

anthanoid series

c. first decreases and then increases d. first increases and then decreases

a. decreases

b. increases

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As	<u>ssignment Sheet - 2</u>	: d- and f- Blo	ock Elements	
When pyrolusite is product is a. red c. black	b. pink d. green	paramagnetic ion is a. Yb ²⁺ c. Lu ²⁺	b. Eu** d. Ce**	
 Which of the following is wrong? K₂Cr₂O₂ → Orange CuSO₄ -5H₂O → Blue MnSO₄ → Yellow Cr₂(SO₄)₃ → Purple 		 The actinoids include theA elements fromB. toC Here, A, B and C refer to a. A - fourteen, B - Th , C - Lr b. A - twelve, B - Lr , C - Th c. A - thirteen, B - Lr , C - Th d. A - fourteen, B - Th, C - Lr 		
oxidation state? a. K ₂ MnO ₄ c. KMnO ₄ 4. KMnO ₄ is used	b. MnO ₂ d. Mn ₃ O ₄	12. Larger number of oxidation states are exhibited by the actinoids then those by the lanthanoids, the mail reason being a. 4forbitals are more diffused than the 5forbitals b. lesser energy difference between 5f and 6d than between 4f and 5d orbitals		
 c. in bleaching of v d. All of the above 	idant in preparative organic chemistry yool, cotten and silk	 c. more energy difference between 5 f and 6d than between 4f and 5d orbitals d. more reactive nature of the actinoids than the lanthanoids 		
conc. H ₂ SO ₄ , a s which is highly compound from th		13. The f-block consists a. two c. four	of series. b. three d. five	
	b. MnO ₂ d. Mn ₂ O ₃ ents in actinoid series. Which of the does not belong to this series?	14. Actinoids possess a. variable valency b. 12 elements c. all synthetic elements d. only short-lived isotopes		
a. U c. Tm	b. Np d. Fm	15. The lanthanoid contr a, atomic radii		
 In context of the lanthanoids, which of the following statements is not correct? There is a gradual decrease in the radii of the members with increasing atomic number in the series All the members exhibit + 3 exidation state Because of similar properties, the separation of lanthanoids is not easy Availability of 4f electrons results in the formation of compounds in + 4 state for all the members of the 		b. atomic as well as ionic radii, M ³⁺ c. valence electrons d. oxidation states 16. Lanthanoids and actinoids differ from each other because a. of the presence of partially filled outermost shells b. actinoids are radioactive in nature c. they show common oxidation state of + 3 d. both are known as inner-transition elements		
series 3. Knowing that the chemistry of lanthanoids (Ln) is dominated by its +3 oxidation state, which of the following statements is incorrect? a. Because of the large size of the Ln (III) ions, the bonding in its compounds is predominantly ionic in character b. The ionic sizes of Ln (III) decrease in general with increasing atomic number c. Ln (III) compounds are generally colourless d. Ln (III) hydroxides are mainly basic in character		 The one which is not transition element, is a. diamagnetic behavior. c. catalytic activity 		
		 Dichromate lons in all a. CrO₂²⁻ Cr Cr³⁺ 	Actor Committee of the	
		 The correct formula for diamine silver chloride is [Ag(NH₃)₂]Cl [Ag(NH₂)₃]Cl 		
. The basicity of la	inthanoid hydroxides across the	g. AgCl. NH.		

d. [Ag(NH₄)₂]CI

pigment?

a. Zno

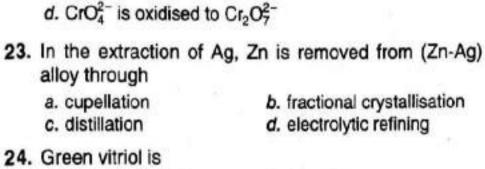
20. Which of the following oxides is used as a whole

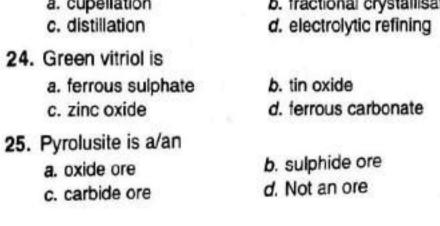
c. NO

d. CuO

b. FeO

Mercury is a liquid metal because a. it has a completely filled d-orbital that causes d-d overlapping b. it has completely filled d-orbital that prevents d-d overlapping c. it has a completely filled s-orbital d. it has a small atomic size 22. When a solution of potassium chromate is treated with an excess of dilute nitric acid. a. Cr3+ and Cr2O2- are formed b. Cr₂O₇²⁻ and H₂O are formed c. CrO₄²⁻ is reduced to Cr³⁺





26.	When potassium ferrocyanide crystals are heated with conc. H ₂ SO ₄ ,the gas evolved is				
	a. SO ₂	b. NH ₃	c. CO ₂	d . CO	
27.	van-Arkel method is base a. cupellation method c. poling method		b. furnace refining method d. None of the above		
28	Oil paintin	as turn black	ish after som	e time. The salt	

b. CuS a. SnS 29. The extraction of which of the following metals involves bessemerisation?

c. PbS

d. CdS

d. Cu C. Al b. Ag a. Fe

formed is

30. A metal X on heating in nitrogen gas gives Y. Y on treatment with water gives a colourless gas which when passed through CuSO₄ solution gives a blue colour. Y is d. MgO C. NHa a. Mg(NO₃)₂ b. Mg₃N₂