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Subject :- chemistry

No. of sheets :- 4

1. The first part of the paper discusses the importance of maintaining accurate records of all transactions. It emphasizes that this is essential for the proper management of the company's finances and for ensuring that all stakeholders are kept informed of the company's financial health.

- ① Give the Applications of Insulators
- ② Explain any two factors affecting corrosion
- ③ What is Galvanic corrosion?
- ④ Define complexometric titration
- ⑤ Define Electroplating
- ⑥ Write notes on constituents of paints.

⑦ Applications:-

Used for insulation in Transformers, condensers, capacitors, generators, etc. . .  
Air acts as an insulator b/w overhead transmission lines

⑧ Position of the metal in the galvanic series:-  
The metals present higher in the series are more corroded than the metals present at the bottom. The higher the metal in the galvanic series the greater will be the rate of corrosion.

⑨ Purity of the metal:-  
Impure metals are more corroded than pure metals has the purity of the metal decreases rate of corrosion increases.

Galvanic Corrosion:-  
When two metals are kept in contact and jointly exposed to moist corrosive Environment

The metal present in higher in the galvanic series acts as anode and gets oxidised. Where as the metal present lower in the series act as Cathode and gets reduced. This type of corrosion is called Galvanic corrosion.

Ex:- A zinc copper couple zinc act as anode and corroded Cu act as cathode and gets protected.

④ Complexometric titration:-  
Complexometric titration is a form of the volumetric analysis in which the formation of a corroded complex is used to indicate the end point of a titration. They are particularly useful for determination of mixture of different metal ions in a solution.

⑤ Electroplating:-  
The process of coating base metal with a thin layer of protective metal through a process of electrolysis is called Electroplating.  
⇒ The process takes place on operator is known as electrolytic bath.

⑥ Constituent of a paint:-  
① Pigment:-  
This is the main constituent of the paint which gives desired colour to the paints. It also improve the physical and chemical properties and corrosion resistance.  
Ex:- Fe, Zn salts white.

② Binder:- It binds all the ingredients of the paint together. It forms cross linked polymers on drying which makes a continuous film. It improves the strength of the paint adhesion, cohesion and flexibility of the paint.  
Ex:- acrylics, epoxy resins, alkyls etc.