

18. Saline solution is prepared by dissolving 9.0 g of NaCl in deionized water in a 500 ml volumetric flask. Calculate the molarity of the solution.

- A. 3.07 M      C. 0.307 M  
 B. 30.07 M      D. 7.03 M

19. Given equations below:



How many mole of  $\text{S}_2\text{O}_8^{2-}$  are needed to oxidise 20mL, 0.2 M  $\text{Mn}^{2+}$ ?

- A.  $4 \times 10^{-3}$  mol      C.  $1 \times 10^{-2}$  mol  
 B.  $1 \times 10^{-3}$  mol      D.  $2 \times 10^{-2}$  mol

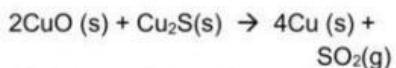
20. A compound has an molecular formula of  $\text{C}_4\text{H}_5\text{ON}_2$ . Chose the **correct** statement.

- I. The weight percentage of Hydrogen is 10.15%  
 II. The number of Nitrogen atoms is  $1.204 \times 10^{24}$   
 III. The weight percentage of Carbon is 49.48%  
 A. I only      C. I and III  
 B. I and II      D. II and III

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24. Based on balance equation below, determine the number of mole of excess reactant remained at the end of the reaction if 90.0 g of CuO is heated with 150.0 g  $\text{Cu}_2\text{S}$ .



- A. 0.375 mol      C. 0.565 mol  
 B. 1.13 mol      D. 0.190 mol

25. 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%      D. 8.64%

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27. 10 cm<sup>3</sup> of ammonia solution,  $\text{NH}_3$  with density 0f 0.93 g/cm<sup>3</sup> contains 0.45 g of  $\text{NH}_3$  solute. What is the percentage by mass of this solution?

- A. 4.18      C. 2.22  
 B. 4.84      D. 4.20