

Most Repeated Questions in JEE Main Chemistry from Stoichiometry

Q: Xg of benzoic acid on reaction with aq NaHCO_3 released CO_2 that occupied 11.2 L volume at STP. X is _____ g.

Q: The number of moles of methane required to produce 11 g CO_2 (g) after complete combustion is: (Given molar mass of methane in g mol^{-1} : 16)

Q: Combustion of glucose ($\text{C}_6\text{H}_{12}\text{O}_6$) produces CO_2 and water. The amount of oxygen (in g) required for the complete combustion of 900 g of glucose is: [Molar mass of glucose in g mol^{-1} = 180]

Q: The density of 'z' M solution ('z' molar) of NaOH is 1.12 g mL^{-1} , while in molality, the concentration of the solution is 3 m (3 molal). Then z is (Given: Molar mass of NaOH is 40 g/mol)

Q: Molality (m) of 3M aqueous solution of NaCl is: (Given: Density of solution 1.25 g mL^{-1} , Molar mass in g mol^{-1} : Na-23, Cl-35.5)

Q: Molarity (M) of an aqueous solution containing x g of anhyd. CuSO_4 in 500 mL solution at 32°C is 2×10^{-1} M. Its molality will be _____ $\times 10^{-3}$ m (nearest integer). [Given density of the solution = 1.25 g/mL]

Q: A solution is prepared by adding 1 mole ethyl alcohol in 9 mole water. The mass percent of solute in the solution is _____ (Integer answer) (Given: Molar mass in g mol^{-1} Ethyl alcohol : 46 water : 18)

Q: Zinc reacts with hydrochloric acid to give hydrogen and zinc chloride. The volume of hydrogen gas produced at STP from the reaction of 11.5 g of zinc with excess HCl is ___N (Nearest integer) (Given: Molar mass of Zn is 65.4 g mol^{-1} and Molar volume of H_2 at STP = 22.7L)

Q: Molality of an aqueous solution of urea is 4.44 m. Mole fraction of urea in solution is $x \times 10^{-3}$, Value of z is _____ (Integer answer)

Q: When a hydrocarbon A undergoes complete combustion it requires 11 equivalents of oxygen and produces 4 equivalents of water. What is the molecular formula of A?

Q: When a hydrocarbon A undergoes combustion in the presence of air, it requires 9.5 equivalents of oxygen and produces 3 equivalents of water. What is the molecular formula of A?

Q: On complete combustion, 0.492 g of an organic compound gave 0.792 g of CO_2 . The % of carbon in the organic compound is ____

Q: When 0.01 mol of an organic compound containing 60% carbon was burnt completely, 4.4 g of CO_2 was produced. The molar mass of compound is ____ g mol^{-1} (Nearest integer)