

# CHEMISTRY

11. The largest number of molecules is in  
(1) 34g of water  
(2) 28g of CO<sub>2</sub>  
(3) 46g of CH<sub>3</sub>OH  
(4) 54g of N<sub>2</sub>O<sub>5</sub>
12. The percentage of nitrogen in urea is about  
(1) 46 (2) 85  
(3) 18 (4) 28
13. How much water should be added to 200 c.c of semi normal solution of NaOH to make it exactly deci normal?  
(1) 200 cc (2) 400 cc  
(3) 800 cc (4) 600 cc
14. In the reaction,  
 $4\text{NH}_3(\text{g}) + 5\text{O}_2(\text{g}) \rightarrow 4\text{NO}(\text{g}) + 6\text{H}_2\text{O}(\text{g})$ ,  
When 1 mole of ammonia and 1 mole of O<sub>2</sub> are made to react to completion  
(1) 1.0 mole of H<sub>2</sub>O is produced  
(2) 1.0 mole of NO will be produced  
(3) All the oxygen will be consumed  
(4) All the ammonia will be consumed
15. If  $1\frac{1}{2}$  moles of oxygen combine with Al to form Al<sub>2</sub>O<sub>3</sub> the weight of Al used in the reaction is (Al = 27)  
(1) 27 g (2) 54 g  
(3) 49.5 g (4) 31 g
16. What is the normality of a 1 M solution of H<sub>3</sub>PO<sub>4</sub>?  
(1) 0.5 N (2) 1.0 N  
(3) 2.0 N (4) 3.0 N
17. Vapour density of a gas is 22. What is its molecular mass?  
(1) 33 (2) 22  
(3) 44 (4) 11
18. Equivalent weight of KMnO<sub>4</sub> acting as an oxidant in acidic medium is  
(1) The same as its molecular weight  
(2) Half of its molecular weight  
(3) One-third of its molecular weight  
(4) One-fifth of its molecular weight
19. KMnO<sub>4</sub> reacts with oxalic acid according to the equation,  
 $2\text{MnO}_4^- + 5\text{C}_2\text{O}_4^{2-} + 16\text{H}^+ \rightarrow 2\text{Mn}^{2+} + 10\text{CO}_2 + 8\text{H}_2\text{O}$ ,  
here 20 mL of 0.1 M KMnO<sub>4</sub> is equivalent to  
(1) 20 mL of 0.5 M H<sub>2</sub>C<sub>2</sub>O<sub>4</sub>  
(2) 50 mL of 0.1 M H<sub>2</sub>C<sub>2</sub>O<sub>4</sub>  
(3) 50 mL of 0.5 M H<sub>2</sub>C<sub>2</sub>O<sub>4</sub>  
(4) 20 mL of 0.1 M H<sub>2</sub>C<sub>2</sub>O<sub>4</sub>
20. How many grams of caustic potash required to completely neutralise 12.6 gm HNO<sub>3</sub>  
(1) 22.4 g (2) 1.01 g  
(3) 6.02 g (4) 11.2 g