

Single Correct Answer Type

- Which out of the following gases is obtained when ammonium dichromate is heated -  
(A) Oxygen (B) Ammonia (C) Nitrogen (D) Nitrous oxide
- Which one of the following does not undergo hydrolysis -  
(A)  $\text{AsCl}_3$  (B)  $\text{SbCl}_3$  (C)  $\text{PCl}_3$  (D)  $\text{NF}_3$
- Which one of the following pentafluorides cannot be formed -  
(A)  $\text{PF}_5$  (B)  $\text{AsF}_5$  (C)  $\text{SbF}_5$  (D)  $\text{BiF}_5$
- The dimerisation of  $\text{NO}_2$  as the temperature is lowered is accompanied by -  
(A) An increase in pressure (B) A darkening in colour  
(C) A decrease in paramagnetism (D) The formation of a colloid
- Phosphine is not obtained by the reaction when  
(A) White P is heated with NaOH (B) Red P is heated with NaOH  
(C)  $\text{Ca}_3\text{P}_2$  reacts with water (D)  $\text{P}_4\text{O}_6$  is boiled with water
- In  $\text{P}_4\text{O}_6$  the number of oxygen atoms bonded to each phosphorus atom is -  
(A) 1.5 (B) 2 (C) 3 (D) 4
- Which of the following statements are not correct about the hydrides of group 15 elements-  
(A) The hydrides of the elements of group 15 are ionic and have planar triangular shape  
(B) The thermal stability of the hydrides decreases down the group  
(C) the basic character of the hydrides decreases down the group  
(D) The reducing nature of the hydrides increases down the group
- Bismuth does not form stable pentahalide because of -  
(A) Its higher electronegativity (B) Its smaller size  
(C) Inert pair effect (D) Non availability of d-orbitals
- Which of the following is basic in nature -  
(A)  $\text{H}_3\text{PO}_3$  (B)  $\text{H}_3\text{BiO}_3$  (C)  $\text{H}_3\text{AsO}_3$  (D)  $\text{H}_3\text{SbO}_3$
- Acidic nitrogen hydride is -  
(A)  $\text{N}_2\text{H}_4$  (B)  $\text{N}_3\text{H}$  (C)  $\text{NH}_2\text{OH}$  (D)  $\text{NH}_3$
- Which of the following phosphorus oxyacids can act as a reducing agent ?  
(A)  $\text{H}_3\text{PO}_3$  (B)  $\text{H}_3\text{PO}_4$  (C)  $\text{H}_4\text{P}_2\text{O}_6$  (D)  $\text{H}_4\text{P}_2\text{O}_7$
- When white phosphorous is heated with caustic soda, the compounds formed are -  
(A)  $\text{PH}_3 + \text{NaH}_2\text{PO}_3$  (B)  $\text{PH}_3 + \text{NaH}_2\text{PO}_2$   
(C)  $\text{PH}_3 + \text{Na}_2\text{HPO}_3$  (D)  $\text{PH}_3 + \text{NaH}_2\text{PO}_4$
- The P – P – P bond angle in white phosphorus is-  
(A)  $120^\circ$  (B)  $90^\circ$  (C)  $60^\circ$  (D)  $109^\circ, 28'$
- Phosphine produces smoky rings when it comes in contact with air because -  
(A) It reacts with water vapour (B) It reacts with nitrogen  
(C) It burns in air (D) It contains impurities of  $\text{P}_2\text{H}_4$

15. Liquor ammonia is -  
 (A) Ammonium hydroxide (B) Liquified ammonia gas  
 (C) Concentrated solution of  $\text{NH}_3$  in water (D) A solution of  $\text{NH}_3$  in alcohol
16. The solid  $\text{PCl}_5$  exists as -  
 (A)  $\text{PCl}_5$  molecules (B)  $\text{P}_2\text{Cl}_{10}$  (C)  $[\text{PCl}_4]^+ [\text{PCl}_6]^-$  (D) None of these
17. Which of the following oxides will be least acidic -  
 (A)  $\text{P}_4\text{O}_6$  (B)  $\text{P}_4\text{O}_{10}$  (C)  $\text{As}_4\text{O}_6$  (D)  $\text{As}_4\text{O}_{10}$
18. Which of the following is used as anaesthetic -  
 (A)  $\text{NH}_3$  (B)  $\text{NO}$  (C)  $\text{N}_2\text{O}$  (D)  $\text{NO}_2$
19. What is false about  $\text{N}_2\text{O}_5$ ?  
 (A) It is anhydride of  $\text{HNO}_3$  (B) It is a powerful oxidizing agent  
 (C) Solid  $\text{N}_2\text{O}_5$  is called nitronium nitrate (D) Structure of  $\text{N}_2\text{O}_5$  contains no  $[\text{N} \rightarrow \text{O}]$  bond
20. Which of the following oxides is most acidic ?  
 (A)  $\text{As}_2\text{O}_3$  (B)  $\text{P}_2\text{O}_3$  (C)  $\text{Sb}_2\text{O}_3$  (D)  $\text{N}_2\text{O}_3$

### Numerical based

21. Number of N – N bond in  $\text{N}_2\text{O}_5$  is
22. The number of water molecules needed to completely hydrolyse 1 mole  $\text{P}_4\text{O}_{10}$  is
23. Number of P – O – P bond in  $\text{P}_4\text{O}_6$  are.
24. The number of S – S bond in  $\text{H}_2\text{S}_2\text{O}_6$  is
25. The basicity of pyrophosphoric acid is

### KEY

1. C	2. D	3. D	4. C	5. B
6. C	7. A	8. C	9. B	10. B
11. A	12. B	13. C	14. D	15. C
16. C	17. C	18. C	19. D	20. D
21. 0	22. 6	23. 12	24. 1	25. 4

→ Wish You all the Best →