# 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 |