**Curriculum Plan of Dr. Kapil Mohan Saini**

**(Odd Semester 2023-2024)**

**Semester-V**

**Name of Paper & Code: CHEMISTRY –DSE: Chemistry of d-Block Elements, Quantum Chemistry and**

**Spectroscopy (1 Periods Per Week), UPC: 42177925**

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| **Contents** | **Allocations of Lectures** | **Month wise Schedule to be followed** | **Tutorials/ Assignment/ Presentation** |
| **Quantum Chemistry**  Postulates of quantum mechanics, quantum mechanical operators.  Free particle. Particle in a 1-D box (complete solution), quantization, normalization of wave functions,  concept of zero-point energy.  Rotational Motion: Schrödinger equation of a rigid rotator and brief discussion of its results (solution not  required). Quantization of rotational energy levels.  Vibrational Motion: Schrödinger equation of a linear harmonic oscillator and brief discussion of its results  (solution not required). Quantization of vibrational energy levels. | 12 | 3rd Week of August – 2nd week of November | * Syllabus Overview * Reference Books * Problem Solving * Class Test, |