

- The group having isoelectronic species is?  
 (A)  $O^{2-}$ , F,  $Na^+$ ,  $Mg^{2+}$  (B)  $BO^-$ , F, Na,  $Mg^+$   
 (C)  $O^{2-}$ ,  $F^-$ , Na,  $Mg^{2+}$  (D)  $O^-$ ,  $F^-$ ,  $Na^+$ ,  $Mg^{2+}$
- The relation stability of +1 oxidation state of group 13 elements follows the order:  
 (A)  $Al < Ga < Tl < In$  (B)  $Tl < In < Ga < Al$   
 (C)  $Ga < Al < In < Tl$  (D)  $Al < Ga < In < Tl$
- The process that is Not endothermic in nature is  
 (A)  $Ar(g) + e^- \rightarrow Ar_{(g)}^-$  (B)  $H(g) + e^- \rightarrow H_{(g)}^-$   
 (C)  $Na(g) \rightarrow Na_{(g)}^+ + e^-$  (D)  $O_{(g)}^- + e^- \rightarrow O_{(g)}^{2-}$
- The first ionization energy (in KJ /mol) of Na, Mg, Al, Si in KJ Mol<sup>-1</sup> respectively are:  
 (A) 786, 737, 577, 496 (B) 497, 577, 737, 786  
 (C) 786, 739, 577, 497 (D) 739, 577, 786, 487
- Given below are two statements : one is labelled as Assertion (A) and the other is labelled as Reason (R).  
 Assertion (A) : Metallic character decreases and non-metallic character increases on moving from left to right in a period.  
 Reason (R) : It is due to increase in ionization enthalpy and decrease in electron gain enthalpy, when one moves from left to right in a period.  
 In the light of the above statements, choose the answer from the options given below:  
 (A) (A) is false but (R) is true.  
 (B) (A) is true but (R) is false.  
 (C) Both (A) and (R) are correct and (R) is the correct explanation of (A).  
 (D) Both (A) and (R) are correct but (R) is not the correct explanation of (A).
- Which of the following pair of molecules contain odd electron molecule and an expanded octet molecule?  
 (A)  $BCl_3$  and  $SF_6$  (B) NO and  $H_2SO_4$   
 (C)  $SF_6$  and  $H_3SO_4$  (D)  $BCl_3$  and NO

## 7. Match List-I with List-II.

List-I (Oxide)

List-II (Nature)

(A)  $\text{Cl}_2\text{O}_7$ (B)  $\text{Na}_2\text{O}$ (C)  $\text{Al}_2\text{O}_3$ (D)  $\text{N}_2\text{O}$ 

(I) Amphoteric

(II) Basic

(III) Neutral

(IV) Acidic

Choose the correct answer from the options given below:

(A) (A) - (IV), (B) - (III), (C) - (I), (D) - (II)

(B) (A) - (IV), (B) - (II), (C) - (1), (D) - (III)

(C) (A)-(II), (B) - (IV), (C) - (III), (D) (I)

(D) (A)-(1), (B) - (II), (C) - (III), (D) - (IV)

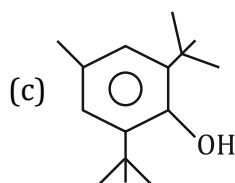
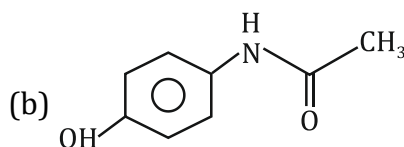
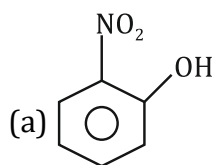
8. Identify the correct order of standard enthalpy of formation of sodium halides.

(A)  $\text{NaI} < \text{NaBr} < \text{NaF} < \text{NaCl}$ (B)  $\text{NaI} < \text{NaBr} < \text{NaCl} < \text{NaF}$ (C)  $\text{NaF} < \text{NaCl} < \text{NaBr} < \text{NaI}$ (D)  $\text{NaCl} < \text{NaF} < \text{NaBr} < \text{NaI}$ 

9. The correct increasing order of the ionic radii is

(A)  $\text{Cl}^- < \text{Ca}^{2+} < \text{K}^+ < \text{S}^{2-}$ (B)  $\text{K}^+ < \text{S}^{2-} < \text{Ca}^{2+} < \text{Cl}^-$ (C)  $\text{S}^{2-} < \text{Cl}^- < \text{Ca}^{2+} < \text{K}^+$ (D)  $\text{Ca}^{2+} < \text{K}^+ < \text{Cl}^- < \text{S}^{2-}$ 10. Amongst  $\text{LiCl}$ ,  $\text{RbCl}$ ,  $\text{BeCl}_2$  and  $\text{MgCl}_2$  the compounds with the greatest and the least ionic character, respectively are:(A)  $\text{LiCl}$  and  $\text{RbCl}$ (B)  $\text{RbCl}$  and  $\text{BeCl}_2$ (C)  $\text{MgCl}_2$  and  $\text{BeCl}_2$ (D)  $\text{RbCl}$  and  $\text{MgCl}_2$ 

11. The compound/s which will show significant intermolecular H-bonding is/are :



(A) (b) only

(B) (c) only

(C) (a) and (b) only

(D) (a), (b) and (c)

12. Arrange the following in increasing order of their covalent character.  
 (A)  $\text{CaF}_2$  (B)  $\text{CaCl}_2$  (C)  $\text{CaBr}_2$  (D)  $\text{CaI}_2$   
 Choose the correct answer from the options given  
 (A)  $B < A < C < D$  (B)  $A < B < C < D$   
 (C)  $A < B < D < C$  (D)  $A < C < B < D$
13. The number of molecule(s) or ion(s) from the following having non-planar structure is \_\_\_\_.  
 $\text{NO}_3^-$ ,  $\text{H}_2\text{O}$ ,  $\text{BF}_3$ ,  $\text{PCl}_3$ ,  $\text{XeF}_4$ ,  $\text{SF}_4$ ,  $\text{XeO}_3$ ,  $\text{PH}_4^+$ ,  $\text{SO}_3$ ,  $[\text{Al}(\text{OH})_4]^-$
14. The equation which is balanced and represents the correct product(s) is :  
 (A)  $\text{Li}_2\text{O} + 2\text{KCl} \rightarrow 2\text{LiCl} + \text{K}_2\text{O}$   
 (B)  $[\text{CoCl}(\text{NH}_3)_5]^+ + 5\text{H}^+ \rightarrow \text{Co}^{2+} + 5\text{NH}_4^+ + \text{Cl}^-$   
 (D)  $[\text{Mg}(\text{H}_2\text{O})_6]^{2+} + (\text{EDTA})^{4-} \xrightarrow{\text{Excess NaOH}} [\text{Mg}(\text{EDTA})]^{2+} + 6\text{H}_2\text{O}$   
 (D)  $\text{CuSO}_4 + 4\text{KCN} \rightarrow \text{K}_2[\text{Cu}(\text{CN})_4] + \text{K}_2\text{SO}_4$
15. Which of the following complex ions has electrons that are symmetrically filled in both  $t_{2g}$  and  $e_g$  orbitals ?  
 (A)  $[\text{FeF}_6]^{3-}$  (B)  $[\text{Mn}(\text{CN})_6]^{4-}$   
 (C)  $[\text{CoF}_6]^{3-}$  (D)  $[\text{Co}(\text{NH}_3)_6]^{2+}$
16. Which of the following is an example of homoleptic complex?  
 (A)  $[\text{Co}(\text{NH}_3)_6]\text{Cl}_3$  (B)  $[\text{Pt}(\text{NH}_3)_2\text{Cl}_2]$   
 (C)  $[\text{Co}(\text{NH}_3)_4\text{Cl}_2]$  (D)  $[\text{Co}(\text{NH}_3)_5\text{Cl}]\text{Cl}_2$
17. Identify the correct trend given below:  
 (Atomic No. = Ti: 22, Cr: 24 and Mo: 42)  
 (A)  $\Delta_0$  of  $[\text{Cr}(\text{H}_2\text{O})_6]^{2+} > [\text{Mo}(\text{H}_2\text{O})_6]^{2+}$  and  $\Delta_0$  of  $[\text{Ti}(\text{H}_2\text{O})_6]^{3+} > [\text{Ti}(\text{H}_2\text{O})_6]^{2+}$   
 (B)  $\Delta_0$  of  $[\text{Cr}(\text{H}_2\text{O})_6]^{2+} > [\text{Mo}(\text{H}_2\text{O})_6]^{2+}$  and  $\Delta_0$  of  $[\text{Ti}(\text{H}_2\text{O})_6]^{3+} < [\text{Ti}(\text{H}_2\text{O})_6]^{2+}$   
 (C)  $\Delta_0$  of  $[\text{Cr}(\text{H}_2\text{O})_6]^{2+} < [\text{Mo}(\text{H}_2\text{O})_6]^{2+}$  and  $\Delta_0$  of  $[\text{Ti}(\text{H}_2\text{O})_6]^{3+} > [\text{Ti}(\text{H}_2\text{O})_6]^{2+}$   
 (D)  $\Delta_0$  of  $[\text{Cr}(\text{H}_2\text{O})_6]^{2+} < [\text{Mo}(\text{H}_2\text{O})_6]^{2+}$  and  $\Delta_0$  of  $[\text{Ti}(\text{H}_2\text{O})_6]^{3+} < [\text{Ti}(\text{H}_2\text{O})_6]^{2+}$
18. Match List-I with List-II :

List-I

List-II

- |  |                               |
|--|-------------------------------|
| (a) $[\text{Co}(\text{NH}_3)_6][\text{Cr}(\text{CN})_6]$ List-II | (i) Linkage isomerism         |
| (b) $[\text{Co}(\text{NH}_3)_3(\text{NO}_2)_3]$ isomerism        | (ii) Solvate isomerism        |
| (c) $[\text{Cr}(\text{H}_2\text{O})_6]\text{Cl}_3$               | (iii) Co-ordination isomerism |
| (d) $\text{cis-}[\text{CrCl}_2(\text{ox})_2]^{3-}$               | (iv) Optical isomerism        |

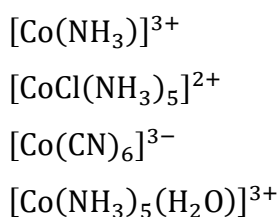
Choose the correct answer from the options given below :

- |  |  |
|--|--|
| (A) (a) - (iii), (b) - (i), (c) - (ii), (d) - (iv) | (B) (a)-(iv), (b)-(ii), (c)-(iii), (d)-(i) |
| (C) (a)-(ii), (b)-(i), (c)-(iii), (d)-(iv)         | (D) (a)-(i), (b)-(ii), (c)-(iii), (d)-(iv) |

19. The correct order of intensity of colors of the compounds is:

- (A)  $[\text{Ni}(\text{CN})_4]^{2-} > [\text{NiCl}_4]^{2-} > [\text{Ni}(\text{H}_2\text{O})_6]^{2+}$   
 (B)  $[\text{Ni}(\text{H}_2\text{O})_6]^{2+} > [\text{NiCl}_4]^{2-} > [\text{Ni}(\text{CN})_4]^{2-}$   
 (C)  $[\text{NiCl}_4]^{2-} > [\text{Ni}(\text{H}_2\text{O})_6]^{2+} > [\text{Ni}(\text{CN})_4]^{2-}$   
 (D)  $[\text{NiCl}_4]^{2-} > [\text{Ni}(\text{CN})_4]^{2-} > [\text{Ni}(\text{H}_2\text{O})_6]^{2+}$

20. Consider the following metal complexes :



The spin-only magnetic moment value of the complex that absorbs light with shortest wavelength is B.M. (Nearest integer)

21. Which of the following is correct order of ligand field strength?

- |   |   |
|---|---|
| (A) $\text{CO} < \text{en} < \text{NH}_3 < \text{C}_2\text{O}_4^{2-} < \text{S}^{2-}$ | (B) $\text{S}^{2-} < \text{C}_2\text{O}_4^{2-} < \text{NH}_3 < \text{en} < \text{CO}$ |
| (C) $\text{NH}_3 < \text{en} < \text{CO} < \text{S}^{2-} < \text{C}_2\text{O}_4^{2-}$ | (D) $\text{S}^{2-} < \text{NH}_3 < \text{en} < \text{CO} < \text{C}_2\text{O}_4^{2-}$ |

22. Hydrogen peroxide oxidises  $[\text{Fe}(\text{CN})_6]^{4-}$  to  $[\text{Fe}(\text{CN})_6]^{3-}$  in acidic medium but reduce  $[\text{Fe}(\text{CN})_6]^{3-}$  to  $[\text{Fe}(\text{CN})_6]^{4-}$  in alkaline medium. The other product formed are, respectively:

- |  |  |
|--|--|
| (A) $\text{H}_2\text{O}$ and $(\text{H}_2\text{O} + \text{O}_2)$ | (B) $\text{H}_2\text{O}$ and $(\text{H}_2\text{O} + \text{OH}^-)$                |
| (C) $(\text{H}_2\text{O} + \text{O}_2)$ and $\text{H}_2\text{O}$ | (D) $(\text{H}_2\text{O} + \text{O}_2)$ and $(\text{H}_2\text{O} + \text{OH}^-)$ |

23. The correct statements among (a) to (d) are:

- (a) saline hydrides produce  $\text{H}_2$  gas when reacted with  $\text{H}_2\text{O}$ .  
 (b) reaction of  $\text{LiAlH}_4$ , with  $\text{BF}_3$ , leads to  $\text{B}_2\text{H}_6$

(c)  $\text{PH}_3$  and  $\text{CH}_4$  are electron-rich and electron - precise hydrides, respectively,

(d)  $\text{HF}$  and  $\text{CH}_4$  are called as molecular hydrides.

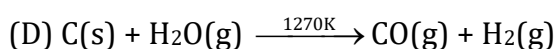
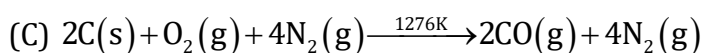
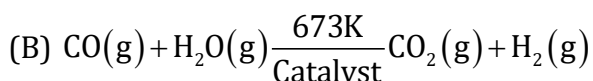
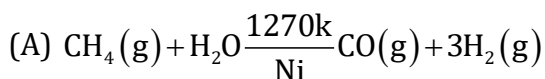
(A) (a), (b), (c) and (d)

(B) (c) and (d) only

(C) (a), (c) and (d) only

(D) (a), (b) and (c) only

24. The equation that represents the water-gas shift reaction is



25. Boiling of hard water is helpful in removing the temporary hardness by converting calcium hydrogen carbonate and magnesium hydrogen carbonate to

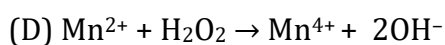
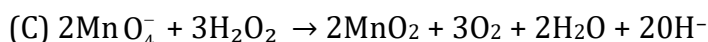
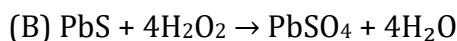
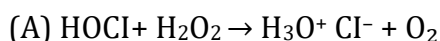
(A)  $\text{CaCO}_3$  and  $\text{Mg}(\text{OH})_2$

(B)  $\text{CaCO}_3$  and  $\text{M}_2\text{CO}_3$

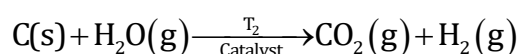
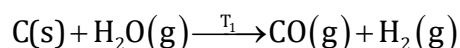
(C)  $\text{Ca}(\text{OH})_2$  and  $\text{MgCO}_3$

(D)  $\text{Ca}(\text{OH})_2$  and  $\text{Mg}(\text{OH})_2$

26. Which one of the following reactions indicates the reducing ability of hydrogen peroxide in basic medium?



27. Given below are two reactions, involved in the commercial production of dihydrogen ( $\text{H}_2$ ). The two reactions are carried out at temperature " $T_1$ " and " $T_2$ ", respectively



The temperature  $T_1$  and  $T_2$  are correctly related as

(A)  $T_1 = T_2$

(B)  $T_1 < T_2$

(C)  $T_1 = 100\text{ K}, T_2 = 1270\text{ K}$

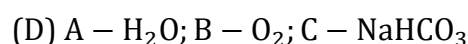
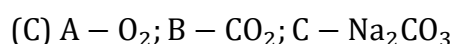
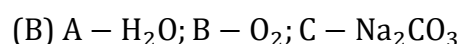
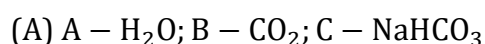
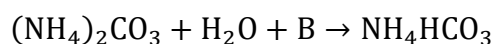
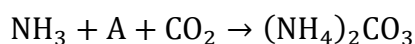
(D)  $T_1 > T_2$

28. Which series of reaction correctly represents chemical reactions related to iron and its compound ?
- (A)  $\text{Fe} \xrightarrow{\text{dil. H}_2\text{SO}_4} \text{FeSO}_4 \xrightarrow{\text{H}_2\text{SO}_4, \text{O}_2} \text{Fe}_2(\text{SO}_4)_3 \xrightarrow{\text{Heat}} \text{Fe}$
- (B)  $\text{Fe} \xrightarrow{\text{O}_2, \text{heat}} \text{FeO} \xrightarrow{\text{dil. H}_2\text{SO}_4} \text{FeSO}_4 \xrightarrow{\text{Heat}} \text{Fe}$
- (C)  $\text{Fe} \xrightarrow{\text{Cl}_2, \text{heat}} \text{FeCl}_3 \xrightarrow{\text{heat, air}} \text{FeCl}_2 \xrightarrow{\text{Zn}} \text{Fe}$
- (D)  $\text{Fe} \xrightarrow{\text{O}_2, \text{heat}} \text{Fe}_3\text{Cl}_4 \xrightarrow{\text{CO}, 600^\circ\text{C}} \text{FeO} \xrightarrow{\text{CO}, 700^\circ\text{C}} \text{Fe}$
29. When  $\text{XO}_2$  is fused with an alkali metal hydroxide in presence of an oxidizing agent such as  $\text{KNO}_3$ , a dark green product is formed which disproportionates in acidic solution to afford a dark purple solution. X is:
- (A) Mn (B) Cr (C) V (D) Ti
30. Which one of the following when dissolved in water gives coloured solution in nitrogen atmosphere?
- (A)  $\text{CuCl}_2$  (B)  $\text{AgCl}$  (C)  $\text{ZnCl}_2$  (D)  $\text{Cu}_2\text{Cl}_2$
31. Among  $\text{Co}^{3+}$ ,  $\text{Ti}^{2+}$ ,  $\text{V}^{2+}$  and  $\text{Cr}^{2+}$  ions, one if used as a reagent cannot liberate  $\text{H}_2$  from dilute mineral acid solution, its spin-only magnetic moment in gaseous state is B.M. (Nearest integer)
32. The number of terminal oxygen atoms present in the product B obtained from the following reaction is
- $$\text{FeCr}_2\text{O}_4 + \text{Na}_2\text{CO}_3 + \text{O}_2 \rightarrow \text{A} + \text{Fe}_2\text{O}_3 + \text{CO}_2$$
- $$\text{A} + \text{H}^+ \rightarrow \text{B} + \text{H}_2\text{O} + \text{Na}^+$$
33. An ammoniacal metal salt solution gives a brilliant red precipitate on addition of dimethylglyoxime. The metal ion is :
- (A)  $\text{Cu}^{2+}$  (B)  $\text{Co}^{2+}$  (C)  $\text{Fe}^{2+}$  (D)  $\text{Ni}^{2+}$
34. During the borax bead test with  $\text{CuSO}_4$ , a blue green colour of the bead was observed in oxidizing flame due to the formation of
- (A)  $\text{Cu}_3\text{B}_2$  (B) Cu (C)  $\text{Cu}(\text{BO}_2)_2$  (D) CuO
35. Which of the following xenon-oxo compounds may not be obtained by hydrolysis of xenon fluorides?
- (A)  $\text{XeO}_2\text{F}_2$  (B)  $\text{XeOF}_4$  (C)  $\text{XeO}_3$  (D)  $\text{XeO}_4$

36. Identify the incorrect statement:
- The S – S – S bond angles in the S<sub>8</sub> and S<sub>6</sub> rings are the same.
  - Rhombic and monoclinic sulphur have S<sub>8</sub> molecules.
  - S<sub>2</sub> is paramagnetic like oxygen
  - S<sub>8</sub> ring has a crown shape.
37. Which of the following reactions is an example of a redox reaction?
- $\text{XeF}_6 + \text{H}_2\text{O} \rightarrow \text{XeOF}_4 + 2\text{HF}$
  - $\text{XeF}_6 + 2\text{H}_2\text{O} \rightarrow \text{XeO}_2\text{F}_2 + 4\text{HF}$
  - $\text{XeF}_4 + \text{O}_2\text{F}_2 \rightarrow \text{XeF}_6 + \text{O}_2$
  - $\text{XeF}_2 + \text{PF}_5 \rightarrow [\text{XeF}]^+\text{PF}_6^-$
38. First ionisation energy of Be is higher than that of Boron.  
Select the correct statements regarding this
- It is easier to extract electron from 2p orbital than 2s orbital
  - Penetration power of 2s orbital is greater than 2p orbital
  - Shielding of 2p electron by 2s electron
  - Radius of Boron atom is larger than that of Be
- (i), (ii), (iii), (iv)
  - (i), (iii), (iv)
  - (ii), (iii), (iv)
  - (i), (ii), (iii)
39. On heating compound (A) gives a gas (B) which is a constituent of air. This gas when treated with H<sub>2</sub> in the presence of a catalyst gives another gas (C) which is basic in nature. (A) should not be:
- Pb(NO<sub>3</sub>)<sub>2</sub>
  - (NH<sub>4</sub>)<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub>
  - NH<sub>4</sub>NO<sub>2</sub>
  - NaN<sub>3</sub>
40. The reaction in which the hybridisation of the underlined atom is affected is
- $\underline{\text{Xe}}\text{F}_4 + \text{SbF}_5 \rightarrow$
  - $\text{H}_2\text{SO}_4 + \text{NaCl} \xrightarrow{420\text{ K}}$
  - $\text{H}_3\text{P}\underline{\text{O}}_2 \xrightarrow{\text{Disproportionation}}$
  - $\underline{\text{N}}\text{H}_3 \xrightarrow{\text{H}^+}$
41. Reaction of ammonia with excess Cl<sub>2</sub> gives
- NH<sub>4</sub>Cl and HCl
  - NCl<sub>3</sub> and HCl
  - NCl<sub>3</sub> and NH<sub>4</sub>Cl
  - NH<sub>4</sub>Cl and N<sub>2</sub>

42. The number of S = O bonds present in sulphurous acid, peroxodisulphuric acid and pyrosulphuric acid, respectively are :
- (A) 2,3 and 4 (B) 1,4 and 3  
(C) 2,4 and 3 (D) 1,4 and 4
43. Among the following allotropic forms of sulphur, the number of allotropic forms, which will show paramagnetism is
- (A)  $\alpha$ -sulphur  
(B)  $\beta$ -sulphur  
(C) S<sub>2</sub>-form

44. Find A, B and C in the following reaction :



45. Match List-I with List-II

**List-I(process)**

**List-II (catalyst)**

(a) Deacon's process

(i) ZSM-5

(b) Contact process

(ii) CuCl<sub>2</sub>

(c) Cracking of hydrocarbons

(iii) Particles 'Ni'

(d) Hydrogenation of vegetable

(iv) V<sub>2</sub>O<sub>5</sub> oils

Choose the most appropriate answer from the options given below -

(A) a – ii, b – iv, c – i, d – iii

(B) a - i, b - iii, c - ii, d - iv

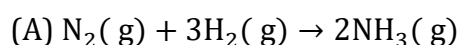
(C) a – iii, b-i,c - iv, d – ii

(D) a – iv, b – ii, c – i, d – ii

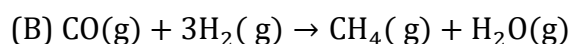
46. Match List - I with List - II

**List - I**

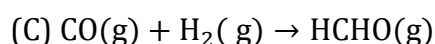
**List - II**



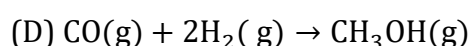
(I) Cu



(II) Cu/ZnO – Cr<sub>2</sub>O<sub>3</sub>



(III) Fe<sub>x</sub>O<sub>y</sub> + K<sub>2</sub>O + Al<sub>2</sub>O<sub>3</sub>



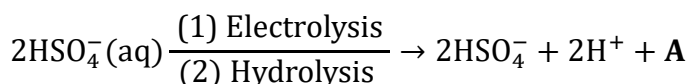
(IV) Ni



Choose the correct answer from the options given below :

- (A) (A) - (II), (B) - (IV), (C) - (I), (D) - (III)  
(B) (A) - (II), (B) - (I), (C) - (IV), (D) - (III)  
(C) (A) - (III), (B) - (IV), (C) - (I), (D) - (II)  
(D) (A) - (III), (B) - (I), (C) - (IV), (D) - (II)

47. Consider the following reaction :



The dihedral angle in product A in its solid phase at 110 K is :

- (A) 104°                      (B) 111.5°                      (C) 90.2°                      (D) 111.0°

48.  $\text{XeF}_4$  reacts with  $\text{SbF}_5$  to form  $[\text{XeF}_m]^{n+}[\text{SbF}_y]^{2-}$   $m + n + y + z = ?$ .

49. Reaction of BeO with ammonia and hydrogen fluoride gives 'A' which on thermal decomposition gives  $\text{BeF}_2$  and  $\text{NH}_4\text{F}$ . What is 'A' ?

- (A)  $(\text{NH}_4)_2\text{BeF}_4$                       (B)  $\text{H}_3\text{NBeF}_3$   
(C)  $(\text{NH}_4)\text{BeF}_3$                       (D)  $(\text{NH}_4)\text{Be}_2\text{F}_5$

50. Reaction of thionyl chloride with white phosphorus forms a compound [A], which on hydrolysis gives [B], a dibasic acid. [A] and [B] are respectively

- (A)  $\text{P}_4\text{O}_6$  and  $\text{H}_3\text{PO}_3$                       (B)  $\text{PCl}_3$  and  $\text{H}_3\text{PO}_3$   
(C)  $\text{PCl}_5$  and  $\text{H}_3\text{PO}_4$                       (D)  $\text{POCl}_3$  and  $\text{H}_3\text{PO}_4$

ANSWER KEY

- |     |     |     |     |     |     |     |     |     |     |     |      |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|
| 1.  | (A) | 2.  | (D) | 3.  | (B) | 4.  | (A) | 5.  | (B) | 6.  | (B)  | 7.  | (B) |
| 8.  | (B) | 9.  | (D) | 10. | (B) | 11. | (A) | 12. | (B) | 13. | (6)  | 14. | (B) |
| 15. | (A) | 16. | (A) | 17. | (C) | 18. | (A) | 19. | (C) | 20. | (0)  | 21. | (B) |
| 22. | (D) | 23. | (D) | 24. | (B) | 25. | (A) | 26. | (C) | 27. | (D)  | 28. | (D) |
| 29. | (A) | 30. | (A) | 31. | (5) | 32. | (6) | 33. | (D) | 34. | (C)  | 35. | (D) |
| 36. | (A) | 37. | (A) | 38. | (D) | 39. | (A) | 40. | (A) | 41. | (B)  | 42. | (D) |
| 43. | (C) | 44. | (A) | 45. | (A) | 46. | (C) | 47. | (C) | 48. | (11) | 49. | (A) |
| 50. | (B) |     |     |     |     |     |     |     |     |     |      |     |     |