**CURRICULUM PLAN 2025-26**

Odd Semester: I, III, V

**Dr. Savita Sharma**

Department of Physics

**DSE Paper: Physics of Materials**

**B.Sc. (H) Physics – III year, V Sem**

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| Content | Allocation of Lectures | Month-wise Schedule followed | Tutorial/assignment/presentation etc |
| **Physics of Materials** |  |
| **Unit – II - Dielectric and magnetic materials:** Dielectrics, Ferroelectric, Piezoelectric and Pyroelectric materials, applications offerroelectrics in capacitors and memory device, Piezoelectrics in micro positioner and actuator,Pyroelectrics in radiation detectors and thermometryClassification and applications of soft and hard magnetic materials, application in transformers,memory device, introduction of spintronics based systems (spin transport) | 9 | 01-August to 30-Sep | Syllabus OverviewReference booksDerivations andNumericalsDiscussion ofImportant questions |
| **Unit – III – Polymers:**Chemical structure of polymers of few thermoplastic (polyethylene, PVC, PTFE, PMMA,Polyester, Nylons) and thermosetting (Epoxy resin) polymers, conducting polymersapplicationin organicelectronics | 3 | 01 October to 21-October | Derivations andNumericalsDiscussion ofImportant questionsHome Register Checking |
| **Unit – IV – Liquid crystals:**Classification of liquid crystals, structural and orientational ordering (isotropic to Nematic),thermotropic liquid crystals, Phases and phase transitions; anisotropic; Birefringence anddisplay devices | 3 | 22 October- to 25-November | Derivations andNumericalsRevision of Syllabus,Discussion of previous year Question papers,Test of IA. |