

# QB365 Question Bank Software Study Materials

## p - Block Elements - II 50 Important 1 Marks Questions With Answers (Book Back and Creative)

12th Standard

Chemistry

Total Marks : 50

### Multiple Choice Question

50 x 1 = 50

- In which of the following,  $\text{NH}_3$  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
- 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**
- An element belongs to group 15 and 3<sup>rd</sup> period of the periodic table, its electronic configuration would be\_\_\_\_\_.  
(a)  $1s^2 2s^2 2p^4$  (b)  $1s^2 2s^2 2p^3$  (c)  $1s^2 2s^2 2p^6 3s^2 3p^2$  **(d)  $1s^2 2s^2 2p^6 3s^2 3p^3$**
- 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)  $\text{P}_4(\text{red})$  &  $\text{PH}_3$  **(b)  $\text{P}_4(\text{white})$  &  $\text{PH}_3$**  (c)  $\text{S}_8$  &  $\text{H}_2\text{S}$  (d)  $\text{P}_4(\text{white})$  &  $\text{H}_2\text{S}$
- On hydrolysis,  $\text{PCl}_3$  gives\_\_\_\_\_.  
**(a)  $\text{H}_3\text{PO}_3$**  (b)  $\text{PH}_3$  (c)  $\text{H}_3\text{PO}_4$  (d)  $\text{POCl}_3$
- $\text{P}_4\text{O}_6$  reacts with cold water to give \_\_\_\_\_.  
**(a)  $\text{H}_3\text{PO}_3$**  (b)  $\text{H}_4\text{P}_2\text{O}_7$  (c)  $\text{HPO}_3$  (d)  $\text{H}_3\text{PO}_4$
- The basicity of pyrophosphorous acid ( $\text{H}_4\text{P}_2\text{O}_5$ ) is \_\_\_\_\_.  
(a) 4 **(b) 2** (c) 3 (d) 5
- The molarity of given orthophosphoric acid solution is 2M. Its normality is \_\_\_\_\_.  
**(a) 6N** (b) 4N (c) 2N (d) none of these
- Among the following, which is the strongest oxidizing agent?  
(a)  $\text{Cl}_2$  **(b)  $\text{F}_2$**  (c)  $\text{Br}_2$  (d)  $\text{I}_2$
- 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)  $\text{HI} > \text{HCl} > \text{HF} > \text{HBr}$
- Which one of the following compounds is not formed?  
(a)  $\text{XeOF}_4$  (b)  $\text{XeO}_3$  (c)  $\text{XeF}_2$  **(d)  $\text{NeF}_2$**
- Most easily liquefiable gas is \_\_\_\_\_.  
(a) Ar (b) Ne (c) He **(d) Kr**
- $\text{XeF}_6$  on complete hydrolysis produces\_\_\_\_\_.  
(a)  $\text{XeOF}_4$  (b)  $\text{XeO}_2\text{F}_2$  **(c)  $\text{XeO}_3$**  (d)  $\text{XeO}_2$

Which of the following is strongest acid among all?

- 14) **(a) HI** (b) HF (c) HBr (d) HCl
- 15) Which one of the following orders is correct for the bond dissociation enthalpy of halogen molecules?  
 (a)  $\text{Br}_2 > \text{I}_2 > \text{F}_2 > \text{Cl}_2$  (b)  $\text{F}_2 > \text{Cl}_2 > \text{Br}_2 > \text{I}_2$  (c)  $\text{I}_2 > \text{Br}_2 > \text{Cl}_2 > \text{F}_2$  **(d)  $\text{Cl}_2 > \text{Br}_2 > \text{F}_2 > \text{I}_2$**
- 16) Among the following the correct order of acidity is \_\_\_\_\_.  
 (a)  $\text{HClO}_2 < \text{HClO} < \text{HClO}_3 < \text{HClO}_4$  (b)  $\text{HClO}_4 < \text{HClO}_2 < \text{HClO} < \text{HClO}_3$  (c)  $\text{HClO}_3 < \text{HClO}_4 < \text{HClO}_2 < \text{HClO}$   
**(d)  $\text{HClO} < \text{HClO}_2 < \text{HClO}_3 < \text{HClO}_4$**
- 17) When copper is heated with conc  $\text{HNO}_3$  it produces \_\_\_\_\_.  
 (a)  $\text{Cu}(\text{NO}_3)_2$ , NO and  $\text{NO}_2$  (b)  $\text{Cu}(\text{NO}_3)_2$  and  $\text{N}_2\text{O}$  **(c)  $\text{Cu}(\text{NO}_3)_2$  and  $\text{NO}_2$**  (d)  $\text{Cu}(\text{NO}_3)_2$  and NO
- 18) Among the following which will not be hydrolysed?  
**(a) Sodium Chloride** (b) Sodium Formate (c) Ammonium Formate (d) Ammonium Nitrate
- 19) Which of the following is correct?  
**(a)  $\text{H}_3\text{PO}_3$  is dibasic and reducing** (b)  $\text{H}_3\text{PO}_3$  is dibasic and non-reducing (c)  $\text{H}_3\text{PO}_4$  is tribasic and reducing  
 (d)  $\text{H}_3\text{PO}_3$  is tribasic and non-reducing
- 20) Catenation property of group 15 elements, follow the order \_\_\_\_\_.  
 (a)  $\text{N} < \text{P} < \text{As} < \text{Sb} < \text{Bi}$  **(b)  $\text{P} > \text{N} > \text{As} > \text{Sb} > \text{Bi}$**  (c)  $\text{P} < \text{N} < \text{As} < \text{Sb} < \text{Bi}$  (d)  $\text{N} > \text{P} > \text{As} > \text{Sb} > \text{Bi}$
- 21) Which of the following halides of group 15 is not hydrolysed?  
 (a)  $\text{NF}_3$  (b)  $\text{PF}_3$  (c)  $\text{NI}_3$  **(d) Both (a) and (b)**
- 22) S-S bond is present in \_\_\_\_\_.  
 (a)  $\text{H}_2\text{S}_2\text{O}_7$  (b)  $\text{H}_2\text{SO}_5$  (c)  $\text{H}_2\text{S}_2\text{O}_6$  **(d)  $\text{H}_2\text{S}_2\text{O}_6$**
- 23) Pick the wrong one among the following  
 (a)  $\text{F}_2$  - Yellow (b)  $\text{Br}_2$  - Red **(c)  $\text{Cl}_2$  - Colourless** (d)  $\text{I}_2$  - Violet
- 24) The incorrect statement among the following is \_\_\_\_\_.  
 (a) Reducing character of hydrides of group 15 increases down the group  
 (b) Basicity of hydrides of group 15 increases down the group (c)  $\text{NCl}_5$  does not exist  
**(d) Phosphorus and arsenic can form  $\text{P}\pi\text{-d}\pi$  bond but not nitrogen**
- 25) Maximum covalent character is shown by \_\_\_\_\_.  
 (a)  $\text{PCl}_3$  **(b)  $\text{NCl}_3$**  (c)  $\text{AsCl}_3$  (d)  $\text{SbCl}_3$
- 26) Helium is used in balloons in the place of hydrogen because it is \_\_\_\_\_.  
 (a) incombustible (b) radioactive and detected easily (c) lighter than hydrogen **(d) both (a) and (c)**
- 27) The basicity of hypophosphorous acid is \_\_\_\_\_.  
**(a) 1** (b) 2 (c) 3 (d) 4
- 28) The acid having O - O bond in its structure \_\_\_\_\_.  
 (a)  $\text{H}_2\text{SO}_3$  (b)  $\text{H}_2\text{S}_2\text{O}_6$  **(c)  $\text{H}_2\text{S}_2\text{O}_8$**  (d)  $\text{H}_2\text{S}_4\text{O}_6$
- 29)  $\text{NH}_3$  is a \_\_\_\_\_ smelling gas.  
 (a) odourless **(b) pungent** (c) garlic odour (d) both (b) & (c)
- 30)  $\text{NH}_3$  is a \_\_\_\_\_ agent.

- (a) oxidising (b) inert **(c) reducing** (d) both (a) & (c)
- 31) Ammonia reacts with metallic salts to give \_\_\_\_\_.  
 (a) metal hydrides (in case of Mg) **(b) metal hydroxides (in case of Fe)** (c) metal oxides (d) none
- 32)  $\text{NH}_3$  molecule is \_\_\_\_\_ in shape.  
**(a) pyramidal** (b) octahedral (c) tetrahedral (d) square planar
- 33)  $\text{HNO}_3$  oxidises \_\_\_\_\_.  
**(a) metals** (b) non-metals (c) metalloids (d) none of these
- 34) Pernitric acid is \_\_\_\_\_.  
 (a)  $\text{H}_3\text{N}_3\text{O}_3$  (b)  $\text{H}_2\text{N}_2\text{O}_2$  (c)  $\text{H}_4\text{N}_2\text{O}_4$  **(d)  $\text{HNO}_4$**
- 35) This phosphorus readily catches fire in air giving dense white fumes of  $\text{P}_2\text{O}_5$  \_\_\_\_\_.  
 (a) green **(b) yellow** (c) white (d) scarlet
- 36) Freezing mixture can condense \_\_\_\_\_.  
 (a)  $\text{PH}_3$  **(b)  $\text{P}_2\text{H}_4$**  (c) Both (d) None
- 37) Which one is hypo phosphoric acid?  
 (a)  $\text{H}_4\text{P}_2\text{O}_5$  (b)  $\text{H}_4\text{P}_2\text{O}_7$  **(c)  $\text{H}_4\text{P}_2\text{O}_6$**  (d)  $\text{H}_3\text{PO}_4$
- 38) The electronic configuration of polonium is \_\_\_\_\_.  
 (a)  $[\text{He}] 2s^2 2p^4$  (b)  $[\text{Ne}] 3s^2 3p^4$  **(c)  $[\text{Xe}] 4f^{14} 5d^{10} 6s^2 6p^4$**  (d)  $[\text{Ar}] 3d^{10} 4s^2 5p^4$
- 39) Sulphur also exists in \_\_\_\_\_ states.  
 (a) solid (b) liquid (c) gaseous **(d) both (b) & (c)**
- 40) The vapour over the liquid sulphur consists of 90% of \_\_\_\_\_, \_\_\_\_\_ & \_\_\_\_\_ and small amount of mixture of  $\text{S}_2$ ,  $\text{S}_3$ ,  $\text{S}_4$  molecules.  
 (a)  $\text{S}_7$ ,  $\text{S}_8$  &  $\text{S}_5$  **(b)  $\text{S}_8$ ,  $\text{S}_7$  &  $\text{S}_6$**  (c)  $\text{S}_{11}$ ,  $\text{S}_{12}$  &  $\text{S}_{13}$  (d)  $\text{S}_5$ ,  $\text{S}_6$  &  $\text{S}_8$
- 41)  $\text{SO}_2$  reduces  $\text{KMnO}_4$ , &  $\text{K}_2\text{Cr}_2\text{O}_7$  in to \_\_\_\_\_ & \_\_\_\_\_ respectively.  
 (a)  $\text{Mn}^{3+}$  &  $\text{Cr}^{2+}$  (b)  $\text{Mn}^{2+}$  &  $\text{Cr}^{2+}$  **(c)  $\text{Mn}^{2+}$  &  $\text{Cr}^{3+}$**  (d)  $\text{Mn}^{4+}$  &  $\text{Cr}^{+4}$
- 42) When  $\text{H}_2\text{SO}_4$  is dissolved in  $\text{H}_2\text{O}$  it forms \_\_\_\_\_.  
 (a) mono hydrates (b) dihydrates **(c) both (a) & (b)** (d) none
- 43) It is an oxidising agent as it produces nascent oxygen \_\_\_\_\_.  
**(a)  $\text{H}_2\text{SO}_4$**  (b)  $(\text{COOH})_2$  (c)  $\text{KOH}$  (d)  $\text{HCl}$
- 44) The structure of thio sulphuric acid is \_\_\_\_\_.  
**(a)**  (b)  (c)  (d) 
- 45) It is a bleaching agent \_\_\_\_\_.  
 (a) fluorine (b) bromine **(c) chlorine** (d) iodine
- 46) Bleaching powder is produced by passing chloride gas through dry \_\_\_\_\_.  
 (a)  $\text{CaCl}_2$  **(b)  $\text{Ca}(\text{OH})_2$**  (c)  $\text{CaCO}_3$  (d)  $\text{Ca}(\text{PO}_4)_2$
- 47)  $\text{HCl}_{(g)} + \text{H}_2\text{O}_{(l)} \rightarrow \text{_____} + \text{Cl}^-$

(a)  $\text{H}^+$    **(b)  $\text{H}_3\text{O}^+$**    (c)  $\text{OH}^-$    (d)  $\text{H}_2\text{O}_2$

48) HCl is used to purify \_\_\_\_\_.

(a) cancer cells   (b) bones   **(c) bone black**   (d) none

49) In interhalogen compounds due to high electro negativity with small sized fluorine helps the central atom to attain high \_\_\_\_\_.

(a) chelates   **(b) co ordination number**   (c) oxidation state   (d) isomeric property

50) Sodium perxenate is very much known for its strong \_\_\_\_\_.

(a) reducing property   **(b) oxidising property**   (c) chlorinating agent   (d) dehydrating agent