# Govt. P.G. Nehru College, Jhajjar

# Month-wise Lesson Plan for session July 2025 to December 2025

# Name: Priti Rani Designation: Assistant Professor Subject: Chemistry

# Paper: SEC Paper – III Nomenclature: Batteries

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| Month | Lectures & Topics | Activities / Assessment |
| July (3rd & 4th Week) | Unit I: Basic Concepts• Components of cells & batteries• Classification of cells• Operation of a cell | Introduction lecture, diagrams of cell components |
| August (1st–4th Week) | Unit I (contd.) & Unit II• Theoretical cell voltage, capacity, energy, energy density• Battery design principles• Safety issues & safeguards• Battery construction• Factors affecting performance | Numerical practice (cell voltage, energy), group discussion on battery safety, Class Test – Unit I |
| September (1st–4th Week) | Unit III: Primary Batteries• General characteristics & applications• Zn–C batteries (Leclanché, Zn–Cl₂): chemistry, construction, components• Mg/MnO₂ batteries: construction, performance, types• Other magnesium batteries | Chart-making (comparison of Zn–C vs Mg batteries), dry cell demonstration, Mid-Sem Test – Units I–II |
| October (1st–4th Week) | Unit IV: Secondary Batteries (Part 1)• General characteristics of secondary batteries• Lead–acid batteries (chemistry, construction, charging)• Lithium-ion batteries (chemistry, performance, applications) | Diagram practice, video demo on Li-ion battery, Assignment submission – Primary Batteries |
| November (1st–4th Week) | Unit IV: Secondary Batteries (Part 2)• Iron electrode batteries• Nickel–Cadmium batteries• Nickel–Metal Hydride batteries• Nickel–Zinc batteries• Comparative analysis of secondary systems | Group presentation: “Best battery for Electric Vehicles”, Class Test – Units III–IV |
| December (1st Week) | Revision & Preparation• Recap of Units I–IV• Solving previous year questions• Discussion of numerical problems | Revision quiz, pre-final test |