Curriculam Plan For even sem 2024-25 Name Of Teacher: Prof. Seema Gupta Paper: Solid state Physics No. Of Periods per week:3

Тороіс	No. of lectures	Time frame	Assignment/tests
Crystal structure:	16	January	Numericals,
amorphous and			assignment
crystalline, unit cell,			
miller indices,			
reciprocal lattice,			
Brilluin zones, Bragg's			
law, atomic and			
geometrical factor,			
Lattice vibrations-			
mionoatomic and			
diatomic lattice,			
acoustical and optical			
phonos, Dulong and			
Petit law, Einstein			
theory, Debye theory,			
T <sup>3</sup> law			
Polarization, Local	16	Feburary	Numerical, Tests
field, Electrical			
susceptibility, Clausius			
Mossotti equation,			
Classical theory of			
dipolar polarization,			
Normal and			
anamolous dispersion,			
Complex dielectric			
constant, plasma			
oscilations, Dia, para			
and ferro magnetic			
materials, Classical			
diamagnetics and			
naramagnetics			
Quantum mechanical			
treatment of			
naramagnetics Weiss			
theory B-H curve			
energy loss			
Elementary hand	12	March	Test, Numericals
theory Bloch	12		
Theorem Kroning			
and Donny model			
effective mass			
semiconductor			
physics, Hall Effect			
Introduction of	9	April	Revision, Numericals
superconductors,			
experimental			
properties, isotope			
effect, Meissner			

effect, Type I and		
Type II		
superconductors,		
London equations,		
peneteration depth,		
coherence		
length,energy gap		