DPP EXERCISE NEET **INORGANIC CHEMISTRY** BY JITENDRA HIRWANI **NITROGEN & OXYGEN FAMILY HALOGEN & NOBLE GAS FAMILY ETOOSINDIA** INDIA'S NO. 1 ONLINE COACHING

Plot No. 38, Near Union Bank of India, Rajeev Gandhi Nagar, Kota, Rajasthan – 324005 Mob. : 9214233303

			DPP -1				
1.	Maximum covalent character is shown by						
	(1) NCl ₃	(2) PCl_3	(3)AsCl ₃	(4) $SbCl_3$			
Ans.	(1)						
2.	HNO ₂ on disproporti	onation gives HNO ₃ and					
	(1) NO ₂	$(2) N_2 O_5$	(3) NO	(4) All of these can form			
Ans.	(3)						
3.	The correct order of a	acidic character is					
	$(1) P_4 O_{10} > P_4 O_6$	$(2) N_2 O_5 > N_2 O_3$	$(3) N_2 O_3 > P_4 O_6$	(4) All of these			
Ans.	(4)						
4.	In which of the follow	wing reactions, products gi	ven are not correct?				
	(1) $(NH_4)_2 Cr_2 O_7 - $	(1) $(NH_4)_2Cr_2O_7 \xrightarrow{\Delta} N_2 + 4H_2O + Cr_2O_3$		$a + 3N_2$			
	(3) $3Mg + N_2 \xrightarrow{\Delta} N$	Mg ₃ N ₂	(4) $NH_4Cl + NaNO_2$	\longrightarrow NaCl + NH ₃ + NO ₂			
Ans.	(4)						
5.	Oxide of nitrogen wh	ich is acidic in nature and b	olue coloured liquid at -30°C	2			
	(1) N ₂ O	(2) NO	$(3) N_2 O_3$	(4) NO ₂			
Ans.	(3)						
6.	Covalency and oxida	tion numbers of nitrogen in	$n N_2O_5$ is respectively				
	(1) 5, +5	(2) 4, +5	(3) 3, +3	(4) 3, +5			
Ans.	(2)						
7.	Which has maximum	melting point?					
	(1) NH ₃	$(2) PH_{3}$	(3)AsH ₃	$(4) \operatorname{SbH}_{3}$			
Ans.	(1)						
8.	In which of the follow	wing N–N bond is not pres	ent?				
	(1) N_2O_5	$(2)N_{2}O$	$(3) N_2 O_4$	$(4) N_2 O_3$			
Ans.	(1)						
9.	Which set of oxide of	fnitrogen is paramagnetic i	n monomeric state ?				
	(1)NO, N ₂ O	$(2) NO_2, N_2O$	(3) NO, NO ₂	$(4) N_2 O, NO, NO_2$			
Ans.	(3)						
10.	The incorrect statem	The incorrect statement among the following is					
	(1) Reducing charac	(1) Reducing character of hydrides of group 15 increases down the group					
	(2) Basicity of hydr	ides of group 15 increases	down the group				
	(3) Phosphorus and	arsenic can form $p\pi$ -d π bo	nd but not nitrogen				
	(4) NCl_5 does not ex	list					
Ans.	(2)						

		D	PP-2				
1.	Metal which become passive with conc. HNO ₃						
	(1) Cr	(2) Zn	(3)Al	(4) Both (1) & (3)			
Ans.	(4)						
2.	In brown ring test for nitrate ions, brown ring is formed having composition						
	$(1) [Fe(H_2O)_6]^{2+}$	(2) $[Fe(H_2O)_5NO]^{2+}$	$(3) [Fe(H_2O)_5NO]^{3+}$	(4) $[Fe(H_2O)_5NO_2]^{2+}$			
Ans.	(2)						
3.	Allotrope of phosphorus which is polymetric consisting of chains of P_4 tetrahedral linked together is						
	(1) White phosphorus	(2) Red phosphorus	(3) Yellow phosphorus	(4) Both (1) & (2)			
Ans.	(2)						
4.	Which is dibasic ?						
	(1) Orthophosphoric act	d	(2) Pyrophosphoric aci	d			
	(3) Orthophosphorus act	id	(4) Hypophosphorus a	cid			
Ans.	(3)						
5.	Cyclotrimeta phosphoric acid has total number of P=O & P –O bonds respectively						
	(1) 5, 3	(2) 3, 9	(3) 3, 6	(4) 5, 6			
Ans.	(2)						
6.	The one with lowest negative electron affinity in group 16 is						
	(1) Oxygen	(2) Sulphur	(3) Selenium	(4) Tellurium			
Ans.	(1)						
7.	The hybridisation and s	The hybridisation and shape of SF_4 is respectively					
	(1) sp^3d^2 , square planar		(2) sp^3d^2 , octahedral				
	(3) sp ³ d, see-saw		(4) sp ³ d, trigonal bipyra	amidal			
Ans.	(3)						
8.	Correct order of boiling point of group 16 hydrides						
	$(1) H_2 O < H_2 S < H_2 S e < H_2 S = H_2 S e < H_2 S $	H ₂ Te	$(2) H_2 Te < H_2 Se < H_2 S < H_2 O$				
	(3) $H_2S < H_2Se < H_2Te < H_2O$ (4) $H_2O < H_2Te < H_2Se < H_2S$						
Ans.	(3)						
9.	Dioxygen can be prepared by						
	(1) Heating KClO ₃						
	(2) Thermal decomposition of oxides like Ag_2O , Pb_3O_4 etc.						
	(3) Electrolysis of water						
	(4) All of these						
Ans.	(4)						
10.	The set containing acidi	c oxides only are					
	(1) SO_2 , Cl_2O_7 , CO	$(2) \operatorname{Al}_{2}O_{3}, \operatorname{NO}, \operatorname{N}_{2}O_{5}$	(3) NO, N ₂ O ₃ , N ₂ O ₅	$(4) N_2 O_3, SO_2, N_2 O_5$			

Ans. (4)

			DPP-3				
1.	The incorrect statement r	egarding structure	ofozone				
	(1) The two oxygen-oxygen bond length in ozone are identical						
	(2) It is linear						
	(3) Bond angle is less th	an 120°					
	(4) Both (2) & (3)						
Ans.	(2)						
2.	Form of sulphur which sh						
	(1) S_8 – Rhombic	(2) S_8 – Monoclin	ic (3) S_2 in vapour state	(4) Not possible			
Ans.	(3)						
3.	Which has bleaching act	ion due to reduction	and it is temporary?				
	(1) H ₂ O ₂	$(2)O_{3}$	(3) SO ₂	$(4) \operatorname{Cl}_2$			
Ans.	(3)						
4.	On reaction of moist SO_2	On reaction of moist SO ₂ with potassium permanganate, (Acidic) which is correctly observed ?					
	(1) Colour of $KMnO_4$ is d	lecolourised	(2) SO_2 is oxidised to S	(2) SO_2 is oxidised to SO_3			
	(3) MnO_4^- is reduced to N	MnO ₂	(4) All of these				
Ans.	(1)						
5.	S – S bond is present in						
	$(1) H_2 S_2 O_7$	$(2) H_2 S_2 O_8$	$(3) H_2 S_2 O_6$	$(4) \operatorname{H}_2 \operatorname{SO}_5$			
Ans.	(3)						
6.	Deacon's process of manufacture of chlorine is represented by the equation						
	$(1) \operatorname{MnO}_2 + \operatorname{HCl} \rightarrow \operatorname{MnCl}_2$	$_{2} + Cl_{2} + H_{2}O$	$(2) \text{ KMnO}_4 + \text{HCl} \rightarrow \text{K}$	$\mathrm{KCl} + \mathrm{MnCl}_2 + \mathrm{H}_2\mathrm{O} + \mathrm{Cl}_2$			
	$(3) \operatorname{HCl} + \operatorname{O}_2 \xrightarrow{\operatorname{CuCl}_2} \operatorname{Cl}_2$	$H_2 + H_2O$	$(4) \operatorname{NaCl} + \operatorname{MnO}_2 + \operatorname{H}_2$	$(4) \operatorname{NaCl} + \operatorname{MnO}_2 + \operatorname{H}_2 \operatorname{SO}_4 \rightarrow \operatorname{Cl}_2 + \operatorname{MnCl}_2 + \operatorname{NaHSO}_4 + \operatorname{H}_2 \operatorname{O}$			
Ans.	(3)						
7.	The colour shown by halogen is incorrectly given by						
	(1) F_2 – Yellow	(2) $Cl_2 - Colourles$	ss (3) Br_2 – Red	(4) I_2 – Violet			
Ans.	(2)						
8.	Which is incorrectly given according to order indicated ?						
	(1) $F_2 > Cl_2 > Br_2 > I_2$	•	Oxidising power				
	(2) $HI > HBr > HCl > HF$	•	Acidic strength				
	(3) $F_2 > Cl_2 > Br_2 > I_2$	•	Bond dissociation enthalpy				
	(4) $HF > HI > HBr > HCl$	•	Boiling point				
Ans.	(3)						
9.	Cl_2 on reaction with exce	ss on NH ₃ gives					
	(1) $NH_4Cl + N_2$	(2) $\mathrm{NCl}_3 + \mathrm{HCl}$	(3) NH ₄ Cl only	$(4) \mathrm{NH}_{4}\mathrm{Cl} + \mathrm{NCl}_{3}$			
Ans.	(1)						
10.	Cl, on reaction with cold and dilute NaOH gives NaCl and						

(1) NaOCl (2) NaClO₃ (3) NaClO₄ (4) NaClO₂

Ans. (1)

	D	PP-4	
$Cl_2 + F_2 - (excess)$	$\xrightarrow{573 \text{ K}} \text{ (A)}$		
Shape of compou	nd (A) is		
(1) Linear	(2) Tetrahedral	(3) T shape	(4) Trigonal bipyramidal
(3)			
The correct order	of acidic strength is		
(1) HClO ₄ > HClO	3>HClO2>HClO	$(2) \mathrm{HClO}_{3} > \mathrm{HBrO}_{3} > \mathrm{HI}_{3}$	O ₃
$(3) H_{3}PO_{2} > H_{3}PO$	$_3 > H_3 PO_4$	(4) All of these	
(4)			
The one with max	imum oxidising power is		
(1) Hypochlorous	acid	(2) Chlorous acid	
(3) Chloric acid		(4) Perchloric acid	
(1)			
Which is mismate	ched regarding the shape?		
(1) $XeF_4 - Squar$	re planar	(2) $XeOF_4$ – Square pyra	umidal
(3) $XeF_6 - Distort$	rted octahedral	(4) XeO_3 – Bent T - shap	pe
(4)			
Structure of XeO	$_{2}F_{2}$ is correctly represented by		
		(F)	
	Cl ₂ + F ₂ (excess) Shape of compou (1) Linear (3) The correct order (1) HClO ₄ > HClO (3) H ₃ PO ₂ > H ₃ PO (4) The one with max (1) Hypochlorous (3) Chloric acid (1) Which is mismate (1) XeF ₄ - Squar (3) XeF ₆ - Disto (4) Structure of XeO	Diamination of the term of term of the term of te	$DPP-4$ $Cl_{2} + F_{2} \xrightarrow{-573 \text{ K}} (A)$ (excess) $Shape of compound (A) is$ $(1) Linear (2) Tetrahedral (3) T shape$ (3) $The correct order of acidic strength is$ $(1) HCIO_{4} > HCIO_{3} > HCIO_{2} > HCIO (2) HCIO_{3} > HBrO_{3} > HBrO$





(4) Both (2) & (3)

6.	$NH_3 + O_2 \xrightarrow{Pt} \Delta$	$A + H_2O$					
	$A + O_2 \rightarrow B$						
	$B + H_2O \rightarrow C + D$						
	A, B, C and D res	pectively are					
	(1) NO, NO ₂ , HN	IO ₃ and HNO ₂					
	(2) NO_2 , HNO_2 , 1	NO and HNO ₃					
	(3) HNO ₂ , NO ₂ , I	HNO_3 and N_2O					
	(4) HNO ₂ , N ₂ O, 1	NO and HNO ₃					
Ans.	(1)						
7.	Which of the following the fol	owing can be hydrolysed ?					
	(1) TeF_6	$(2) \operatorname{NCl}_{3}$	(3) SF_{6}	(4) All of these			
Ans.	(4)						
8.	Phosphine on rea	ction with hydrobromic acid g	gives				
	(1) PBr_3	(2) $P_2H_4Br_2$	$(3) \operatorname{PBr}_5$	$(4) PH_4Br$			
Ans.	(4)						
9.	In P_4O_{10} the num	ber co-ordinate bonds is					
	(1) 1	(2) 8	(3) 3	(4) 4			
Ans.	(4)						
10.	Calomel (Hg_2Cl_2)	on reaction with NH ₄ OH gives	5				
	(1)Hg ₂ O	(2) HgO	(3) HgNH ₂ Cl	$(4) \mathrm{NH}_{2}\mathrm{Hg}_{2}\mathrm{Cl}$			
Ans.	(3)						

			-				
1.	XeF ₆ on complete hydrolysis gives						
	(1) Xe	(2) XeO ₂	(3) XeO ₃	$(4) \operatorname{XeO}_2 F_2$			
Ans.	(3)						
2.	Which of the following	ng is most basic ?					
	(1)Cl ⁻	(2) F-	(3) I⁻	(4) Br-			
Ans.	(2)						
3.	Nitrogen is obtained	when NaNO, reacts with					
	(1)NH ₄ Cl	$(2) NH_4 NO_3$	$(3)(NH_4)_2CO_3$	$(4) NH_4OH$			
Ans.	(1)						
4.	Which one of the foll	owing does not form duri	ng the hydrolysis of XeF_6 ?				
	(1) XeO_3	(2) $XeOF_4$	(3) XeO ₂ F ₂	(4) $XeOF_3$			
Ans.	(4)						
5.	The final product for	The final product formed, when alkaline KI solution reacts with ozone, is					
	$(1)I_{2}$	(2) KIO ₃	(3) HI	(4) Reaction will not occur			
Ans.	(1)						
6.	Which of the following	ng is a sesqui oxide ?					
	$(1)N_2O_4$	$(2) N_2 O_3$	(3) N ₂ O	$(4) N_2 O_5$			
Ans.	(2)						
7.	$HNO_3 + HCl \longrightarrow d$	A + NOCl + H ₂ O Pt /HCl					
	1 1	♥ P'					
	The product 'P' will h	he					
	(1) H PtCl	(2) H PtCl	(3) H PtCl	(4) H PtCl			
Ans.	() ₂ - 4 (2)	() 2 - 6	(-) 2 - 2				
8.	What is the product for	ormed when NH. reacts w	ith excess of Cl. ?				
	(1) NH.Cl & HCl	(2) NH.Cl&N.	(3) NCl. & HCl	(4) NH.Cl&NCl.			
Ans.	(3)	() 4 2 2		() 4			
9.	Hybridisation of central 'N' - atom in N O is						
	(1) sp	(2) sp^2	(3) sp^{3}	(4) sp & sp^2			
Ans.	(1)						
10.	The most acidic oxide	e among the following is					
	(1) SO,	$(2) P_2 O_c$	(3)Cl ₂ O ₂	(4) SiO ₂			
Ans.	(3)	~ 2 3	· · <u>·</u> /	· · <u>2</u>			

ETOOSINDIA INDIA'S NO. 1 ONLINE COACHING

DPP-6

1.	In solid state PBr ₅ exist as						
	$(1) [PBr_4]^+ [PBr_6]^-$	(2) $[PBr_5]^+ [PBr_5]^-$	$(3)[PBr_4]^+[Br^-]$	$(4) \operatorname{PBr}_5$			
Ans.	(3)						
2.	Which of the following metal gives NH ₄ NO ₃ with very dilute HNO ₃ ?						
	(1) Fe	(2) Ti	(3) Cu	(4) Hg			
Ans.	(1)						
3.	In iodide of Millon's base formed by the reaction of Nessler's reagent with NH_3 , the coordination number of Hg will be						
	(1)2	(2)3	(3)4	(4)6			
Ans.	(1)						
4.	The compound insolu	uble in aqueous NH ₃ is					
	(1)AgI	(2)AgCl	(3) ZnSO ₄	(4) HgCl_{2}			
Ans.	(1)						
5.	When Cu is reacted with hot concentrated solution of H_2SO_4 then the gas obtained is						
	(1)O ₂	$(2) H_2$	$(3) \operatorname{SO}_2$	$(4) \operatorname{SO}_{3}$			
Ans.	(3)						
6.	A metal X when burnt in air, X-forms oxide and nitride both, X can be						
	(1) Rb	(2) Mg	(3) Na	(4) K			
Ans.	(2)						
7.	In xenon fluorides most reactive in XeF_6 , XeF_4 and XeF_2 is						
	(1) XeF_{6}	(2) XeF_2	$(3) \operatorname{XeF}_4$	(4) All are equally reactive			
Ans.	(1)						
8.	The shape of ClF_2^- , is						
	(1) Linear	(2) Trigonal bipyramidal	(3) Square pyramidal	(4) T-shape			
Ans.	(1)						
9.	Which of the following	ng is called mixed anhydride?					
	(1) NO ₂	$(2) N_2 O_3$	$(3) N_2 O_5$	(4) All of these			
Ans.	(1)						
10.	Reaction of Cl ₂ with h	not and conc. NaOH produces					
	(1)NaClO	(2) NaClO ₃	(3) NaClO ₄	(4) NaClO ₂			
Ans.	(2)						

1.	Which of the following do not exist ?								
	(1)NCl ₅	(2) PH ₅	$(3) [BCl_6]^{3-}$	(4) All of these					
Ans.	(4)								
2.	$PCl_3 + H_2O \rightarrow A + B$. What are A and B								
	(1) H ₃ PO ₂ + HCl	(2) H ₃ PO ₄ + HCl	(3) H ₃ PO ₃ + HCl	(4) HPO ₃ + HClO ₃					
Ans.	(3)								
3.	Which of the following	Which of the following is correct ?							
	(1) In PF, axial and equatorial bonds are interchanged, known as pseudo rotation								
	(2) In solid state PF, re	emains covalent							
	(3) PH, cannot be obtain	ned, because H is not suffi	ciently electronegative to mak	te the d-orbitals contact sufficiently.					
	(4) All of these	,	, ,						
Ans.	(4)								
4.	P_2O_5 is used extensively	vasa –							
	(1) Dehydrating agent	(2) Catalytic agent	(3) Reducing agent	(4) Preservative					
Ans.	(1)								
5.	Which one of the follow	ving nitrogen oxides is the	e anhydride of nitrous acid?						
	$(1)N_2O$	$(2) N_2 O_3$	$(3)N_2O_4$	(4) NO					
Ans.	(2) A motal V on heating in	nitrogon goo giyog V V g	on treatment with U.O. gives a	adourlass as which when perced					
0.	A metal A on nearing in microgen gas gives Y. Y on treatment with H_2O gives a colourless gas which when passed through CuSO, solution gives a blue colour. Y is –								
	$(1) \operatorname{Mg(NO_3)}_2^4$	(2) Mg_3N_2	(3) NH ₃	(4) MgO					
Ans.	(2)								
7.	A deep brown gas is formed by mixing two colourless gases which are –								
	(1) NO ₂ and O ₂	(2) N_2 O and NO	(3) NO and O_2	(4) NH ₃ and HCl					
Ans.	(3)								
8.	Sea weed are important	source of –							
•	(1) Iron	(2) Chlorine	(3) lodine	(4) Bromine					
Ans.	(3)	- 6							
9.	Euchlorine is a mixture of	-	(2) Cl 1 CO						
Ans.	(1) Cl_2 and SO_2 (2)	(2) Cl_2 and ClO_2	(3) Cl_2 and CO	(4) None of these					
10.	SbCl ₃ and BiCl ₃ on hyd	lrolysis gives –							
	(1) Sb ⁺³ and Bi ⁺³		(2) Sb(OH) ₃ and Bi(OH)	3					
	(3) SbOCl and BiOCl		(4) None						
Ans.	(3)								

	DPP-8						
1.	What is false about N_2O_5 ?						
	(1) It is anhydride of HNO_3			(2) It is a powerful	oxidizing agent		
	(3) Solid N_2O_5 is called nitr	ronium nitrate		(4) Structure of N_2	O_5 contains no [N \rightarrow O] bond		
Ans.	(4)			_			
2.	HI can be prepared by all the	pt –					
	$(1) Pl_3 + H_2O$	$(2) \mathrm{KI} + \mathrm{H}_2 \mathrm{SO}_4$		$(3) \operatorname{H}_2 + \operatorname{I}_2 \longrightarrow$	$(4) I_2 + H_2 S$		
Ans.	(2)						
3.	When I ₂ is passed through	KCl, KF, KBr so	olution –				
	(1) Cl_2 and Br_2 are evolved		(2) Cl ₂	s evolved			
	(3) Cl_2 , Br_2 , F_2 are evolved	(3) Cl_2 , Br_2 , F_2 are evolved (4) None of these					
Ans.	(4)						
4.	Which amongst the following reactions cannot be used for the preparation of the halogen acid?						
	$(1) 2KBr + H_2SO_4(Conc.) \longrightarrow K_2SO_4 + 2HBr$						
	$(2) 2NaCl + H_2SO_4(Conc.) \longrightarrow NaHSO_4 + HCl$						
	$(3) \text{ NaHSO}_4 + \text{ NaCl} \longrightarrow \text{Na}_2 \text{SO}_4 + \text{HCl}$						
	(4) $\operatorname{CaF}_2 + \operatorname{H}_2\operatorname{SO}_4(\operatorname{conc.}) \longrightarrow \operatorname{CaSO}_4 + 2\operatorname{HF}$						
Ans.	(1)						
5.	The statement, which prompted Neil Bartlett to prepare the first noble gas compound was -						
	(1) Xe-F bond has high bond energy						
	(2) F_2 has exceptionally low bond energy						
	(3) PtF_6 is a strong oxidant						
	(4) O_2 molecule and Xe atom have very similar ionization energies.						
Ans.	(4)						
6.	Three allotropes (1), (2) an	d (3) of phospho	brous in th	e following change a	are respectively –		
			470 k	c.			

$$\begin{array}{c} 470 \text{ K} \\ 1200 \text{ atm} \end{array} \rightarrow \text{B} \\ \hline 570 \text{ K} \\ \hline \text{CO}_2 \text{- atm} \end{array} \rightarrow \text{C}$$

(1) White, black, red (2) Black, white, red (3) Red, black, white (4) Red, violet, black Ans. (1)

А

7. Match List-I with List-II

List-I Chemical reaction

(A)
$$4NH_3 + 5O_2 \xrightarrow{800^\circ C/Pt} 4NO + 6H_2O$$

(B)
$$4HCl + O_2 \xrightarrow{3230^{\circ}C/CuCl_2}{450-500^{\circ}/V_2O_5} 2Cl_2 + 2H_2O$$

(C)
$$2SO_2 + O_2 \longrightarrow 2SO_3$$

D)
$$2N_2 + 3H_2 \xrightarrow{Fe+Mo} 2NH_3$$

List-II Name of process

- (a) Contact process
- (b) Ostwald's process
- (c) Deacon's process
- (d) Haber's process
 - (3) A-a, B-d, C-c, D-b (4) A-a, B-c, C-b, D-d

(2) Ans.

(

8.	When chlorine gas is passed through an aqueous solution of a potassium halide in the presence of chloroform, a						
	voilet colouration is	obtained. On passing more	of chlorine water, the vo	ilet colour is disappeared and solution			
	becomes colourless.	This test confirms the presen	ce of in aqueou	s solution. –			
	(1) Chlorine	(2) Fluorine	(3) Bromine	(4) Iodine			
Ans.	(4)						
9.	When fluoride is heated with conc. H_2SO_4 and MnO_2 the gas evolved is –						
	(1)HF	$(2) F_2$	(3) SF ₄	(4) None			
Ans.	(1)						
10.	The compound which gives off oxygen on moderate heating is –						
	(1) Cupric oxide	(2) Mercuric oxide	(3) Zinc oxide	(4) Aluminium oxide			
Ans.	(2)						