What is the ratio of the volume of 2 g of hydrogen to the volume of 16 g of methane, both volumes at r.t.p. ?
(a) 1 to 1 (b) 1 to 2 (c) 1 to 8 (d) 2 to 1
3. One mole of an organic compound is completely burnt in oxygen . Which compound produces exactly three moles of water ?
4. What is the formula of iron (III) nitrate ? (a) $Fe(NO_3)_3$ (b) $Fe_2NO_3)_3$ (c) Fe_3NO_3 (d) $Fe_3(NO_3)_2$
5. What is the mass of the oxygen contained in 72 g of pure water ? [Relative atomic masses : H =1; O= 16]
(a) 16 g (b) 64 g (c) 32 g (d)70 g
6. Sodium reacts with water according to the equation, $2Na + 2H_2O \rightarrow 2NaOH + H_2$. Which volume of hydrogen is produced at r.t.p. when 0.2 mol of sodium reacts ? (a) 1.2dm² (b) 2.4 dm³ (c) 4.8 cm³ (d) 9.6 dm³
7. All ammonium salts on heating with sodium hydroxide produce ammonia gas. From which ammonium salt can the greatest mass of ammonia be obtained ? (a) 0.5 mol $[NH_4]_3 PO_4$ (b) 0.5 mol $[NH_4]_2SO_4$
(c)1.0 mol NH_4Cl (d) 1.0 mol NH_4NO_3 .
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