

V1

- Derive Gibbs Phase Rule (NH_4Cl example ★)
- Water System (All States + Theory)
- M.O.I derivation
- Franck - Condon Principle
- Pb - Ag System (& Significance of Eutectic Point & Pattinson's Process)
- Energy Level diagram (Refer extra ques)
- Numericals (Refer from extra ques)
- Define Phase, Component, D.O.F
- Rotational Spectra (Theory + Examples) & Vibrational
- Born - Oppenheimer Approximation

U2

- Cell construction Numericals (Refer Extra Ques)
& Nernst Equation ★★★
- Numericals subjective to Zn-Hg, Calomel
- Ion Selective Electrodes → Glass Electrode
(Theory) ★★★
→ Alkaline Error
- Corrosion Complete
(Anything can be asked in complete random order)

V3

- E.D., P.D., ESD Numericals
- Battery & Characteristics
- Zn-Air Battery
- H₂O₂ Fuel Cell
- Oxygen Sensor
- Ragone Plot ★★
- Li-Ion Battery (Advantage over Li, All theory ★)
- Reserve Batteries
- Super Capacitors
- Mg - Water Activated Battery
- Hydrogen Storage (Not sure as PYQs not much there)

Q4

- Types of Nano materials , Properties all (colour , conductivity etc.,)
- Weight , Number & Viscosity Avg. M.Wt
- Epoxy Resin
- Kevlar
- Carbon Fibre
- All Chemicals
- PMMA
- Factors affecting Polymers (Especially T.S)
- Conducting & Biodegradable Polymers
- OLED Construction & Theory & Working , Applications
Adv & Disadv
(No Types of OLED)
- 4 - 6 Principles of Green Chemistry