



CHEMISTRY

BOOKS - MODERN PUBLICATION

INORGANIC CHEMISTRY



1. What happens when KI solution is added to

acidified $K_2Cr_2O_7$ solution?

2. What happens when yellow phosphorus is

heated with dilute NaOH solution?



3. Explain why HCl is a gas and HF is a liquid at

room temperature.

4. Write the IUPAC name of the following compounds . (a) $[Co(NH_3)_6]Cl_3$ (b) $Fe(CO)_5$

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5. With an example, explain roasting.



6. Use EAN rule and predict the molecular formula of nickel carbonyl?
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7. Why hydrogen sulphide cannot be dried by conc. H_2SO_4 ?

8. Why do transitional elements form complex

compounds ?

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9. What happens when SO_2 is passed through sulphuretted hydrogen dissolved in water? Give equation.

10. What type of hybridisation takes place in xenon during the formation of XeF_4 ? What is its shape ?

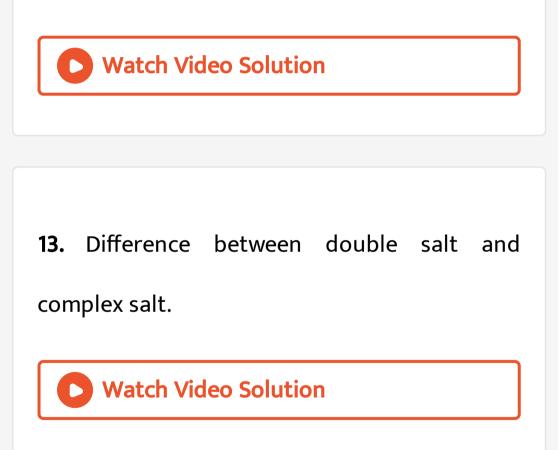


11. Why hydrofluoric acid is the weakest of all

the halogen acids ?

12. What is the action of ozone on acidified

ferrous sulphate? Give equation.



14. Explain why most of transition elements

from coloured salts.

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15. Why hydrofluoric acid is the weakest of all

the halogen acids ?

16. What is the action of ozone with lead

sulphide? Give equation.

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17. H_2S cannot be dried by passing over conc.

 H_2SO_4 because:



18. What happens when $SnCl_2$ solution is

added to $CuCl_2$ solution ?

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19. Why are most of the transition metal

compounds are paramagnetic ?

20. What happens when chlorine gas is passed

through cold solution of NaOH?



21. What happens when SO_2 gas is passed

through H_2S dissolved in water ?



22. Why ClF_3 exists, whereas FCl_3 does not exist explain?

23. What is the function of limestone the extraction of iron? Give equation to explain its action.

24. How does the bleaching action of chlorine

differ from that of sulphur dioxide? Explain.

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25. Why HF cannot be stored in glass bottle?

Explain with equation.



26. What is the action of chlorine with (i) cold and dilute NaOH and (ii) hot and concentrated NaOH ?



27. Discuss the struchure of $[Co(NH_3)_6]^{3+}$ ion on the basis of valence bond theory. Whether it is an inner orbital or outer orbital complex ion ?



28. Answer any seven questions of the following

Discuss van Arkel Boer method for

ultrapurification of zirconium.

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29. Answer any seven questions of the following:

What are bidentate ligands? Give an example.

30. What are freons ? What are their harmful

effects on the environment ?



31. What is lanthanide contraction? Write any

two of its consequences.

32. $FeSO_4$, solution mixed with $(NH_4)_2SO_4$, solution in 1:1 molar ratio gives the test for Fe^{2+} ion but $CuSO_4$, solution mixed with aqueous ammonia in1:4 molar ratio does not give the test for Cu^{2+} ion. Explain.

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33. Explain why transition metal ions are usually coloured.

34. Give one method of preparation of XeF_4 . Mention one reaction in which it acts as an oxidising agent Give its structure



35. How does copper react with dilute and

conc. HNO_3 ? Give reactions.

36. The aqueous solution of which amongst the following is the most acidic and why? HF, HCI, HBr, HI

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37. Why hydrogen bromide cannot be prepared by reacting sodium bromide with concentrated H_2SO_4 ?

38. What happens when SO_2 gas is passed through lime water first slowly and then in excess ?



39. HF is a liquid whereas HCl is a gas. Explain.



40. What are the interhalogen compounds?

Give examples.

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41. What type of hybridisation takes place in xenon during the formation of XeF_4 ? What is its shape?

42. Give a brief account of Werner's coordination theory.
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43. Explain. Why fluorine exhibits an oxidation state of -1 only, while other elements of the family exhibit oxidation state of -1 +1, +3, +5 and +7.



44. Difference between double salt and

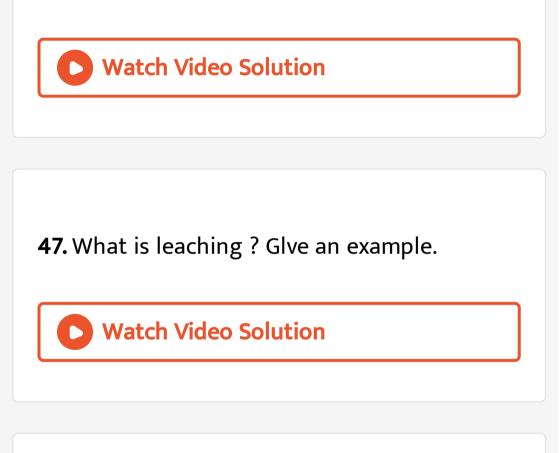
complex salt.



45. Explain that bleaching action of CL_2 is permanent, while that of SO_2 is temporary.

46. What happens when potassium iodide is

added to $CuSO_4$ solution ?



48. What happens when NH_4OH solution is added dropwise to copper sulphate solution



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49. Answer the following:

Match the diseases of Group (A) with the

vitamins of Group (B) correctly:

	Group (A)		Group (B)	
(a)	Xerophthalmia	(8)	Vitamin-D	
(b)	Scurvy	低的	Vitamin-K	
(c)	Coagulation of blood	(iii)	Vitamin-A	
(d)	Rickets	(iiv)	Vitemin-C	

