1. Write a note on GLP ?

Ans. GLP - Good and Laboratory Practices.

GLP - Set of principles that avoids a framework within which lab studies, non-clinical health, and environmental safety studies are planned, performed, monitored, recorded, reported and achieved.

It is a quality System Concerned with the organisational process.

GLP followed in labs to avoid accidents while handling reagents.

GLP (History)

GLP is a formal regulation that was created by the FDA (United States Food and Drug Administration) in 1978.

Purpose of GLP's

GLP is to certify that every step of the analysis is valid or not.

GLPs have heavy emphasis on data recording, record and specimen retention.

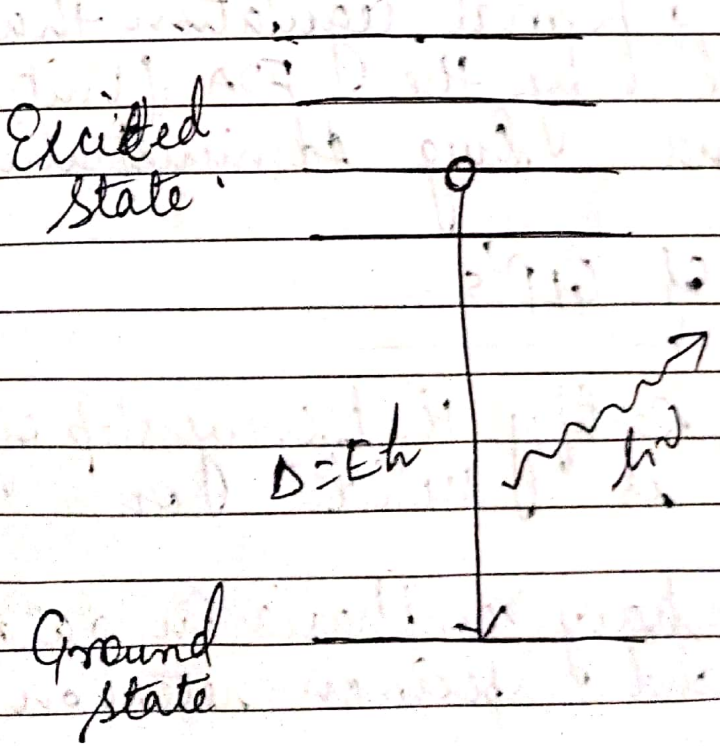
2. Write About Emission spectroscopy.

Ans It is a process in which when atoms are subjected to intense heat or an electric discharge, they absorb Energy and get excited, during this they move to higher Energy levels and return back to the ground state and the absorbed Energy is released as light.

When this emitted radiation is passed through a prism, it gives rise to Emission Spectrum.

There are many possible Electron transition has a specific Energy difference.

Emission Spectra of molecules can be used in Chemical analysis of substance.



3. Write principle and instrumentation of IR Spectroscopy.

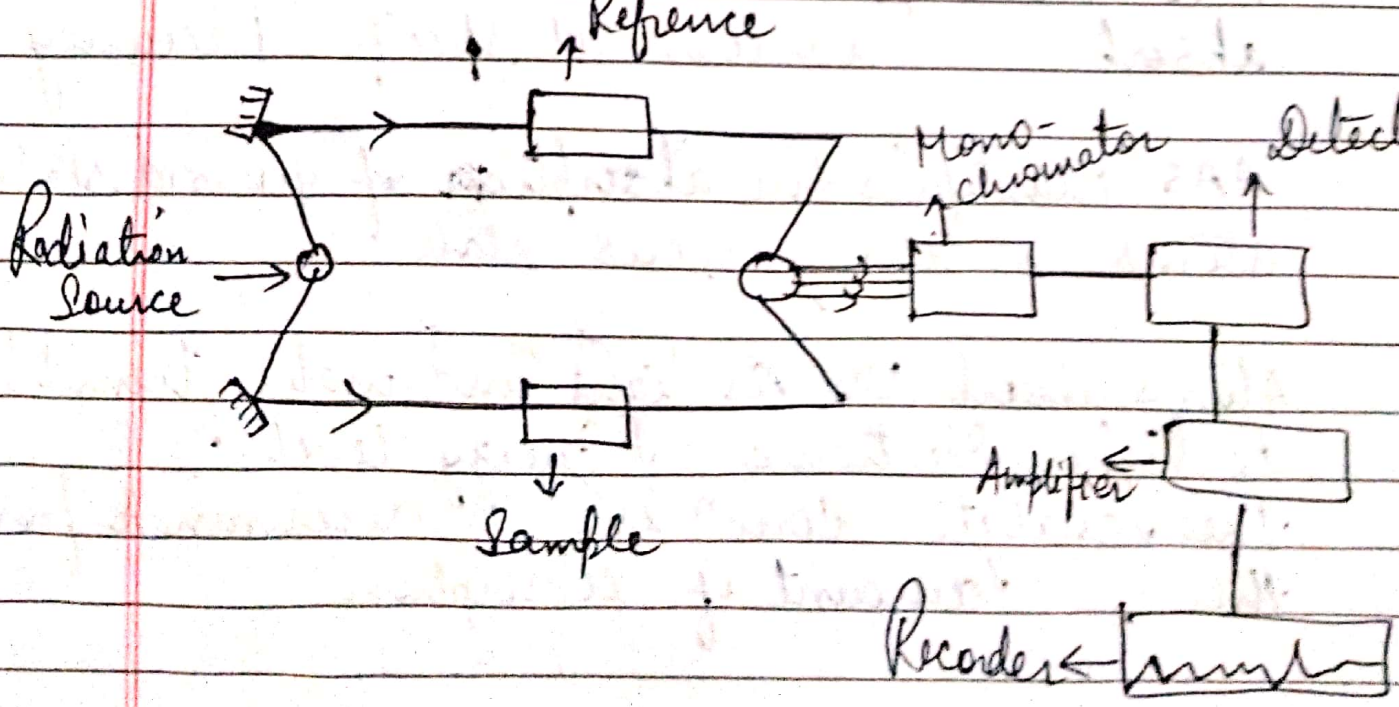
Ans. **Principle of IR Spectroscopy**

When infared light or radiation hits a molecule, the bonds in the molecule absorb the energy of the infared and respond by vibrating.

Principle of IR Spectroscopy is related to the vibrational and rotational Energy of a molecule.

Instrumentation

(i) light source
(ii) cell sample
(iii) Monochromator
(iv) Detector
(v) Recorder



4. Write principle and Theory of AAS (Atomic Absorption Spectroscopy).

Ans Principle -

Liquid Sample
↓
Formation of droplets
↓
Fine residue
↓
Formation of neutral atoms
↓
Neutral atom absorb specific wavelength of radiation from hollow cathode lamp.
↓
Measurement of intensity of radiation absorbed by the neutral atoms using a detector.

Theory:-

Free atom generated in an atomiser can absorb radiation at specific frequency.

AAS quantifies the absorption of ground state atoms in the gaseous state.

Atoms absorb UV-Vis light and make transition to higher Electronic Energy levels.
The analyte conc^n is determined from the amount of absorption.