

## CHEMISTRY

### p-Block Elements (from 13 to 18 Group Elements)

11. The number of hydroxyl groups in pyrophosphoric acid is  
(1) 3 (2) 4  
(3) 5 (4) 7
12. The number of P-O-P bonds in the structure of phosphorous pentoxide ( $P_4O_{10}$ ) and phosphorous trioxide ( $P_4O_6$ ) are respectively  
(1) 6, 6 (2) 5, 5  
(3) 5, 6 (4) 6, 5
13. Which one of the following hydrides is least stable?  
(1)  $AsH_3$  (2)  $SbH_3$   
(3)  $NH_3$  (4)  $PH_3$
14. Atomic number of N is 7. The atomic number of 3<sup>rd</sup> number of nitrogen family is  
(1) 23 (2) 15  
(3) 43 (4) 33
15. Which of the following oxy acids of phosphorous is a reducing agent and monobasic?  
(1)  $H_3PO_2$  (2)  $H_3PO_3$   
(3)  $H_3PO_4$  (4)  $H_4P_2O_6$
16. Of the following which is paramagnetic  
(1)  $N_2O$  (2)  $NO$   
(3)  $N_2O_3$  (4)  $N_2O_5$
17. Which of the following noble gas does not have an octet of electrons in its outermost shell?  
(1) Neon (2) Radon  
(3) Argon (4) Helium
18. White phosphorus on reaction with NaOH gives  $PH_3$  as one of the products. This is a  
(1) dimerization reaction  
(2) disproportionation reaction  
(3) condensation reaction  
(4) precipitation reaction
19. Which of the following statements about  $H_3BO_3$  is not correct?  
(1) It is a strong tribasic acid  
(2) It is prepared by acidifying an aqueous solution of borax  
(3) It has a layer structure in which planar  $BO_3^{3-}$  units are joined by hydrogen bonds  
(4) It does not act as proton donor but acts as a Lewis acid by accepting hydroxyl ion
20. Identifying the statement that is not correct as far a structure of diborane is concerned  
(1) There are two bridging hydrogen atoms in diborane  
(2) Each boron atom forms four bonds in diborane  
(3) The hydrogen atoms are not in the same plane in diborane  
(4) All B-H bonds in diborane are similar