D.A.V. PUBLIC SCHOOL, NEW PANVEL



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Subject: Chemistry		Std	·XI	Worksheet No 1				
SOME BASIC CONCEPTS OF CHEMISTRY								
1.	Calculate molality o a) 0.5 m	of solution containi b) 0.56 m	ng 3 g glucose dissolv c) 0.091 m	ed in 30 g water. d) 0.05 m				
2.	4 g H ₂ reacts with 2 a) 24 g	20 g O ₂ to produce b) 36 g	water. What is the ma c) 22.5 g	ss of water produced? d) 40 g				
3.	 Which of the following statement is correct? a) 28 g CO contains 12 g carbon and 16 g oxygen. b) 1 mole of CO reacts completely with 0.5 moles of O₂ to form CO₂ c) N₂ and CO have same molar mass. d) All of these 							
4.	The number of mol a) 4 x 10 ²³	ecules in 4.25 g of b) 1.5 x10 ²³	NH ₃ is approximately c) 1 x 10 ²³	d) 6 x 10 ²³				
5.	How is empirical formula related to its molecular formula?							
6.	80 g of H ₂ are reacted with 80 g of O ₂ to form water. Find out the mass of water obtained. Which substance is the limiting reagent?							
7.	What will be the molality of the solution obtained by dissolving 4.9 g H_2SO_4 in 250 g of water?							
8.	A compound has the following composition: Mg = 9.76%, S = 13.01%, O = 26.01%, H ₂ O = 51.22%. What is its empirical formula?							
9.	If 500 mL of 5 M solution is diluted to 1500 mL, what will be molarity of obtained solution?							
10.	What is the mass ir	n grams of one mo	lecule of caffeine (C ₈ +	I ₁₀ N ₄ O ₂)?				
11.	a) State law of multiple proportion. b) 0.6 mol of Cu ₂ S is roasted in excess of oxygen to yield Cu and SO ₂ , according to reaction $Cu_2S + O_2 \rightarrow 2 Cu + SO_2$ Calculate the mass of Cu formed. (Atomic mass of Cu = 63.5u)							

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Subject: Chemistry		Std- XI		Worksheet No 1			
SOME BASIC CONCEPTS OF CHEMISTRY							
12.	4 g H_2 reacts with 2	20 g O ₂ to produc	ce water. What is the	mass of water produced?			
	a) 24 g	b) 36 g	c) 22.5 g	d) 40 g			
13.	An organic compou compound.	und has 40% C, 6	6.7% H and rest is O.	Find the empirical formula of the			
	a) CH ₄	b) CH ₂ O	c) C ₂ H ₄ O ₂	d) C ₂ H ₄			
14.	The number of molecules in 4.25 g of NH_3 is approximately:						
	a) 4 x 10 ²³	b) 1.5 x10 ²³	c) 1 x 10 ²³	d) 6 x 10 ²³			
15.	Calculate molality o a) 0.5 m	of solution contai b) 0.56 m	ning 3 g glucose diss c) 0.091 m	olved in 30 g water. d) 0.05 m			
16.	What is the mole fr a) 0.3	action of solvent b) 0.05	in aqueous solution c) 0.7	of NaOH having molality 3? d) 0.95			
17.	Arrange the following in the order of increasing mass.						
	 I. 1 atom of ox II. 1 atom of nin III. 1 x 10⁻¹⁰ mo IV. 1 x 10⁻¹⁰ mo 	tygen trogen les of oxygen les of copper					
18.	a) II < I < III < IV c) III < II < IV < I Concentrated aqueous H2SO4 is 98		b) I < II < III < IV d) IV < II < III < I 8% (w/v) and has a d	ensity of 1.8 g/mL. Molarity of			
	solution is a) 1 M	b) 1.8 M	c) 10 M	d) 1.5 M			
19.	 Which of the following statement is correct? a) 28 g CO contains 12 g carbon and 16 g oxygen. b) 1 mole of CO reacts completely with 0.5 moles of O₂ to form CO₂ c) N₂ and CO have same molar mass. d) All of these 						