RAMAKRISHNA MISSION VIDYAMANDIRA

(Residential Autonomous College affiliated to University of Calcutta)

SECOND YEAR [2018-21] B.A./B.Sc. THIRD SEMESTER (July – December) 2019 Mid-Semester Examination, September 2019

Mid-Semester Examination, September 2019			
Date : 17/09/19 CHEMISTRY (General)			
Time	e : :	11 am – 12 noon Paper : III	Full Marks : 25
Answer any five questions of the following: $[5 \times 5 =$			
1.	a)	Why xenon fluorides are dangerous to work with in the presence of water ?	[2]
	b)	Arrange the following hydrogen halides, HF, HCI, HBr and HI on the basis of their ad providing with logical explanation.	cidity, [3]
2.	a)	Explain the exceptionally high reactivity of F_2 .	[2]
	b)	Among fluorine and chlorine which one has higher electronegativity and electron affi Provide explanation.	nity? [3]
3.	a)	Suggest the most suitable noble gas for (i) a very low temperature liquid refrigerant (electric discharge light source with low ionization energy.	(ii) an [2]
	b)	How do you detect chloride in the presence of bromide in laboratory?	[2]
	c)	Write an application of xenon fluorides.	[1]
4.	a)	What happens when: (i) A mixture of CaF_2 , SiO_2 and conc. H_2SO_4 is warmed in lead cr and drop of water is held in the issued vapor. (ii) AgCl precipitate is shaken with KI sol Show chemical equation.	ucible ution. [3]
	b)	Why XeF ₆ shouldn't be stored in glass vessel?	[2]
5.	a)	How borazole is prepared? Compare the stability of diborane with borazole.	[3]
	b)	Carbon monoxide behaves as an organometallic ligand. Explain.	[2]
6.	a)	Compound (A) is soluble in water. Aqueous solution of (A) gives a yellow ppt (B) K_2CrO_4 is added to the solution but the ppt is insoluble in CH ₃ COOH. Solid(A) gives fumes(C) when strongly heated. Identify (A), (B) & (C)	when brown [3]
	b)	Why Pb(+2) salts are stable while Sn(+4) is stable?	[2]

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