

**S.S.R. DEGREE COLLEGE, (AUTONOMOUS)**  
**NIZAMABAD (C.C:5029)**  
**I SEMESTER INTERNAL ASSESSMENT I EXAMINATIONS**  
**CHEMISTRY**  
**QUESTION BANK**

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**I. Multiple Choice Questions**

1. The cations of group III are \_\_\_\_\_ ( A )  
a)  $\text{Co}^{2+}$ ,  $\text{Ni}^{2+}$ ,  $\text{Zn}^{2+}$ ,  $\text{Mn}^{2+}$       b)  $\text{Cu}^{2+}$ ,  $\text{Cd}^{2+}$ ,  $\text{Pb}^{2+}$   
c)  $\text{Hg}^{2+}$ ,  $\text{Pb}^{2+}$ ,  $\text{Bi}^{3+}$       d) None
2. The ion that can't be precipitated by both HCL and  $\text{H}_2\text{S}$  is. ( B )  
a)  $\text{Cu}^+$       b)  $\text{Sn}^{2+}$       c)  $\text{Pb}^{2+}$       d)  $\text{Ag}^{2+}$
3. Which one of the following has minimum solubility product ( D )  
a)  $\text{AlCl}_3$       b)  $\text{NH}_4\text{Cl}$       c)  $\text{BaCl}_2$       d)  $\text{AgCl}$
4. Potassium cyanide is used to separate the following ions ( B & C )  
a)  $\text{Mn}^{2+}$  and  $\text{Zn}^{2+}$       b)  $\text{Cu}^{2+}$  and  $\text{Cd}^{2+}$   
c)  $\text{Co}^{2+}$  and  $\text{Ni}^{2+}$       d)  $\text{Ba}^{2+}$  and  $\text{Ca}^{2+}$
5. \_\_\_\_\_ ions give crimson colour in flame ( A )  
a)  $\text{Sr}^{2+}$       b)  $\text{Ca}^{2+}$       c)  $\text{K}^+$       d)  $\text{Ba}^{2+}$
6. \_\_\_\_\_ gives a white precipitate with aqueous  $\text{AgNO}_3$  and a green flame test ( C )  
a)  $\text{KCl}$       b)  $\text{CaCl}_2$       c)  $\text{BaCl}_2$       d)  $\text{NaCl}$
7. Which of the following sulphates is insoluble in water? ( D )  
a)  $\text{CuSO}_4$       b)  $\text{CdSO}_4$       c)  $\text{Bi}(\text{SO}_4)_3$       d)  $\text{PbSO}_4$
8. \_\_\_\_\_ ions cannot be separated by H<sub>2</sub>S in dilute hydrochloric acid ( D )  
a)  $\text{Al}^{3+}$ ,  $\text{Hg}^{2+}$       b)  $\text{Ni}^{2+}$ ,  $\text{Cu}^{2+}$       c)  $\text{Zn}^{2+}$ ,  $\text{Cu}^{2+}$       d)  $\text{Bi}^{3+}$ ,  $\text{Sn}^{4+}$
9. Which of the following cation will not be precipitated by  $\text{H}_2\text{S}$  in presence of ammonia? ( A )  
a)  $\text{Cd}^{2+}$       b)  $\text{Fe}^{3+}$       c)  $\text{Mn}^{2+}$       d)  $\text{Co}^{2+}$
10. The group reagent of group V radicals is \_\_\_\_\_ ( A )  
a)  $(\text{NH}_4)_2\text{CO}_3$  in presence of  $\text{NH}_4\text{OH}$       b)  $\text{H}_2\text{S}$   
c)  $\text{HCl}$       d) None
11. An example of basic oxide is \_\_\_\_\_ ( A )  
a)  $\text{Na}_2\text{O}$       b)  $\text{N}_2\text{O}_5$       c)  $\text{CO}_2$       d)  $\text{Co}$
12. Superoxides are in nature ( A )  
a) Paramagnetic      b) Diamagnetic      c) Both (a)&(b)      d) Neutral
13.  $\text{Pb}_3\text{O}_4$  is a \_\_\_\_\_ ( C )  
a) Suboxide      b) Neutral oxide  
c) Mixed oxide      d) Amphoteric oxide.

14. Carbon monoxide is a resonance hybrid of how many structures? ( B )  
 a) 2                      b) 3                      c) 4                      d) None
15. \_\_\_\_\_ are the most volatile constituents. ( B )  
 a) Kr and Xe              b) He and Ne      c) Ar and Kr              d) Ne and Xe
16. The structure of  $\text{XeO}_4$  is \_\_\_\_\_ ( C )  
 a) Square pyramidal                      b) Square bipyramidal  
 c) Trigonal planar                      d) Trigonal bipyramidal
17. Separation of gases from one another is carried out by a method called.. ( A )  
 a) Dewar's method                      b) Rayleigh's method  
 c) Physical method                      d) None of the above
18.  $\text{XeF}_4$  when treated with  $\text{BCl}_3$ , gives \_\_\_\_\_ ( B )  
 a)  $\text{XeF}_2$                       b)  $\text{BF}_3$                       c)  $\text{HF}$                       d) None of the above
19. The formula of nitrous acid is \_\_\_\_\_ ( A )  
 a)  $\text{HNO}_2$                       b)  $\text{HNO}_3$                       c)  $\text{HNO}_4$                       d)  $\text{HOONO}$
20. The first three elements of \_\_\_\_\_ groups are called as chromium triad. ( C )  
 a) Fourth                      b) Fifth                      c) Sixth                      d) Eleventh

## II. FILL IN THE BLANKS

- The atomic radius of group 13 elements, **Increases** from boron to thallium.
- The hydrolysis of diborane produces . **Boric acid** and **hydrogen**.
- The structure of **Borazine** resembles with that of benzene.
- Silicones** are the organosilicon polymers. Having. Si– O-si linkages.
- Decomposition** of hydroxylamine produces nitrogen, ammonia and water.
- The process of precipitation and dissolution are carried out based on the principle of **solubility product**.
- All the carbonates decompose when react with diluted . **HCL (or)  $\text{H}_2\text{SO}_4$** .
- Blue** precipitate is obtained by adding potassium ferricyanide to a solution containing  $\text{Fe}^{2+}$  ions.
- The colour of zinc sulphide is **White**
- Ammonium thiocyanate** is used in the detection of  $\text{CO}_3^{2-}$  and  $\text{Fe}^{3+}$  ions.
- Acidic oxides are formed when oxygen reacts with Non metals.
- The electronic configuration of xenon in  $\text{XeO}_3$  is  $5s^2 5p^3 5d^3$ .
- Pseudohalogens are also called as Halogenoids.
- $\beta$  –quinol is a clathrate compound.
- When a mixture of noble gases are brought into contact with charcoal at  $-100^\circ\text{C}$ , the gases absorbed at charcoal are Argon, krypton & xenon.
- The bond angle in  $\text{XeF}_2$  is **180**
- The geometry of  $\text{XeO}_3$  is **Trigonal planar**.
- In laboratories  $\text{XeO}_3$  is used to measure alcohols, carboxylic acids & **Amino Acids**
- Covalent** & **Hydrogen** types of bonds are formed in boric acid.
- The thermodynamic stability of the compounds increases with **Decrease** in ionization energy.

### **III. Descriptive Questions**

1. Interhalogen
2. Definition & types of oxides
3. Markovnikov's & Anti markovnikov's rule
4. Orientation
5. Nitration.