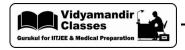


Date Planned : / /	Daily Tutorial Sheet - 1	Expected Duration : 90 Min		
Actual Date of Attempt ://	JEE Main (Archive)	Exact Duration :		

1.	Numb	er of atoms in 5	558.5 gra	m Fe (At. wt. of F	e = 55.8	5 g mol^{-1}) is			(2002)	
	(A)	twice that in	60 g carl	oon	(B)	6.023×10^{22}				
	(C)	half that in 8	g He		(D)	558.5×6.023	$\times 10^{23}$			
2.			mole of	ace of 1/12, mas a substance will	ss of car	bon atom is tak	en to be	e the relative	atomic mass	
	(B)	increase two								
	(C)	remain unch								
	(D)		_	olecular mass of	the sub	stance				
3.	How n	nany moles of n	nagnesiu	m phosphate, Mg	g ₃ (PO ₄) ₂	will contain 0.2	25 mole	of oxygen ato	ms?	
	(A)	0.02	(B)	3.125×10^{-2}			(D)	2.5×10^{-2}	(2006)	
4.		reaction,							(2007)	
	2Al _(s)	$+6HCl_{(aq)} \rightarrow 2R$	$Al_{(aq)}^{3+} + 60$	$Cl_{(aq)}^- + 3H_{2(q)}$						
	(A)			produced for eve	ry 3 L F	I _{2(g)} produced				
	(B)	(8)		ned for every 3 L		(8)				
	(C)	33.6 L H _{2(g)}	is produc	ced regardless of	tempera	ture and pressu	re for ev	ery mole Al th	nat reacts	
	(D)	10,		produced for ver						
5.	3 g of	3 g of a hydrocarbon on combustion in excess of oxygen produces 8.8 g of CO ₂ and 5.4 g of H ₂ O. Th								
	data il	lustrates the la	w of:					_	(2010	
	(A)	conservation	of mass		(B)	multiple prop	ortions			
	(C)	constant proj	portions		(D)	none of these				
6.	The m	olarity of a solu	ıtion obta	ained by mixing 7	750 mL o	of 0.5M HCl with	h 250 m	L of 2M HCl	will be:	
	(A)	0.875M	(B)	1.00 M	(C)	1.75 M	(D)	0.0975M	(2013	
7.	_	eous mixture co er of molecules		xygen and nitrog	gen in th	ne ratio of 1:4	by weigh	nt. Therefore,	ratio of thei	
	(A)	1:4	(B)	1:8	(C)	7:32	(D)	3:16		
8.	A sample of a hydrate of barium chloride weighing 61 g was heated until all the water of heatened. The dried sample weighed 52 g. The formula of the hydrated salt is: (atomic mass, $Ba = 137 \text{amu}$, $Cl = 35.5 \text{amu}$)							hydration is (2015)		
	(A)	$\mathrm{BaCl}_2\cdot\mathrm{H}_2\mathrm{O}$	(B)	$\mathrm{BaCl}_2 \cdot 2\mathrm{H}_2\mathrm{O}$	(C)	$\mathrm{BaCl}_2\cdot 3\mathrm{H}_2\mathrm{O}$	(D)	$\operatorname{BaCl}_2 \cdot 4\operatorname{H}$	₂ O	
9.	A + 2F	3 +3C ← AI	B _o C _o						()	
) ²³ atoms of B, a	nd 0.03	6 mol of C vields	s 4 8 o o	f compound	_	
				and 80 amu, res					(2015)	
		dro number =	6×10^{23}							



10.	The amount of arsenic pentasulphide that can be obtained when 35.5 g arsenic acid is treated with excess H_2S in the presence of conc. HCl (assuming 100% conversion) is: (Atomic mass of As = 75u)								
	$2H_3AsO_4 + 5H_2S \longrightarrow As_2S_5 + 8H_2O $ (2016)								
	(A)	0.50 mol	(B)	0.25 mol	(C)	0.125 mol	(D)	0.333 mol	
11.	An organic compound contains C, H and S. The minimum molecular weight of the compound containing 8% sulphur is : (Atomic weight of $S=32$ amu)							containing (2016)	
	(A)	$200gmol^{-1}$	(B)	$400\mathrm{gmol}^{-1}$	(C)	$600\mathrm{gmol}^{-1}$	(D)	$300\mathrm{gmol}^{-1}$	
12.	The vo	lume of 0.1N dib	oasic aci	d sufficient to n	eutralize	e 1 g of a base th	at furnis	shes 0.04 mo	
	aqueou	us solution is :							(2016)
	(A)	200 mL	(B)	400 mL	(C)	600 mL	(D)	800 mL	
13.	What o	quantity (in mL)	of a 45	% acid solution	of a mo	ono-protic strong	acid m	ust be mixed	with a 20%
	solution of the same acid to produce 800 mL of a 29.875% acid solution? (2017)								
	(A)	320	(B)	325	(C)	316	(D)	330	
14.	1 gran	of a carbonate	(M ₂ CO ₃)	on treatment w	ith exce	ss HCl produces	0.0118	6 mole of CO	2. The molar
	mass of M_2CO_3 in g mol ⁻¹ is: \bigcirc (20)								(2017)
	(A)	11.86	(B)	1186	(C)	84.3	(D)	118.6	
15.	The mo	ost abundant ele	ments b	y mass in the bo	ody of a	healthy human a	ıdult are	: Oxygen (61	4%); Carbon
	(22.9%), Hydrogen (10.0%); and Nitrogen (2.6%). The weight which a 75 kg person would gain if all								ain if all ¹ H
	atoms are replaced by ² H atoms is: (2017)								(2017)
	(A)	10 kg	(B)	15 kg	(C)	37.5 kg	(D)	7.5 kg	