



# Govt. Science College, Jabalpur

**B.Sc. 3<sup>rd</sup> year**

**Chemistry**

**Green and Agricultural Chemistry**

**(Group A Paper I)**

**Course Learning Outcomes (CLO)**

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- ❖ Basic principles of green and sustainable chemistry.
- ❖ Understand stoichiometric calculation and relate them to green process metrics.
- ❖ Learn alternative solvent media, green catalysis and energy sources for chemical processes.
- ❖ Understand the requirements of manures and fertilizers for various crops and their proper time of application.
- ❖ Understand to maintain soil fertility for better crop production.





# Govt. Science College, Jabalpur

**B.Sc. 3<sup>rd</sup> year**

**Chemistry**

**Laboratory skill, techniques & management**

**(Group A Paper II)**

**Course Learning Outcomes (CLO)**

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- ❖ Familiarized with the basic facilities available in laboratories.
- ❖ Expected to gain knowledge of the basic skill of organization and management of science laboratories.
- ❖ Enabled to expertise in the procedures of procurement and storage of laboratory equipment & material.
- ❖ Trained in the operation and maintenance of simple instruments used in science laboratories.
- ❖ Enabled to adopt appropriate disposal procedures and safety method suitable for laboratories.





# Govt. Science College, Jabalpur

**B.Sc. 3<sup>rd</sup> year**

**Chemistry**

**Instrumental techniques in Chemistry**

**(Group B Paper I)**

**Course Learning Outcomes (CLO)**

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- ❖ Preparation of standard samples for analysis.
- ❖ Instrumentation for analytical methods of Chemistry.
- ❖ Instrumentation for various spectroscopic techniques.
- ❖ Principles and instrumentation of various electro analytical techniques.
- ❖ Instrumentation used in optical methods of analysis.
- ❖ Advanced chromatographic techniques.





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**B.Sc. 3<sup>rd</sup> year**

**Chemistry**

**Bio physical, Bio inorganic and Organometalic Chemistry**

**(Group B Paper II)**

**Course Learning Outcomes (CLO)**

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- ❖ Biophysical concept like pH, biological oxidation, bioenergetics.
- ❖ Magnetic properties and electronic spectra of transition metal complexes.
- ❖ Structure and bonding analysis of Organometalic compound using the MO theory.
- ❖ Organometalic compound of main group element and their structure and bonding analysis.
- ❖ Bio inorganic chemistry and role of metal ions in biological systems.

