

Single Correct Answer Type

- Which of the following is correct order with respect to the property mentioned against each ?
 (A) $\text{Cl}_2 > \text{Br}_2 > \text{I}_2$ (solubility in water)
 (B) $\text{HClO}_4 > \text{HClO}_3 > \text{HClO}_2 > \text{HOCl}$ (acidic character)
 (C) $\text{ClO}^- > \text{ClO}_2^- > \text{ClO}_3^- > \text{ClO}_4^-$ (oxidising power)
 (D) All of these
- Dry bleaching is done by
 (A) Cl_2 (B) SO_2 (C) O_3 (D) H_2O_2
- HBr and HI reduces conc. H_2SO_4 . HCl can reduce KMnO_4 and HF can reduce.
 (A) H_2SO_4 (B) KMnO_4 (C) $\text{K}_2\text{Cr}_2\text{O}_7$ (D) none of the above
- The correct order among the following is
 (A) $\text{ClO}_4^- > \text{BrO}_4^- > \text{IO}_4^-$ (basicity)
 (B) $\text{ClO}^- > \text{ClO}_2^- > \text{ClO}_3^- > \text{ClO}_4^-$ (delocalization of negative charge)
 (C) $\text{ClO}^- > \text{ClO}_2^- > \text{ClO}_3^- > \text{ClO}_4^-$ (charge density)
 (D) $\text{NH}_3 > \text{PH}_3 > \text{AsH}_3$ (delocalization of lone pair electron)
- T-shape molecule are -
 (A) ClF_3 (B) ICl_3 (C) BrF_3 (D) All of these
- Of the following statements -
 (a) Cl_2 gas is dried by using conc. H_2SO_4
 (b) Fluorine have highest oxidising power
 (c) Oxidising power of halogens follow the order $\text{I}_2 > \text{Br}_2 > \text{Cl}_2$
 (d) HI is the strongest acid among HI, HBr, HCl
 (A) a, b and d are corrects (B) a, c are corrects
 (C) b, c are corrects (D) c, d are corrects
- Hydrogen fluoride is a liquid unlike other hydrogen halides because -
 (A) F atom is small in size (B) HF is a weakest acid
 (C) HF molecule are hydrogen bonded (D) Fluorine is highly reactive
- Hybridisation involved in the structure of XeF_2 -
 (A) sp^3d^2 (B) dsp^2 (C) sp^3d (D) sp^3
- Molecular shapes of SF_4 , CF_4 and XeF_4 are -
 (A) The same, with 2, 0 and 1 lone pairs of electrons respectively
 (B) The same, with 1, 1 and 1 lone pairs of electrons respectively
 (C) Different, with 0, 1 and 2 lone pairs of electrons respectively
 (D) Different, with 1, 0 and 2 lone pairs of electrons respectively
- Helium oxygen mixture is used by deep sea divers in preference to nitrogen oxygen mixture because-
 (A) Helium is much less soluble in blood than nitrogen
 (B) Nitrogen is much less soluble in blood than helium
 (C) Due to high pressure deep under sea nitrogen and oxygen react to give poisonous nitric oxide
 (D) Nitrogen is highly soluble in water

11. The ease of liquefaction of noble gases decreases in the order -
 (A) He > Ne > Ar > Kr > Xe (B) Xe > Kr > Ar > Ne > He
 (C) Kr > Xe > He > Ar > Xe (D) Ar > Kr > Xe > He > Ne
12. Which of the following trihalides is not hydrolysed -
 (A) PF₃ (B) PCl₃ (C) AsCl₃ (D) SbCl₃
13. XeF₄ on partial hydrolysis produces -
 (A) XeF₂ (B) XeOF₂ (C) XeOF₄ (D) XeO₃
14. The first compound of noble gases prepared by N-Bartlett was -
 (A) Xe⁺[Pt F₆]⁻ (B) XeF₄ (C) XeF₆ (D) XeOF₄
15. Tincture of iodine is -
 (A) I₂, KI and rectified spirit (B) I₂ and rectified spirit
 (C) KI and rectified spirit (D) I₂ and water
16. Compounds (A) and (B) are -

$$\text{Cl}_2 \begin{cases} \xrightarrow{\text{Cold and dilute NaOH}} (\text{A}) + \text{NaCl} + \text{H}_2\text{O} \\ \xrightarrow{\text{Hot and conc. NaOH}} (\text{B}) + \text{NaCl} + \text{H}_2\text{O} \end{cases}$$

 (A) NaClO₃, NaClO (B) NaOCl₂, NaOCl (C) NaClO₄, NaClO₃ (D) NaOCl, NaClO₃
17. Iodine is placed between two liquids C₆H₆ and water then -
 (A) It dissolves more in C₆H₆ (B) It dissolves more in water
 (C) It dissolves equally in both (D) Does not dissolve in both
18. A greenish yellow gas reacts with an alkali metal hydroxide to form a halate which can be used in fire works and safety matches. The gas and halides respectively are -
 (A) Br₂, KBrO₃ (B) Cl₂, KClO₃ (C) I₂, NaIO₃ (D) Cl₂, NaClO₃
19. XeF₆ on complete hydrolysis gives -
 (A) Xe (B) XeO₂ (C) XeO₃ (D) XeOF₂
20. XeF₆ dissolves in anhydrous HF to give a good conducting solution which contains
 (A) H⁺ and XeF₇⁻ ions (B) HF₂⁻ and XeF₅⁺ ions
 (C) HXeF₆⁺ and F⁻ (D) None of these

Numerical based

21. The number of lone pairs of electrons in chlorine(I) oxide is
22. In the known interhalogen compounds AB_n, what is maximum value of n?
23. How many Cl – O bonds Cl₂O₇ ?
24. On long standing bleaching powder undergoes auto-oxidation. The sum of the oxidation numbers of chlorine atoms in the products is
25. The n-factor of Cl₂ on reaction with dil and cold NaOH is ...

KEY

1.	D	2.	C	3.	D	4.	C	5.	D
6.	A	7.	C	8.	C	9.	D	10.	A
11.	B	12.	A	13.	B	14.	A	15.	A
16.	D	17.	A	18.	B	19.	C	20.	A
21.	8	22.	7	23.	8	24.	4	25.	1

* *Wish You all the Best* *