TRICHY

COMMON FIRST MID TERM TEST - JULY 2019

	SIANDAKI) - Al Reg. No.			
Time: 1.	.30 Hrs. CHEMIS	TRY Marks: 50			
Part - I					
Answer	all the questions:	15×1=15			
	The equivalent mass of ferrous oxala	te is			
	a) Molar mass of Ferrous oxalate b				
	1	2			
	c) Molar mass of Ferrous oxalate) None of these			
2)	Which one of the following represent	c 190g water?			
2)	Which one of the following represent a) 5 moles of water) 90 moles of water			
	c) 6.022×10^{23} molecules of water				
	180	, or other transfer of the control o			
3)	Match the following prefixes with the	ir multiples.			
	A) E KMnO ₄ (Acidic) 1. M/				
	B) E KMnO ₄ (Neutral) 2. M				
	C) E H ₃ PO ₂ 3. M/	3			
	D) E H ₃ PO ₃ 4. M/				
	A B C D	A B C D			
	a) 4 3 2 1	b) 4 2 1 3			
	c) 3 4 2 1	d) 3 1 4 2			
4)	Electron density in the YZ plane of 3				
F\		d) 0.90			
5)	If $n=6$ the correct sequence for filling a) $ns \rightarrow (n-2)f \rightarrow (n-1)d \rightarrow np$				
	c) ns \rightarrow (n-2)f \rightarrow np \rightarrow (n-1)d				
6)	Orientation of orbitals	in mone of these are some con-			
) Spin quantum number			
	c) Azimuthal quantum number				
7)	Which of the following elements will				
		o) Nitrogen			
0)		d) Fluorine at would be the formula of the compoun			
0)	obtained if M has a valence of 2?	at would be the formula of the compoun			
		c) M ₂ Cl d) M ₂ Cl,			
9)	Common electronic configuration of				
Wales !	a) $ns^2 nd^{1-10}$ b) $ns^2 np^1 (n-1)^{d1}$				
10)	Hardness of water is due to	of calcium and magnesium.			
	a) bicarbonates b) sulphates	c) chlorides d) all the above			
11)	Tritum nucleus contains				
(8)	a) 1p+0n b) 2p+1n				
12)	Zeolite used to soften hardness of w				
		b) Calcium aluminium silicate			
	c) Zinic aluminium borate	d) Lithium aluminium hydride			

		2	XI -	Chemistry		
	13)	The value of the gas constant R is				
		a) 0.082 dm ³ atm	b) 0.987 cal i	nol ⁻¹ k ⁻¹		
	1/1)		8 erg mol ⁻¹ k ⁻¹			
	14)	Maximum deviation from ideal gas is e a) CH ₄ b) NH ₂ c) I				
	15)	4(9)	² (g) ² (g)	i nevens		
	15)		emperature d) all of these			
		a) voidine b) pressure	an of these	- T		
Part - II						
Answer any four of the following questions. 4×2=8 Question No. 21 is compulsory.						
	16) Calculate the molar mass of the following compounds					
		(i) Urea [CO(NH ₂) ₂] (ii) Boric acid [H ₃ BO ₃]				
	17)	Balance the equation by ion electron method				
	-	$C_2O_4^{2-} + Cr_2O_7^{2-} \rightarrow Cr^{3+} + CO_2$ (in acid medium)				
		How many orbitals are possible for n = 4?				
		The size of $Cl^- = 1.81$ Å and $Cl = 0.99$ Å Explain.				
	21)	Write any two uses of deuterium. Give the expressions of critical constants by using Vander Vaals constant.				
		dive the expressions of critical constant	s by using variate vadis cor	istailt.		
Part - III						
Answer any four questions. 4×3=12						
Question Number 27 is compulsory. 22) 3.24g of titanium reacts with oxygen to form 5.40g of the metal oxide. Find						
	the emprical formula of the metal oxide (atomic mass of Ti = 48).					
	23) Explain the shapes of 'P' orbitals.					
	24)					
	25) 26)	What is water-gas shift reaction? Difference between diffusion and effusion.				
	27) An unknown gas diffuses at a rate of 0.5 time that of nitrogen at the same					
temperature and pressure. Calculate the molar mass of the unknown gas.						
Part - IV						
Ans	wer	all the questions:		3×5=15		
2	28)	i) Define equivalent mass of acid.		(2)		
		ii) Any three rule assigning the oxidation	on number.	(3)		
		i) State Aufbau principle. (OR)		(2)		
		ii) Explain briefly the time independent	schroodinger wave equation			
2	29) i) Calculate the effective nuclear charge of chlorine. (
		ii) Ni ²⁺ , Fe ³⁺ which has the stable elect	ronic configuration why?	(3)		
		(OR)		(2)		
		i) Explain exchange reaction of deuteriii) Explain covalent hydride. How are th		(2)		
3	CONTRACTOR AND THE					
	1	ii) How will you calculate the partial pressure in terms of mole fraction?(3)				
		i) Define limiting reagent.		(2)		
		i) Define limiting reagent.ii) Derive de-Broglie equation.		(2)		
				All the second second second		