DAILY PRACTICE PROBLEM OF PHYSICAL CHEMISTRY FOR NEET

BY JITENDRA HIRWANI

REDOX REACTION



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

1.	The process in which oxidation number increases is				
	(1) Reduction	(2) Hydrolysis	(3) Oxidation	(4) Decomposition	
Ans.	(3)				
2.	The oxidation number of	phosphorus vary from			
	(1) - 3 to $+ 5$	(2) - 1 to $+ 1$	(3) - 3 to $+ 3$	(4) - 5 to $+ 1$	
Ans.	(1)				
3.	Oxidation number of iodin	ne varies from			
	(1) - 1 to $+ 1$	(2) - 1 to $+ 7$	(3) + 3 to $+ 5$	(4) - 1 to $+ 5$	
Ans.	(2)				
4.	Oxidation number of oxyg	gen atom in O_3 molecule is			
	(1)0	(2)-2	(3)+2	$(4) - \frac{1}{2}$	
Ans.	(1)				
5.	The oxidation number of C	$C in CH_4$, CH_3Cl , CH_2Cl_2 , CH_2Cl_3 , CH_3Cl_3 , CH_3C	HCl ₃ and CCl ₄ is respectively	,	
	(1) -4, -2, 0, +2, +4	(2)+2, 4, 0, -2, -4	(3) 4, 2, 0, -2, 4	(4) 0, 2, -2, 4, 4	
Ans.	(1)				
6.	Chlorine is in +3 oxidation	n number in			
	(1)HCl	(2) HClO ₄	(3) ICl	$(4) \operatorname{ClF}_{3}$	
Ans.	(4)				
7	In a reaction between zinc and iodine, zinc iodide is formed. Which is being oxidised?				
/•	In a reaction between Zing				
/ .	(1) Zinc ions	(2) Iodide ions	(3) Zinc atom	(4) Iodine	
Ans.	(1) Zinc ions(3)	(2) Iodide ions	(3) Zinc atom	(4) Iodine	
Ans. 8.	(1) Zinc ions(3)(3)(3)	(2) Iodide ions sulphur in $H_2S_2O_8$ is	(3) Zinc atom	(4) Iodine	
Ans. 8.	 (1) Zinc ions (3) (1)+7 	(2) Iodide ions sulphur in $H_2S_2O_8$ is (2)+6	(3) Zinc atom (3)–6	(4) Iodine (4)+4	
Ans. 8. Ans.	 (1) Zinc ions (3) (1) +7 (2) 	(2) Iodide ions sulphur in $H_2S_2O_8$ is (2)+6	(3) Zinc atom (3)–6	(4) Iodine (4)+4	
Ans. 8. Ans. 9.	 (1) Zinc ions (3) (1) +7 (2) In which of the following 	(2) Iodide ions sulphur in $H_2S_2O_8$ is (2)+6 g compounds iron has lowe	 (3) Zinc atom (3)-6 st oxidation number? 	(4) Iodine (4) +4	
Ans. 8. Ans. 9.	 (1) Zinc ions (3) (1) +7 (2) In which of the following (1) FeSO₄. (NH₄)₂SO₄.6H₂ 	 (2) Iodide ions sulphur in H₂S₂O₈ is (2)+6 g compounds iron has lower O 	 (3) Zinc atom (3)-6 (3)-6 (2) K₄[Fe(CN)₆] 	(4) Iodine (4) +4	
Ans. 8. Ans. 9.	(1) Zinc ions (3) The oxidation number of $(1)+7$ (2) In which of the following (1) FeSO ₄ . (NH ₄) ₂ SO ₄ .6H ₂ (3) Fe ₂ O	 (2) Iodide ions sulphur in H₂S₂O₈ is (2)+6 g compounds iron has lower 	 (3) Zinc atom (3) -6 (3) -6 (4) Fe₂O₃ 	(4) Iodine (4) +4	
Ans. 8. Ans. 9. Ans.	(1) Zinc ions (3) The oxidation number of a (1) +7 (2) In which of the following (1) $FeSO_4$. (NH_4) ₂ SO_4 .6H ₂ (3) Fe_2O (3)	 (2) Iodide ions sulphur in H₂S₂O₈ is (2)+6 g compounds iron has lower 	 (3) Zinc atom (3) -6 est oxidation number? (2) K₄[Fe(CN)₆] (4) Fe₂O₃ 	(4) Iodine (4) +4	
Ans. 8. Ans. 9. Ans. 10.	(1) Zinc ions (3) The oxidation number of a (1) +7 (2) In which of the following (1) $FeSO_4$. $(NH_4)_2SO_4$. $6H_2$ (3) Fe_2O (3) Phosphorus has the oxida	 (2) Iodide ions sulphur in H₂S₂O₈ is (2)+6 g compounds iron has lowe O 	 (3) Zinc atom (3) -6 (3) -6 (4) Fe₂O₃ 	(4) Iodine (4) +4	
Ans. 8. Ans. 9. Ans. 10.	(1) Zinc ions (3) The oxidation number of $(1)+7$ (2) In which of the following (1) FeSO ₄ . (NH ₄) ₂ SO ₄ .6H ₂ (3) Fe ₂ O (3) Phosphorus has the oxida (1) Orthophosphoric aci	(2) Iodide ions sulphur in $H_2S_2O_8$ is (2)+6 g compounds iron has lowe O attion state +3 in d (H_3PO_4)	 (3) Zinc atom (3) -6 (3) -6 (2) K₄[Fe(CN)₆] (4) Fe₂O₃ 	(4) Iodine (4) +4	
Ans. 8. Ans. 9. Ans. 10.	(1) Zinc ions (3) The oxidation number of a (1)+7 (2) In which of the following (1) $FeSO_4$. $(NH_4)_2SO_4$. $6H_2$ (3) Fe_2O (3) Phosphorus has the oxidat (1) Orthophosphoric acit (2) Phosphorus acid	(2) Iodide ions sulphur in $H_2S_2O_8$ is (2)+6 g compounds iron has lowe O ation state +3 in d (H_3PO_4) (H_3PO_3)	 (3) Zinc atom (3) -6 est oxidation number? (2) K₄[Fe(CN)₆] (4) Fe₂O₃ 	(4) Iodine (4) +4	
Ans. 8. Ans. 9. Ans. 10.	(1) Zinc ions (3) The oxidation number of a (1) +7 (2) In which of the following (1) $FeSO_4$. $(NH_4)_2SO_4$. $6H_2$ (3) Fe_2O (3) Phosphorus has the oxida (1) Orthophosphoric acid (2) Phosphorus acid (3) Metaphosphoric acid	(2) Iodide ions sulphur in $H_2S_2O_8$ is (2)+6 g compounds iron has lowe O ation state +3 in d (H_3PO_4) (H_3PO_3) d (HPO_3)	 (3) Zinc atom (3) -6 (3) -6 (2) K₄[Fe(CN)₆] (4) Fe₂O₃ 	(4) Iodine (4) +4	
Ans. 8. Ans. 9. Ans. 10.	(1) Zinc ions (3) The oxidation number of (1)+7 (2) In which of the following (1) $FeSO_4$. $(NH_4)_2SO_4$. $6H_2$ (3) Fe_2O (3) Phosphorus has the oxida (1) Orthophosphoric acid (2) Phosphorus acid (3) Metaphosphoric acid (4) Pyrophosphoric acid	(2) Iodide ions sulphur in $H_2S_2O_8$ is (2)+6 g compounds iron has lowe O ation state +3 in d (H_3PO_4) (H_3PO_3) d (HPO_3) d $(H_4P_2O_7)$	 (3) Zinc atom (3) -6 (3) -6 (2) K₄[Fe(CN)₆] (4) Fe₂O₃ 	(4) Iodine (4) +4	

1.	The brown ring complex compound is formulated as $[Fe(H_2O)_5NO]SO_4$. The oxidation state of iron is						
	(1)+1	(2)+2	(3)+3	(4)+6			
Ans.	(1)						
2.	Oxidation number of Cr in CrO_5 is						
	(1)+10	(2)+6	(3)+4	(4)+5			
Ans.	(2)						
3.	In which of the follow:	ing compounds, the	oxidation number of io	dine is fractional ?			
	(1) IF ₇	(2) I_3^{-}	(3) IF ₅	(4) IF ₃			
Ans.	(2)						
4.	Oxidation number of s	odium in sodium am	algam is				
	(1)+1	(2)0	(3)-1	(4)+2			
Ans.	(2)						
5.	A compound of Xe and F is found to have 53.3% Xe (At. mass = 133). Oxidation number of Xe in this compound is						
	(1)+2	(2)0	(3)+4	(4)+6			
Ans.	(4)						
6.	The oxidation number	of nitrogen in NH ₂ O	OH is :				
	(1)0	(2)+1	(3)-1	(4)-2			
Ans.	3						
7.	Oxidation number of Fe in Fe_3O_4 are :						
	(1)+2 and +3	(2)+1 and $+2$	(3)+1 and	+3 (4) None			
Ans.	1						
8.	Select the compound in which the oxidation number of oxygen is -1:-						
	(1) H ₂ O	(2) $O_2 F_2$	(3) Na ₂ O	(4) BaO ₂			
Ans.	4						
9.	In the conversion of Br_2 to BrO_3^- the oxidation state of bromine changes from :-						
	(1) 0 to 5 (2) 1	1 to 5	(3) 0 to -3	(4) 2 to 5			
Ans.	1						
10.	Oxidation number of P in KH ₂ PO ₂ is :-						
	(1) - 1	(2) - 3	(3) + 5	(4) + 3			
Ans.	4		~ /	• /			

1.	White P reacts with caus	White P reacts with caustic soda, the products are PH, and NaH, PO,. The reaction is an example of				
	(1) Oxidation	(2) Reduction	(3) Disproportionation	(4) Neutralization		
Ans.	(3)					
2.	In the following equation	1				
	$2Br_2 + 6CO_3^{2-} + 3H_2O \rightarrow$	$5Br^{-}+BrO_{3}^{-}+6HCO_{3}^{-}$				
	(1) Bromine is oxidised	and carbonate is reduced				
	(2) Bromine is reduced	and carbonate is oxidised				
	(3) Bromine is neither r	educed nor oxidised				
	(4) Bromine is reduced	as well oxidised				
Ans.	(4)					
3.	In which reaction, there	is change in oxidation num	ber of N atom ?			
	(1) $2NO_2 \rightleftharpoons N_2O_4$		$(2) 2NO_2 + H_2O \rightarrow HNO_3$	+ HNO ₂		
	(3) $NH_4OH \rightarrow NH_4^+ + OH_4^+ + OH_4^+$)H-	$(4) N_2O_5 + H_2O \rightarrow 2HNO$	3		
Ans.	(2)					
4.	When iron is added to C	CuSO ₄ solution, copper is	precipitated. It is due to			
	(1) Oxidation of Cu^{+2}	(2) Reduction of Cu^{+2}	(3) Hydrolysis of $CuSO_4$	(4) Ionization of $CuSO_4$		
Ans.	(2)					
5.	Which of the following reactions involves oxidation and reduction ?					
	(1) $NaBr + HCl \rightarrow NaCl$	+HBr	$(2) HBr + AgNO_3 \rightarrow AgB$	$Br + HNO_3$		
	(3) $H_2 + Br_2 \rightarrow 2HBr$		$(4) \operatorname{Na}_2 \mathrm{O} + \mathrm{H}_2 \mathrm{SO}_4 \to \mathrm{Na}_2$	$SO_4 + H_2O$		
Ans.	(3)					
6.	Which of the following involves the reduction of copper?					
	(1) $\operatorname{Cu}(s) + \frac{1}{2}O_2(g) \to C$	CuO(s)	$(2) \operatorname{Cu}^{2+}(aq) + 2I^{-}(aq) \to 2$	2CuI(aq)		
	(3) $CuCl_2(s) + 2F(aq) -$	$\rightarrow CuF_2 + Cl_2(g)$	$(4) \operatorname{CuO} + \operatorname{H}_2 \operatorname{O} \rightarrow \operatorname{Cu}(\operatorname{O})$	$H)_2$		
Ans.	(2)					
7.	Which one of the follow	Which one of the following is the correct match?				
	(1) Cl_2 – only reducing agent					
	(2) HNO_2 – only oxidising agent					
	 (3) HNO₃ - both oxidising and reducing agent (b) and the state of the stat					
	(4) SO_2 – both oxidising	g and reducing agent				
Ans.	(4)					
8.	Which reaction involves	neither oxidation nor redu	ction ?			
	$(1)\operatorname{CrO}_{4}^{2-} \to \operatorname{Cr}_{2}\operatorname{O}_{7}^{2-}$	$(2) \operatorname{Cr} \to \operatorname{Cr}_2 \operatorname{Cl}_3$	$(3) \text{ KMnO}_4 \rightarrow \text{MnO}_2$	$(4) \operatorname{Fe} \to \operatorname{Fe}_2 \operatorname{O}_3. \operatorname{xH}_2 \operatorname{O}$		
Ans. 0	(1)					
У.	In the chemical reaction, $K = \{0, 1, 2, 3, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5,$					
	$\kappa_2 U r_2 U_7 + a H_2 S U_4 + b S U_4$	$\nu_2 \rightarrow \kappa_2 S U_4 + C r_2 (S U_4)_3 + c I$	n_2 \bigcirc a, σ and c are	(4) 2 1 2		
A	(1) 1, 3, 1	(2)4, 1, 4	(3) 3, 2, 3	(4) 2, 1, 2		
AIIS.	(1)					

1.	Which of the following compound cannot be oxidised by O_3 ?						
	(1)KI	(2) KMnO ₄	$(3) K_{2}$	MnO ₄	(4) $FeSO_4$		
Ans.	(2)						
2.	Which of the following is not a redox reaction?						
	$(1) \operatorname{H}_2 + \operatorname{Cl}_2 \rightarrow 2\operatorname{HCl}$		(2) Na	$OH + HCl \rightarrow Na$	$Cl + H_2O$		
	(3) Photosynthesis		(4) Cel	ll respiration			
Ans.	(2)						
3.	Redox reaction have no concern with						
	(1) Neutralization of acid bases		(2)	Salt hydrolys	iis		
	(3) Esterification		(4)	All of these			
Ans.	(4)						
4.	In the process of phot	osynthesis, which takes pla	ce in green	plants which u	ndergoes reduction ?		
	(1) Water	$(2) \operatorname{CO}_2$	(3) Pro	otons	(4) Photons		
Ans.	(2)		4				
5.	In a reaction 4 mole of electrons are transferred to one mole of HNO_3 when it acts as an oxidant. The possible reduction product is :						
	(1)(1/2) mole N ₂	(2) (1/2) mole N_2O	(3) 1 m	nole of NO ₂	(4) 1 mole NH_3		
Ans.	2						
6.	Which is a redox react	tion :					
	$(1) 2CuI_2 \rightarrow CuI + I_2$		(2) Na	$Cl + AgNO_3 \rightarrow A$	$AgCl + NaNO_{3}$		
	$(3) \mathrm{NH}_{4}\mathrm{Cl} + \mathrm{NaOH} \rightarrow (3) \mathrm{NH}_{4} + \mathrm{NAOH} \rightarrow (3) \mathrm$	$NH_3 + NaCl + H_2O$	(4) Cr ₂	$(SO_4)_3 + 6KOH -$	$\rightarrow 2Cr(OH)_3 + 3K_2SO_4$		
Ans.	1						
7.	Select the example of disproportionation reaction						
	$(1) \operatorname{BaCl}_2 + \operatorname{H}_2 \operatorname{SO}_4 \to \operatorname{H}_2$	BaSO ₄ +2HCl	(2) NH	$(2) \operatorname{NH}_4 \operatorname{NO}_3 \to \operatorname{N}_2 \operatorname{O} + 2\operatorname{H}_2 \operatorname{O}$			
	$(3) 4H_3PO_3 \rightarrow PH_3 + 3H_3PO_4$		(4)Ag	$(4) AgCl + 2NH_3 \rightarrow Ag(NH_3)_2Cl$			
Ans.	3						
8.	In the reaction -						
	$MnO_4^- + SO_3^{2-} + H^+ \rightarrow SO_4^{-2} + Mn^{+2} + H_2O$						
	(1) MnO_4^- and H ⁺ both are reduced		(2) Mi	(2) MnO_4^- is reduced and H ⁺ is oxidised			
	(3) MnO_4^- is reduced and SO_3^{2-} is oxidised		(4) Mi	(4) MnO_4^- is oxidised and SO_3^{2-} is reduced			
Ans.	3						
9.	$I_2 + KI \rightarrow KI_3$						
	In the above reaction:	In the above reaction:-					
	(1) Only oxidation taken place		(2) On	(2) Only reduction takes place			
	(3) Both the above		(4) No	one of the above			
Ans.	3						

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1.	Given that the oxidation number of sulphur is -2 , the equivalent weight of sulphur is				
	(1)16	(2) 32	(3)9	(4)4	
Ans.	(1)				
2.	In alkaline solution KM	InO_4 reacts as follows			
	$2KMnO_4 + 2KOH \rightarrow 2I$	$K_2MnO_4 + H_2O + O$			
	Therefore, its equivalent	nt weight will be			
	(1) 31. 6	(2) 52.7	(3)79.0	(4) 158.0	
Ans.	(4)				
3.	The equivalent weight	of FeS_2 in the following read	ction is $\text{FeS}_2 + \text{O}_2 \rightarrow \text{Fe}^{+3} + \text{S}_2$	80 ₂	
	(1) $\frac{\text{Mol.wt}}{\text{Wol.wt}}$	(2) $\frac{\text{Mol.wt}}{\text{Wol.wt}}$	(2) $\frac{\text{Mol.wt}}{\text{Wol.wt}}$	(4) Mol.wt	
	(1) 1	(2) 7	(5) 11	(4) 9	
Ans.	(3)				
4.	When SO ₂ is passed in	acidified potassium dichro	omate solution, the oxidation	n number of S is changed from	
	(1) +4 to zero	(2) + 4 to $+2$	(3) + 4 to $+ 6$	(4) + 6 to $+ 4$	
Ans.	(3)				
5.	How many mole of FeS	O_4 reacted with one mole of	^C KMnO ₄ in acidic medium ?		
	(1) 2	(2) 5	(2) 1	(4) 1	
	$(1){5}$	(2)5	$(3)\frac{1}{2}$	$(4){5}$	
Ans.	(2)				
			IH ₂		
(Electroreduction			
0.		eakly acidic medium			
		\sim			
	n factor of nitrobenzen	e in this process			
	(1)3	(2)6	(3)2	(4)4	
Ans.	(2)				
7.	Equivalent weight of NH, in the change $N_2 \rightarrow NH_3$ is :				
	17		17	17	
	$(1)\frac{17}{6}$	(2) 17	$(3)\frac{17}{2}$	$(4)\frac{17}{3}$	
Ans.	4				
8.	The number of mole of	foxalate ions oxidised by or	ne mole of MnO_ is :		
	(1) 1/5	(2) 2/5	(3) 5/2	(4)5	
Ans.	3				
0	What is the value of u is the following equation $u \in C(\Omega)$ $(\Omega) = (\Omega) = (\Omega \cap \Omega)^{-1} \cup (\Omega \cap \Omega)^{-1}$				
7.	what is the value of <i>n</i> i	in the following equation :	$CI(UH)_4 + UH \rightarrow CIO_4^2$	$+\Pi_2 O + \hbar c$	
	(1)3	(2)6	(3)5	(4)2	
Ans.	1				

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10.	The number of electro	ons required to balance the	following equation are:		
	$NO_3^- + 4H^+ \rightarrow 2H_2O^+$	+NO			
	(1) 2 on right side	(2) 3 on left side	(3) 3 on right side	(4) 5 on left side	
Ans.	2				

Ans.