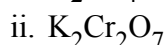
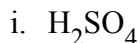


## Important Questions 2010 Class-XI (Chemistry)

**Q . 1.** What are the number of significant figure in 2.3098

**Q. 2.** Calculate the No. of  $\sigma$  and  $\pi$  bonds in  $\text{CaC}_2$

**Q. 3.** Calculate the Oxidation No. of Bold atom in:



**Q. 4.** What are the conditions necessary for a gas to behave ideal?

**Q. 5.** Why water has bent shaped and ammonia has trigonal pyramidal in spite of same hybridization in case of both?

**Q. 6.** What will the number of orbital if the Principal Q.No. is 4

**Q. 7.** Why Chlorine has greater electron enthalpy than Fluorine

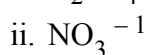
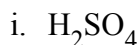
**Q. 8.** Why water is liquid but hydrogen sulfide is gas

**Q. 9.** Calculate the no. of molecules and atoms in:

i. 2 moles of Water

ii. 3 moles of ammonia

**Q. 10.** Calculate the hybridization of the bold atom in followings:



**Q. 11.** Calculate the Pressure if the initial pressure was 2 atm. And the Volume was increased to 3 times of initial

**Q. 12.** Give reason:

a. The radius of Noble gases are very large in comparison to the halogens

b. Chlorine in spite of similar electro negativity than Nitrogen do not form Hydrogen bonding

**Q. 13.** Write 4 differences between Sigma and Pie bond

**Q. 14.** Write 4 characteristics of cathode rays

**Q. 15.** Predict the product of electrolysis for the following case:

a. Electrolysis of aq.  $\text{AgNO}_3$  using silver electrode

b. Electrolysis of aq.  $\text{AgNO}_3$  using Platinum electrode

Or//

Predict the feasibility of reaction:

a. Magnesium can displace copper from its compound

b. Sodium can remove hydrogen from water

**Q. 16.** Calculate the debroglie wavelength for the a ball of 100 gm moving with velocity  $10 \text{ m s}^{-1}$

**Q. 17.** Define:

- Hund's Rule of maximum multiplicity
- Afbau Principal

**Q. 18.** Arrange the following on the basis of properties indicated:

- $\text{F}_2$ ,  $\text{Cl}_2$ ,  $\text{Br}_2$ ,  $\text{I}_2$  ( Bond dissociation energy)
- Na, Ca, N, Ne (Atomic Size)

**Q. 19.** Explain Hydrogen Bonding (its types) with example and its consequences

**Q. 20.** Balance the following equation by Redox method  $\text{C}_2\text{H}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$

**Q. 21.** Explain the methods for separation of:

- Napthalene from sand
- Water from oil
- Pigments of different colored inks

**Q. 22.** Explain the Electrochemical cell under following heads:

- Oxidation half and Reduction half cel
- Calculation of  $E_o$
- Salt Bridge and its function

Or

Explain the types of inter molecular forces between:

- Ethyl alcohol and water
- Na ion and Chloride ion
- Iodine molecule

**Q. 23.** Explain the variation of following periodic properties along the period and down the group:

- Atomic size
- Electronegativity
- Ionization Energy

**Q. 24.** Write short notes on: a. Adsorption Spectrum b. Pauli's exclusion principle c. Chromatography

**Q. 25.** Draw the Born Haber Cycle for formation of NaCl or  $\text{AlCl}_3$

**Q. 26.** Predict which of the following quantum numbers are not possible:

S.NO	Principal	Azimuthal	Magnetic	Spin
1	4	2	2	+1/2
2	2	2	1	+1/2
3	3	2	2	-1/2

**Q. 27.** Calculate the molarity of solution prepared by mixing of 18.25 gms of HCl in 1 litre. And find

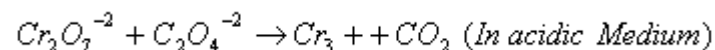
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out the new molarity if 3.25 gm of HCl is lost and the volume is reduced to 600 ml

**Q. 28.** Calculate Bond order, arrange on the basis of bond stability and write electronic configuration of :

$O_2$  ,  $O_2^+$  and  $O_2^{-1}$  **Or**  $N_2$  ,  $N_2^+$  and  $N_2^{-1}$

**Q. 29.** Balance the equation by Ion electron method:



**Or**

Write short notes on:

- Reduction and Oxidation
- Azimuthal Quantum Number
- Limiting Reagent
- Accuracy and Precision
- Molarity

**Q. 30.** Explain the following with reason:

- Why Nitrogen molecule is unreactive
- Why the o nitrophenol is more steam volatile than p nitro phenol
- Why the bond angle in  $H_2O$  is  $104^{\circ}5'$  whereas in  $H_2S$  is  $94^{\circ}$
- Why all the bonds in  $PCl_5$  are not equivalent
- Why Xenon forms compounds with Fluorine

**Or**

State the postulates of Kinetic Theory of gases Write the Vanderwall gas equation and units for a and b constant