Roughly even three-way split across sub-disciplines: Organic chemistry (reaction mechanisms, isomerism, NMR, carbonyl reactivity, aromaticity, biomolecules) dominates the middle and end of the paper; inorganic/coordination chemistry (crystal field theory, point groups, coordination compounds, qualitative analysis, metallurgy) forms a strong secondary cluster; and physical chemistry (thermodynamics, kinetics, electrochemistry, quantum chemistry, surface chemistry) rounds out the remainder — no single branch is neglected, unlike papers that lean heavily organic or heavily physical.

Coordination chemistry and organometallics are unusually prominent: Questions on ferrocene's 18-electron rule, EDTA titrations, Vitamin B12, hemoglobin/myoglobin oxygen binding, trans-effect ordering, Ziegler-Natta catalysts, and CFT-driven color (d-d vs charge-transfer transitions) appear as a dense cluster (items 27, 31, 34-37, 44, 46, 65, 90-93)

Physical chemistry leans conceptual/derivational over numerical: Thermodynamic relations (Gibbs-Helmholtz, Maxwell relations, spontaneity criteria), reaction order/kinetics expressions, and real-gas behavior are tested mostly through recognizing correct formulas or interpreting signs of ΔG/ΔH/ΔS rather than through multi-step calculations — a smaller but present numerical component appears in conductivity, Kp, and titration questions.

Organic mechanism and stereochemistry are heavily represented: Carbocation stability, nucleophilic addition reactivity, SN1/E1 rearrangements, ozonolysis retrosynthesis, isomerism types (linkage, geometrical, optical), and mixed photochemistry ([2+2] cycloaddition implied in Q13) suggest strong weighting toward mechanistic reasoning and structure-based prediction rather than rote nomenclature.

Analytical and instrumental chemistry appears as a distinct thread: Spectroscopy techniques (NMR, IR, Mössbauer), chromatography (TLC reverse-phase, ion-exchange),

titrimetric analysis (iodometric, EDTA), and Debye-Hückel theory cluster together (43, 49-52, 85)

Difficulty is front-loaded with basics, but spikes unpredictably: Early questions (1-10) are largely factual/definitional, while advanced quantum mechanical and group-theory items (86-88 on eigenfunctions, term symbols, microstates) appear late — but harder physical-organic questions (like Q19's Wheland intermediate kinetics) are interspersed early, so difficulty doesn't scale smoothly with question number.