

CHOOSE THE CORRECT ANSWER

NO	QUESTION	ANSWER	
1	The percent composition by mass of a compound is 76.0% C, 12.8% H, and 11.2% O. The molar mass of this compound is 284.5 g/mol. What is the molecular formula of the compound?	A. $\text{C}_9\text{H}_{18}\text{O}$	C. $\text{C}_{20}\text{H}_{12}\text{O}_2$ B. $\text{C}_{16}\text{H}_{28}\text{O}_4$
2	A 0.8715 g sample of sorbic acid, a compound first obtained from the berries of a certain ash tree, is burned completely in oxygen to give 2.053 g of carbon dioxide and 0.5601 g of water. The empirical formula of sorbic acid is	A. CH_2O	C. CH_4O_3 B. $\text{C}_3\text{H}_4\text{O}$
3	What volume of water in cm^3 should be added to 10.0 cm^3 of NaOH 6.0 M to produce a solution of NaOH 0.3 M?	A. 10	C. 200 B. 190
4	The label on the bottle of concentrated nitric acid solution is 37.4% HNO_3 by weight and density 1.18 g/mL. Determine mole fraction of HNO_3 .	A. 0.374	C. 0.598 B. 0.171
5	The density of 10.5 molal NaOH is 1.33 g/mL. Calculate percentage by mass of NaOH .	A. 12.67%	C. 29.57% B. 75.18%
6	A 3.2 molal solution contains 285 g of solvent. What is the molality of the solution after dilution with an additional 140 g of solvent?	A. 4.32 m	C. 2.15 m B. 1.46 m
7	10 cm^3 of ammonia solution, NH_3 with density of 0.93 g/ cm^3 contains 0.45 g of NH_3 solute. What is the percentage by mass of this solution?	A. 4.18	C. 2.22 B. 4.84

8	A compound has an empirical formula of C_2H_7N . Choose the CORRECT statement.	A. the weight percentage of carbon is 60.00 % B. the weight percentage of nitrogen is 31.11% C. the number of hydrogen atom is 5.21×10^{24} D. the number of nitrogen atoms is 3.0×10^{-24}
9	The label on a commercial concentrated hydrochloric acid solution reads “37.4% HCl by weight and density 1.18 g mL^{-1} ”. What is the molarity of HCl?	A. 12.1 M B. 16.4 m C. 37.4 g/100mL D. 64.4 g/100mL
10	A sample of gas contains 14 g of N_2 . This is equal to	A. 1 mole of N_2 B. 1 molar volume of N_2 C. 2 moles of N_2 D. 0.5 moles of N_2