



CHEMISTRY

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P-BLOCK ELEMENT II

Evaluation Choose The Correct Answer

1. In which of the following, NH_3 is not used?

A. Nessler's reagent

B. Reagent for the analysis of IV group basic radical

C. Reagent for the analysis of III group basic radical

D. Tollen's reagent

Answer: A



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2. Which is true regarding nitrogen?

A. least electronegative element

B. has low ionisation enthalpy than oxygen

C. d- orbitals available

D. ability to form $P\pi - P\pi$ bonds with itself

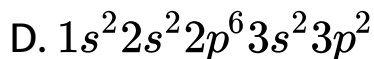
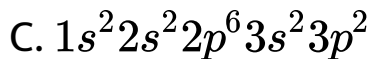
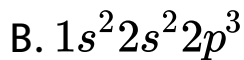
Answer: D



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3. An element belongs to group 15 and 3rd period of the periodic table, its electronic configuration would be:

A. $1s^2 2s^2 2p^4$



Answer: D



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4. Solid (A) reacts with strong aqueous NaOH liberating a foul smelling gas(B) which spontaneously burn in air giving smoky rings. A and B are respectively:

A. P_4 (red) and PH_3

B. P_4 (white) and PH_3

C. S_8 and H_2S

D. P_4 (white) and H_2S

Answer: B



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5. In the brown ring test, brown colour of the ring is due to:

A. a mixture of NO and NO_2

B. Nitroso ferrous sulphate

C. Ferrous nitrate

D. Ferric nitrate

Answer: B



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6. On hydrolysis, PCl_3 gives:

A. H_3PO_3

B. PH_3

C. H_3PO_4

D. $POCl_3$

Answer: A



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7. P_4O_6 reacts with cold water to give:

A. H_3PO_3

B. $H_4P_2O_7$

C. HPO_3

D. H_3PO_4

Answer: A



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8. The basicity of pyrophosphorus acid ($H_4P_2O_5$)
is

A. 4

B. 2

C. 3

D. 5

Answer: B



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9. The molarity of given orthophosphoric acid solution is 2M. its normality is:

A. 6N

B. 4N

C. 2N

D. none of these

Answer: A



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10. Assertion: bond dissociation energy of fluorine is greater than chlorine gas .

Reason: chlorine has more electronic repulsion than fluorine

A. Both assertion and reason are true and reason is the correct explanation of assertion.

B. Both assertion and reason are true but reason is not the correct explanation of assertion.

C. Assertion is true but reason is false.

D. Both assertion and reason are false.

Answer: D



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11. Among the following, which is the strongest oxidizing agent?

A. Cl_2

B. F_2

C. Br_2

D. I_2

Answer: B



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12. The correct order of the thermal stability of hydrogen halide is:

A. $\text{HI} > \text{HBr} > \text{HCl} > \text{HF}$

B. $\text{HF} > \text{HCl} > \text{HBr} > \text{HI}$

C. $\text{HCl} > \text{HF} > \text{HBr} > \text{HI}$

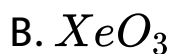
D. $\text{HI} > \text{HCl} > \text{HF} > \text{HBr}$

Answer: B



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13. Which one of the following compounds is not formed?



Answer: D



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14. Most easily liquefiable gas is:

A. Ar

B. Ne

C. He

D. Kr

Answer: C



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15. XeF_6 on complete hydrolysis produces:

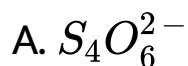


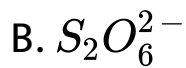
Answer: C



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16. On oxidation with iodine, sulphite ion is transformed to:





Answer: C



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17. Which of the following is strongest acid among all?



C. HBr

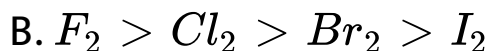
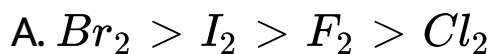
D. HCl

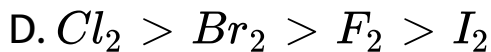
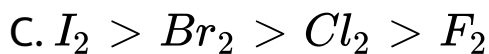
Answer: A



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18. Which one of the following orders is correct for the bond dissociation enthalpy of halogen molecules?



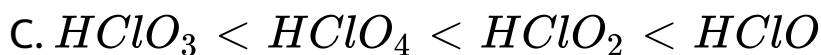
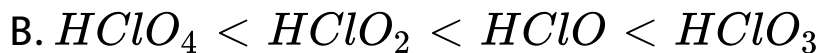
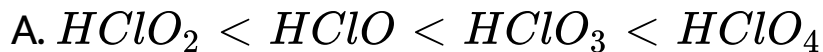


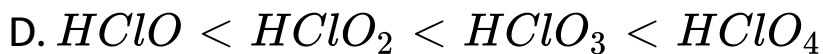
Answer: D



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19. Among the following the correct order of acidity is:



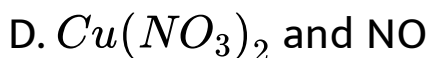
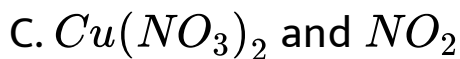
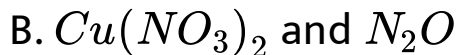
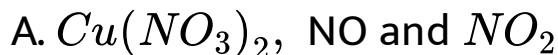


Answer: D



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20. When copper is heated with conc HNO_3 it produces:



Answer: C



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Evaluation Answer The Following Questions

1. What is inert pair effect?



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2. Chalcogens belongs to p-block. Give reason.



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3. Explain why fluorine always exhibit an oxidation state of -1?



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4. Give the oxidation state of halogen in the OF_2



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5. Give the oxidation state of halogen in the O_2F_2



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6. Give the oxidation state of halogen in the Cl_2O_3



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7. Give the oxidation state of halogen in the I_2O_4



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8. What are interhalogen compounds? Give examples.



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9. Why fluorine is more reactive than other halogens?



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10. Give the uses of helium.



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11. What is the hybridisation of iodine in IF_7 ? Give its structure.



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12. Give the balanced equation for the reaction between chlorine with cold NaOH and hot NaOH.

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13. How will you prepare chlorine in the laboratory?

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14. Give the uses of sulphuric acid.

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15. Give a reason to support that sulphuric acid is a dehydrating agent.



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16. Give the reason for the anomalous behaviour of Nitrogen.



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17. Write the molecular formula and structural formula for the molecules.

Nitric acid



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18. Write the molecular formula and structural formula for the molecules.

dinitrogen pentoxide



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19. Write the molecular formula and structural formula for the molecules.

Phosphoric acid



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20. Write the molecular formula and structural formula for the molecules.

phosphine



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21. Give the uses of argon.



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22. Write the valence shell electronic configuration of group-15 elements.



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23. Give two equations to illustrate the chemical behaviour of phosphine.



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24. Give a reaction between nitric acid and a basic oxide.



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25. What happens when PCl_5 is heated?



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26. Suggest a reason why HF is a weak acid, whereas binary acids of the all other halogens are

strong acids.

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27. Deduce the oxidation number of oxygen in hypofluorous acid – HOF.

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28. What type of hybridisation occur in BrF_5

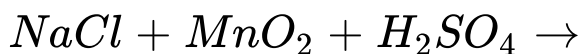
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29. What type of hybridisation occur in BrF_3



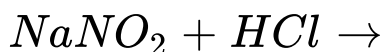
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30. Complete the reactions.



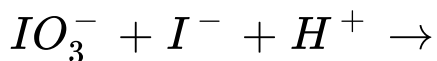
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31. Complete the reactions.



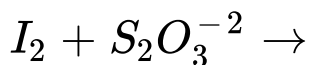
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32. Complete the reactions.



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33. Complete the reactions.



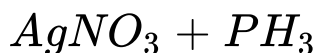
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34. Complete the reactions.



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35. Complete the reactions.



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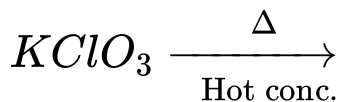
36. Complete the reactions.





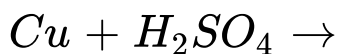
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37. Complete the reactions.



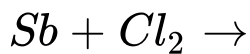
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38. Complete the reactions.



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39. Complete the reactions.



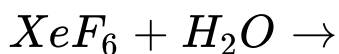
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40. Complete the reactions.



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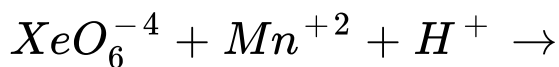
41. Complete the reactions.





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42. Complete the reactions.



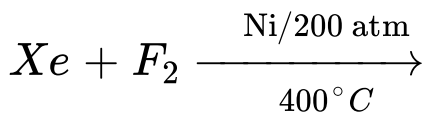
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43. Complete the reactions.



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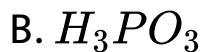
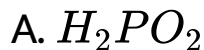
44. Complete the reactions.

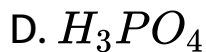


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Other Important Questions Answers Choose The Correct Answer

1. Which of the following is tribasic?



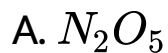


Answer: D



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2. Which of the following oxides of nitrogen is thermally most stable?



D. N_2O

Answer: C



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3. P_2O_5 is extensively used as

- A. reducing agent
- B. preservative
- C. oxidising agent
- D. dehydrating agent

Answer: D



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4. The range of oxidation states shown by phosphorus is from:

A. - 3 to +5

B. - 3 to 0

C. 0 to +5

D. - 4 to +2

Answer: A



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5. The structural formula of hypo phosphorus acid is:

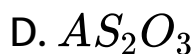
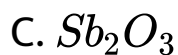
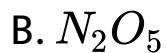
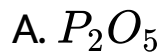


Answer: A



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6. Which of the following oxides is the most acidic?



Answer: B



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7. In white phosphorus molecule (P_4) which one is not correct?

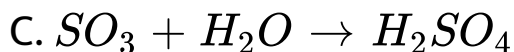
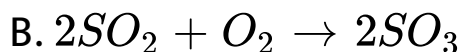
- A. Six P - P single bonds are present
- B. Four P - P single bonds are present
- C. Four lone pairs of electrons are present
- D. P-P-P bond angle is 60°

Answer: B



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8. In the preparation of sulphuric acid, V_2O_5 is used as a catalyst in the reaction?



D. none of these

Answer: B



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9. HCOOH reacts with conc. H_2SO_4 to produce:

A. CO

B. CO_2

C. SO_2

D. SO_3

Answer: A



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10. The geometry of H_2S and its dipole moment are:

A. angular and non zero

B. angular and zero

C. linear and non zero

D. linear and zero

Answer: A



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11. Among H_2O , H_2S , H_2Te , H_2Se , the one with maximum boiling point is:

- A. H_2O because of hydrogen bonding
- B. H_2Te because of higher molecular mass
- C. H_2S because of hydrogen bonding
- D. H_2Se because of lower molecular mass

Answer: A



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12. Which of the following has the highest bond energy?

A. O - O

B. S - S

C. Se - Se

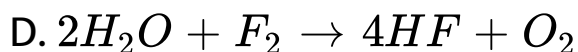
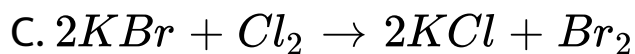
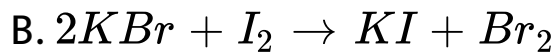
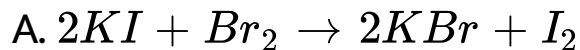
D. Te - Te

Answer: A



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13. Which of the following reaction is not feasible?



Answer: B

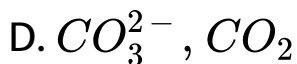
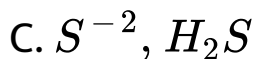
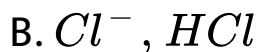
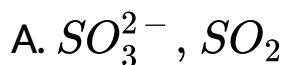


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14. $[X] + H_2SO_4 \rightarrow [Y]$. a colourless gas with initiating smell.

$[Y] + K_2Cr_2O_7 + H_2SO_4 \rightarrow$ green solution [X]

and [Y] are:

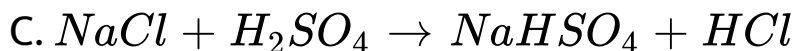
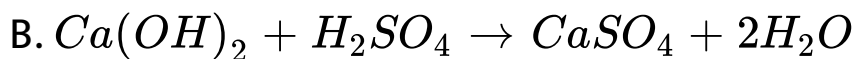
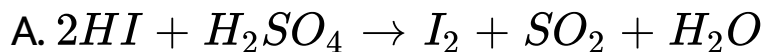


Answer: A



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15. Which of the following chemical reactions depicts the oxidising nature of conc. H_2SO_4 ?



D.



Answer: A



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16. The correct order of reactivity of halogens is:

A. F gt Br gt ClgtI

B. Fgt Clgt Br gt I

C. lgt Br gt Cl gt F

D. Br gt ClgtFgtI

Answer: B



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17. Which one of the following arrangements does not truly represent the property against it?

A. $Br_2 < Cl_2 < F_2$ Electronegativity

B. $Br_2 < F_2 < Cl_2$ Electron affinity

C. $Br_2 < Cl_2 < F_2$ Bond energy

D. $Br_2 < Cl_2 < F_2$ Oxidising power

Answer: C



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18. Which products are expected from the disproportionation reaction of hypochlorous acid?

A. $HClO_3$ and Cl_2O

B. $HClO_2$ and $HClO_3$

C. HCl and Cl_2O

D. HCl and $HClO_3$

Answer: D



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19. Among the halogens, the one which is oxidised by nitric acid is:

A. F

B. Cl

C. Br

D. I

Answer: D



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20. Sea divers go deep in sea water with a mixture of the following gases?

A. O_2 and Ar

B. O_2 and He

C. CO_2 and Ar

D. O_2 and CO_2

Answer: B



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21. Among the following molecules:

(i) XeO_2 (ii) $XeOF_4$ (iii) XeF_6

those having same number of lone pairs on Xe are:

A. (i) and (ii) only

B. (i) and (iii) only

C. (ii) and (iii) only

D. in all

Answer: D



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22. As compared to nitrogen, oxygen is:

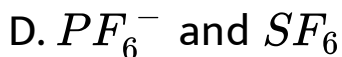
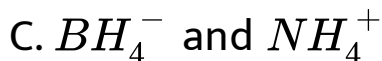
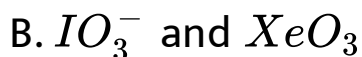
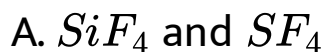
- A. less electronegative and less reactive
- B. more electronegative and less reactive
- C. more electronegative and more reactive
- D. less electronegative and more reactive

Answer: C



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23. Among the following the pair in which two species are not isostructural is:



Answer: A



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24. Which one of the following statements is correct?

A. The bond dissociation energy of fluorine is less than chlorine.

B. Pure HBr can be prepared by treatment of NaBr with conc. H_2SO_4

C. Hydrazine (N_2H_4) is a stronger base than NH_3

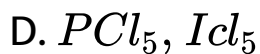
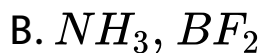
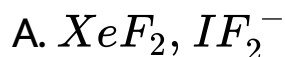
D. H_2S is a weaker acid than H_2O

Answer: C



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25. Which of the following two are iso structural?



Answer: A



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26. Assertion (A): Nitrogen molecule is less reactive than molecular oxygen.

Reason (R): The bond length of N_2 is shorter than that of oxygen.

A. Both assertion and reason are true and reason is the correct explanation of assertion.

B. Both assertion and reason are true, but reason is not the correct explanation of assertion

C. Assertion is true but reason is false

D. Both assertion and reason are false.

Answer: A



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27. Assertion (A): $HClO_4$ is a stronger acid than $HClO_3$.

Reason (R): The oxidation state of chlorine in $HClO_4$ is +5 and in $HClO_3$ is +7

A. Both assertion and reason are true and reason is the correct explanation of assertion.

B. Both assertion and reason are true, but reason is not the correct explanation of assertion

C. Assertion is true but reason is false

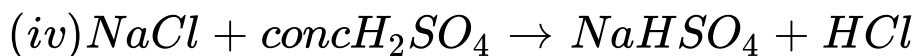
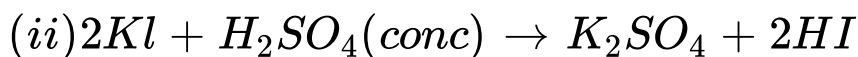
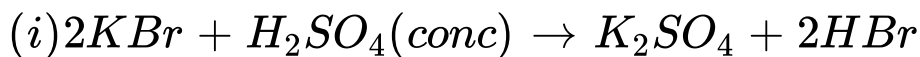
D. Both assertion and reason are false.

Answer: C



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28. Which reactions are used in the preparation of halogen acid?



A. (i) and (ii) only

B. (ii) and (iii) only

C. (iii) and (iv) only

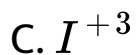
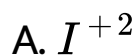
D. (i) and (iv) only

Answer: C



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29. Iodine cannot form the ion:



Answer: A



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30. Xenon forms compounds with fluorine under different conditions. The known fluorides are:

(i) XeF (ii) XeF_2 (iii) XeF_3 (iv) XeF_4

A. (i) and (iv) only

B. (ii) and (iv) only

C. (ii) and (iii) only

D. (i) and (iii) only

Answer: B



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Other Important Questions Answers Answer The Following Questions

1. Briefly account for the trend in atomic radius of elements in the nitrogen family



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2. Briefly explain the trend in melting and boiling point in the nitrogen family elements.



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3. What happens when Sodium azide is heated?

Give equations.



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4. What happens when Ammonia is treated with bromine. Give equations.



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5. Explain why nitrogen is inert at room temperature.



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6. What are nitrides?



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7. Give the preparation of Lithium nitride by means of chemical equation



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8. Give the preparation of Calcium nitride by means of chemical equation



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9. Give the preparation of Boron nitride by means of chemical equation



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10. Mention the conditions under which maximum amount of ammonia is formed from nitrogen to

hydrogen.



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11. Give equation for hydrolysis of urea



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**12. Give equation for heating ammonium chloride
with CaO**



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13. Give equation for Heating magnesium nitride with water



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14. How is ammonia manufactured?



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15. Compare the properties of liquid ammonia and water.



View Text Solution

16. Give equations for the Ammonia is heated over $500^{\circ}C$



View Text Solution

17. Give equations for the Ammonia is burnt in oxygen



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18. Give equations for the Ammonia is burnt in oxygen in the presence of a metal catalyst (pt)



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19. Give equations for the Ammonia is treated with excess of chlorine.



[View Text Solution](#)

20. Give equations for the Excess of ammonia is treated with chlorine.



[View Text Solution](#)

21. Give an example for a reducing property of ammonia.



[View Text Solution](#)

22. Ammonia is a reducing agent. Give an example to prove this statement.



[View Text Solution](#)

23. What are amides ? Give an example . How are they formed?



[View Text Solution](#)

24. What are nitrides ? Give an example . How are they formed?



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25. What happens when an aqueous solution of ammonia is treated with aqueous solution of ferric

chloride



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26. What happens when an aqueous solution of ammonia is treated with an aqueous solution of cupric chloride



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27. What happens when an aqueous solution of ammonia is treated with an aqueous solution of aluminium chloride.



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28. Explain with examples, that ammonia acts as a Lewis base.



[View Text Solution](#)

29. Explain why (i) insoluble silver chloride dissolves in aqueous ammonia?



[View Text Solution](#)

30. When aqueous ammonia is treated with a copper sulphate solution, a blue precipitate is formed. It dissolves on adding excess ammonia. Explain this observation.



[View Text Solution](#)

31. Explain the structure of ammonia.



[View Text Solution](#)

32. How is nitric acid prepared?



[View Text Solution](#)

33. Give reason for the following:

The nitric acid prepared by heating potassium nitrate and conc. H_2SO_4 is brown coloured.



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34. Explain the manufacture of Oswald's process of nitric acid.



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35. Explain with examples to show that nitric acid acts as an acid



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36. Explain with examples to show that nitric acid acts as an oxidising agent



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37. Explain with examples to show that nitric acid acts as an as nitrating agent



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38. Briefly explain the action of nitric acid on metals.

 [View Text Solution](#)

39. Give uses of nitric acid.

 [View Text Solution](#)

40. Complete and balance the equations.





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41. Complete and balance the equations.



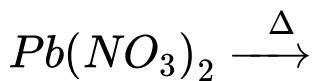
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42. Complete and balance the equations.



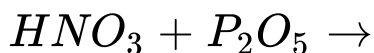
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43. Complete and balance the equations.



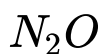
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44. Complete and balance the equations.



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45. Give the oxidation states of nitrogen in the





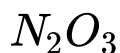
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46. Give the oxidation states of nitrogen in the NO



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47. Give the oxidation states of nitrogen in the



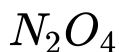
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48. Give the oxidation states of nitrogen in the



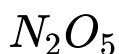
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49. Give the oxidation states of nitrogen in the



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50. Give the oxidation states of nitrogen in the



 [View Text Solution](#)

51. Write the structure of the N_2O

 [View Text Solution](#)

52. Write the structure of the NO

 [View Text Solution](#)

53. Write the structure of the N_2O_3

 [View Text Solution](#)

54. Write the structure of the NO_2



[View Text Solution](#)

55. Write the structure of the N_2O_4



[View Text Solution](#)

56. Write the structure of the N_2O_5



[View Text Solution](#)

57. Give equation for the preparation of the Hyponitrous acid



[View Text Solution](#)

58. Give equation for the preparation of the Nitrous acid



[View Text Solution](#)

59. Give equation for the preparation of the Pernitrous acid





[View Text Solution](#)

60. Give equation for the preparation of the Nitric acid



[View Text Solution](#)

61. Give equation for the preparation of the Pernitric acid



[View Text Solution](#)

62. Give reason for the Freshly prepared phosphorus becomes yellow on standing.



[View Text Solution](#)

63. Give reason for the Yellow phosphorus glows in dark.



[View Text Solution](#)

64. Give reason for the Nitrogen is a gas while phosphorus is a solid.



[View Text Solution](#)

65. Write the structure of the Hyponitrous acid



[View Text Solution](#)

66. Write the structure of the Hydronitrous acid



[View Text Solution](#)

67. Write the structure of the Nitrous acid



[View Text Solution](#)

68. Write the structure of the Pernitrous acid



View Text Solution

69. Write the structure of the Nitric acid



View Text Solution

70. Write the structure of the Pernitric acid



View Text Solution

71. Give the formula and the oxidation state of nitrogen in the Hyponitrous acid



[View Text Solution](#)

72. Give the formula and the oxidation state of nitrogen in the Nitrous acid



[View Text Solution](#)

73. Give the formula and the oxidation state of nitrogen in the Pernitrous acid





[View Text Solution](#)

74. Give the formula and the oxidation state of nitrogen in the Nitric acid



[View Text Solution](#)

75. Give the formula and the oxidation state of nitrogen in the Pernitric acid



[View Text Solution](#)

76. Explain the structure of white phosphorus.



View Text Solution

77. Explain why white phosphorus is kept under water.



View Text Solution

78. The red phosphorus is less reactive than white phosphorus. Explain with examples.



View Text Solution

**79. Distinguish between white and red phosphorus
interms of their properties**



View Text Solution

**80. Compare the chemical properties of white and
red phosphorus.**



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81. How phosphine is formed from White phosphorus. Give equations



[View Text Solution](#)

82. How phosphine is formed from Calcium phosphide. Give equations



[View Text Solution](#)

83. How phosphine is formed from Phosphorus acid. Give equations



[View Text Solution](#)

84. How phosphine is formed from Phosphonium iodide. Give equations



[View Text Solution](#)

85. Give equations for the Phosphine is heated at 317 K in the absence of air.



[View Text Solution](#)

86. Give equations for the Phosphine is heated with oxygen.



View Text Solution

87. Give equations for the Phosphine is treated with chlorine.



View Text Solution

88. Give examples for basic nature .



View Text Solution

89. Give examples for reducing property of phosphine.



View Text Solution

90. Briefly explain the structure of phosphine.



View Text Solution

91. What are Holmes signals? Mention its use.



View Text Solution

92. How is phosphorus trichloride prepared?



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93. What happens when white phosphorus is treated with a stream of chlorine gas.



[View Text Solution](#)

94. What happens when White phosphorus is treated with thionyl chloride





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95. What happens when Phosphorus trichloride is hydrolysed by cold water.



[View Text Solution](#)

96. How does phosphorus trichloride react with ethanol Give equations.



[View Text Solution](#)

97. How does phosphorus trichloride react with propionic acid? Give equations.



[View Text Solution](#)

98. Explain the structure of phosphorus trichloride.



[View Text Solution](#)

99. Give equations for the formation of PCl_5 from PCl_3



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100. Give equations for H_3PO_4 from PCl_5 .



[View Text Solution](#)

101. How does phosphorus pentachloride react with metals? Give examples



[View Text Solution](#)

102. Briefly outline the structure of PCl_5 .



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103. Mention the uses of phosphorus pentachloride.



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104. Hypophosphorus acid is monobasic and a good reducing agent. Explain.



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105. Briefly explain the structure of phosphorus trioxide



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106. Briefly explain the structure of phosphorus pentoxide



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**107. What is the basicity of orthophosphorus acid?
Explain with its structure. Will it act as a reducing**

agent or not?



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108. Write the formula and structure of hypophosphoric acid. What information do you get from its structure regarding its basicity and its reducing action?



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109. Orthophosphoric acid is tribasic and is not a reducing agent. Explain.



[View Text Solution](#)

110. Write the structure of pyrophosphoric acid and explain its basicity on the basis of the structure.



[View Text Solution](#)

111. Write the formula and the oxidation state of phosphorus in the Hypophosphorus acid



[View Text Solution](#)

112. Write the formula and the oxidation state of phosphorus in the Orthophosphorus acid



[View Text Solution](#)

113. Write the formula and the oxidation state of phosphorus in the Hypophosphoric acid



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114. Write the formula and the oxidation state of phosphorus in the Orthophosphoric acid



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115. Write the formula and the oxidation state of phosphorus in the Pyrophosphoric acid



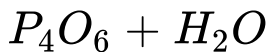
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116. Complete and balance the equation :



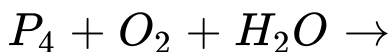
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117. Complete and balance the equation :



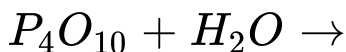
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118. Complete and balance the equation :



[View Text Solution](#)

119. Complete and balance the equation :





[View Text Solution](#)

120. Complete and balance the equation :



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121. Briefly explain the trend in physical properties of group 16 elements.



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122. Give two methods of preparation of oxygen in the laboratory.



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123. Give reasons for Oxygen exists as diatomic gas.



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124. Give reasons for Oxygen is paramagnetic.



[View Text Solution](#)

125. Give reasons for Oxygen forms strong hydrogen bonds



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126. How is ozone prepared in the laboratory?



View Text Solution

127. Write a note on the structure of ozone molecule.



View Text Solution

128. How does oxygen react with metals ? Give examples.



View Text Solution

129. How does oxygen react with non metals? Give examples.



View Text Solution

130. Explain why ozone is a more powerful oxidising agent than oxygen.



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131. Give an example for the oxidising action of ozone



[View Text Solution](#)

132. Explain how ozone can be estimated quantitatively.



[View Text Solution](#)

133. Mention the uses of oxygen.



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134. Name the stable allotrope of sulphur at ordinary temperature and pressure. What happens when it is heated to avoid $96^{\circ} C$?



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135. Give the characteristics of rhombic and monoclinic sulphur.



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136. How is sulphur dioxide prepared from sulphur



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137. How is sulphur dioxide prepared from galena



View Text Solution

138. How is sulphur dioxide prepared from iron pyrites.



View Text Solution

139. Give equation for the preparation of sulphur dioxide in the laboratory.



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140. With an example, prove sulphur dioxide in an acidic oxide.



[View Text Solution](#)

141. Give two examples for the oxidising property of sulphur dioxide.



[View Text Solution](#)

142. Give two examples to show that sulphur dioxide acts as a reducing agent.



[View Text Solution](#)

143. Give equation for the reaction in which sulphur dioxide is used for the manufacture of sulphuric acid by contact process.



[View Text Solution](#)

144. Explain the use of sulphur dioxide as a bleaching agent.



[View Text Solution](#)

145. Draw the structure of sulphur dioxide.



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146. Mention the uses of sulphur dioxide.



[View Text Solution](#)

147. Discuss the various steps involved in the manufacture of sulphuric acid by contact process?



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148. How do you prove that sulphuric acid is dibasic acid?



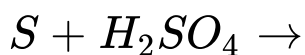
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149. Give two examples to show that conc. sulphuric acid is an oxidising agent.



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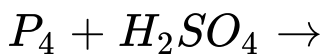
150. Complete and balance the equations.





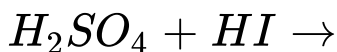
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151. Complete and balance the equations.



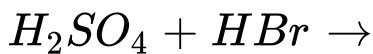
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152. Complete and balance the equations.



[View Text Solution](#)

153. Complete and balance the equations.



View Text Solution

154. Give a brief account of the action of sulphuric acid on metals.



View Text Solution

155. What happens when Potassium chloride is heated with concentrated sulphuric acid.



[View Text Solution](#)

156. What happens when Potassium nitrate is heated with concentrated sulphuric acid.



[View Text Solution](#)

157. What happens when Sodium carbonate is heated with dilute sulphuric acid.



[View Text Solution](#)

158. What happens when Sodium bromide is heated with conc. sulphuric acid



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159. How will you detect sulphate radical in qualitative analysis.



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160. Write the formula and the oxidation state of sulphur in the Sulphurous acid



[View Text Solution](#)

161. Write the formula and the oxidation state of sulphur in the Sulphuric acid



[View Text Solution](#)

162. Write the formula and the oxidation state of sulphur in the Thio sulphuric acid



[View Text Solution](#)

163. Write the formula and the oxidation state of sulphur in the Peroxy mano sulphuric acid



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164. Write the formula and the oxidation state of sulphur in the Peroxydithionic acid



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165. Write the formula and the oxidation state of sulphur in the Dithionic acid

 [View Text Solution](#)

166. Write the formula and the oxidation state of sulphur in the Pyrosulphuric acid.

 [View Text Solution](#)

167. Write the structure of the Sulphurous acid

 [View Text Solution](#)

168. Write the structure of the Sulphuric acid

 [View Text Solution](#)

169. Write the structure of the Thiosulphuric acid

 [View Text Solution](#)

170. Write the structure of the Dithionous acid

 [View Text Solution](#)

171. Write the structure of the Pyro sulphuric acid

 [View Text Solution](#)

172. Write the structure of the peroxy mono sulphuric acid



[View Text Solution](#)

173. Write the structure of the Peroxy di sulphuric acid



[View Text Solution](#)

174. Write the structure of the Dithionic acid





[View Text Solution](#)

175. Write the structure of the Polythionic acid



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176. Briefly outline the trend in physical properties of halogens.



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177. How is chlorine prepared from NaCl





[View Text Solution](#)

178. How is chlorine prepared from HCl



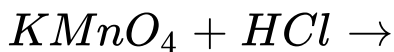
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179. How is chlorine prepared from bleaching powder



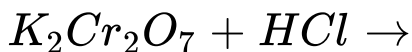
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180. Complete and balance the equation.



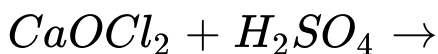
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181. Complete and balance the equation.



[View Text Solution](#)

182. Complete and balance the equation.





[View Text Solution](#)

183. Briefly outline the manufacture of chlorine by Electrolytic process



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184. Briefly outline the manufacture of chlorine by Deacon's process



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185. Give example for the reaction of chlorine an Aluminium



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186. Give example for the reaction of chlorine an Sulphur



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187. Give example for the reaction of chlorine an boron



[View Text Solution](#)

188. Give example for the reaction of chlorine an arsenic



[View Text Solution](#)

189. Give example for the reaction of chlorine an Phosphorus



[View Text Solution](#)

190. What happens when chlorine is treated with excess of ammonia ? Give equation



[View Text Solution](#)

191. What happens when ammonia is treated with excess of chlorine? Give equation



[View Text Solution](#)

192. Give examples for the oxidising power of chlorine.



[View Text Solution](#)

193. What happens when chloride is treated with cold, dilute sodium hydroxide ?Give equations.



[View Text Solution](#)

194. What happens when chloride is treated with hot, concentrated solution of sodium hydroxide? Give equations.



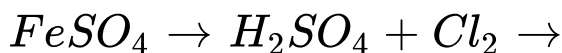
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195. Explain the bleaching action of chlorine.



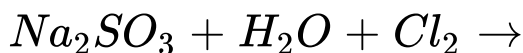
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196. Complete and balance the equation .



[View Text Solution](#)

197. Complete and balance the equation .



[View Text Solution](#)

198. Complete and balance the equation .



[View Text Solution](#)

199. How is bleaching powder prepared? Give equation.



[View Text Solution](#)

200. Give a brief account of displacement reactions of halogens



[View Text Solution](#)

201. Mention the uses of chlorine.



[View Text Solution](#)

202. How is hydrochloric acid prepared?



[View Text Solution](#)

203. How does hydrochloric acid react with Zn ?

Give equation





[View Text Solution](#)

204. How does hydrochloric acid react with Na_2CO_3 ? Give equation



[View Text Solution](#)

205. How does hydrochloric acid react with Na_2SO_4 ? Give equation



[View Text Solution](#)

206. What is aquaregia? Mention its uses.



View Text Solution

207. Mention the uses of hydrochloric acid.



View Text Solution

208. Briefly outline the trend in physical and chemical properties of hydrogen halides.



View Text Solution

209. How are hydrogen fluoride and hydrogen chloride prepared from CaF_2 and NaCl respectively? Give equation.



[View Text Solution](#)

210. Hydrogen bromide and hydrogen iodide cannot be prepared by treating their bromides and iodides with cone. H_2SO_4 . Why?



[View Text Solution](#)

211. Give a method of preparation of hydrogen bromide and hydrogen iodide from sodium bromide and sodium iodide respectively.



[View Text Solution](#)

212. How is hydrogen bromide prepared from red phosphorus?



[View Text Solution](#)

213. Give a method of preparation of hydrogen iodide from red phosphorus.



[View Text Solution](#)

214. Hydrogen fluoride has a high melting and boiling point compared to other hydrogen halides. Give reason.



[View Text Solution](#)

215. Fluorine forms hydrogen dihalides while other hydrogen halides do not form hydrogen dihalides.

Give reason



View Text Solution

216. Mention a reaction which is given by hydrogen fluoride alone, but not other hydrogen halides.



View Text Solution

217. What is etching? Explain with an example.



[View Text Solution](#)

218. Compare to reducing power of the hydrogen halides.



[View Text Solution](#)

219. Mention the conditions for the formation of inter halogen compound.



[View Text Solution](#)

220. Briefly outline the structure of interhalogens based on VSEPR theory. AB type



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221. Briefly outline the structure of interhalogens based on VSEPR theory. AB_3 type



[View Text Solution](#)

222. Briefly outline the structure of interhalogens based on VSEPR theory. AB_5 type



[View Text Solution](#)

223. Briefly outline the structure of interhalogens based on VSEPR theory. AB_7 type



[View Text Solution](#)

224. What happens when BrF_5 are treated with NaOH? Give equation.



[View Text Solution](#)

225. What happens when ICl are treated with $NaOH$? Give equation.



[View Text Solution](#)

226. Write a short note on oxides of halogens?



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227. Write a short note on oxy acids of halogens.



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228. Write a brief account of the trends in properties of group 18 (noble gases) elements



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229. How are the XeF_2 prepared? Give equations.



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230. How are the XeF_4 prepared? Give equations.



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231. How are the XeF_6 prepared? Give equations.

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232. Explain what happens when XeF_6 is heated at $50^\circ C$ in a sealed quartz vessel.

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233. Explain what happens when vapours of XeF_6 is treated with water vapour.

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234. Explain what happens when XeF_6 reacts with 2.5 M sodium hydroxide.



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235. Give an example for the oxidising property of sodium perxenate.



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236. Name the addition compounds formed by the Xenon difluoride.



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237. Explain the structure of Xenon fluoride (XeF_2).



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238. Explain the structure of Xenon tetrafluoride (XeF_4).



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239. Explain the structure of Xenon hexa fluoride (XeF_6).



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240. Explain the structure of Xenon oxy difluoride ($XeOF_2$).



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241. Explain the structure of Xenon oxy tetra fluoride ($XeOF_4$)



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242. Explain the structure of Xenon trioxide (XeO_3).



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243. Mention the uses of Xenon.



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244. Mention the uses of radon.



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