प्रयास UP PGT Physics Batch Study Plan					
DATE	**DAY**	**TIMING**	**FACULTY**	**SUBJECT**	**TOPIC**
29-August	Mon	8:00 AM - 9:00 AM	Sonu Sir	Mechanics	Conservation Laws
30-August	Tue	8:00 AM - 9:00 AM	Sonu Sir	Mechanics	Collisions and impact parameter
31-August	Wed	8:00 AM - 9:00 AM	Sonu Sir	Mechanics	Scattering cross-section
1-September	Thu	8:00 AM - 9:00 AM	Sonu Sir	Mechanics	Centre of mass and lab systems with transformation of physical quantities
2-September	Fri	8:00 AM - 9:00 AM	Sonu Sir	Mechanics	Rutherford Scattering
5-September	Mon	8:00 AM - 9:00 AM	Sonu Sir	Mechanics	Motion of a rocket under constant force field
6-September	Tue	8:00 AM - 9:00 AM	Sonu Sir	Mechanics	Rotating frames of reference, Coriolis force
7-September	Wed	8:00 AM - 9:00 AM	Sonu Sir	Mechanics	Motion of rigid bodies
8-September	Thu	8:00 AM - 9:00 AM	Sonu Sir	Mechanics	Angular momentum
9-September	Fri	8:00 AM - 9:00 AM	Sonu Sir	Mechanics	Torque and procession of a top, Gyroscope, Central forces
12-September	Mon	8:00 AM - 9:00 AM	Sonu Sir	Mechanics	Motion under inverse square law
13-September	Tue	8:00 AM - 9:00 AM	Sonu Sir	Mechanics	Kepler's Laws
14-September	Wed	8:00 AM - 9:00 AM	Sonu Sir	Mechanics	Motion of Satellites (including geostationary). Galilean Relativity
15-September	Thu	8:00 AM - 9:00 AM	Sonu Sir	Mechanics	Special Theory of Relativity
16-September	Fri	8:00 AM - 9:00 AM	Sonu Sir	Mechanics	Michelson-Morley Experiment
19-September	Mon	8:00 AM - 9:00 AM	Sonu Sir	Mechanics	Lorentz Transformations - addition theorem of velocities
20-September	Tue	8:00 AM - 9:00 AM	Sonu Sir	Mechanics	Variation of mass with velocity
21-September	Wed	8:00 AM - 9:00 AM	Sonu Sir	Mechanics	Mass- Energy equivalence
22-September	Thu	8:00 AM - 9:00 AM	Sonu Sir	Mechanics	Fluid dynamics, streamlines
23-September	Fri	8:00 AM - 9:00 AM	Sonu Sir	Mechanics	Laws of thermodynamics, Entropy
26-September	Mon	8:00 AM - 9:00 AM	Sonu Sir	Thermal Physics	Carnot's cycle. Isothermal and Adiabatic Changes
27-September	Tue	8:00 AM - 9:00 AM	Sonu Sir	Thermal Physics	Thermodynamic Potentials Maxwell's relations.
28-September	Wed	8:00 AM - 9:00 AM	Sonu Sir	Thermal Physics	The Clausius Clapeyren equation reversible cell
29-September	Thu	8:00 AM - 9:00 AM	Sonu Sir	Thermal Physics	Joule-Kelvin effect, Stefan Boltzmann Law
30-September	Fri	8:00 AM - 9:00 AM	Sonu Sir	Thermal Physics	Kinetic Theory of Gases
3-October	Mon	8:00 AM - 9:00 AM	Sonu Sir	Thermal Physics	Maxwell's Distribution Law of velocities
4-October	Tue	8:00 AM - 9:00 AM	Sonu Sir	Thermal Physics	Equipartition of energy, Specific heats of gases

6-October	Thu	8:00 AM - 9:00 AM	Sonu Sir	Thermal Physics	Mean Free path, Brownian Motion. Black Body radiation,
7-October	Fri	8:00 AM - 9:00 AM	Sonu Sir	Thermal Physics	Specific heat of solid-Einstean & Dbye theories
10-October	Mon	8:00 AM - 9:00 AM	Sonu Sir	Thermal Physics	Wein's Law, Planck's Law. Solar Constant
11-October	Tue	8:00 AM - 9:00 AM	Sonu Sir	Thermal Physics	Thermal ionization and Stellar spectra-production of law temperatures using adiabatic demagnetization and dilution refrigeration
12-October	Wed	8:00 AM - 9:00 AM	Sonu Sir	Thermal Physics	Concept of negative temperature
13-October	Thu	8:00 AM - 9:00 AM	Sonu Sir	Thermal Physics	Oscillations, Simple harmonic motion
14-October	Fri	8:00 AM - 9:00 AM	Sonu Sir	Waves and Oscillations	Stationary and travelling waves
17-October	Mon	8:00 AM - 9:00 AM	Sonu Sir	Waves and Oscillations	Damped harmonic motion
18-October	Tue	8:00 AM - 9:00 AM	Sonu Sir	Waves and Oscillations	Forced oscillation & Resonance
19-October	Wed	8:00 AM - 9:00 AM	Sonu Sir	Waves and Oscillations	Wave equation, Harmonic Solutions
20-October	Thu	8:00 AM - 9:00 AM	Sonu Sir	Waves and Oscillations	Plane and Spherical waves
21-October	Fri	8:00 AM - 9:00 AM	Sonu Sir	Waves and Oscillations	Superposition of waves, Phase and Group velocities
27-October	Thu	8:00 AM - 9:00 AM	Sonu Sir	Waves and Oscillations	Beats Huygen's principle
28-October	Fri	8:00 AM - 9:00 AM	Sonu Sir	Waves and Oscillations	Interference. Differaction-Fresnee and Fraunhofer
31-October	Mon	8:00 AM - 9:00 AM	Sonu Sir	Waves and Oscillations	Diffraction by straight edge, Single and multiple slits
1-November	Tue	8:00 AM - 9:00 AM	Sonu Sir	Waves and Oscillations	Resolving power of grating and Optical Instruments
2-November	Wed	8:00 AM - 9:00 AM	Sonu Sir	Waves and Oscillations	Ravleigh Criterion
3-November	Thu	8:00 AM - 9:00 AM	Sonu Sir	Waves and Oscillations	Polarization; Production and Detection of polarized light (linear. circular and elliptical)
4-November	Fri	8:00 AM - 9:00 AM	Sonu Sir	Waves and Oscillations	Laser sources (Helium-Neon, Ruby, and semiconductor diode)
7-November	Mon	8:00 AM - 9:00 AM	Sonu Sir	Waves and Oscillations	Concept of spatial and temporal coherence
8-November	Tue	8:00 AM - 9:00 AM	Sonu Sir	Waves and Oscillations	Diffraction as a Fourier transformation

9-November	Wed	8:00 AM - 9:00 AM	Sonu Sir	Waves and Oscillations	Fresnel and Fraunhofer diffraction by rectangular and circular apertures
10-November	Thu	8:00 AM - 9:00 AM	Sonu Sir	Waves and Oscillations	Holography, theory and applications
11-November	Fri	8:00 AM - 9:00 AM	Sonu Sir	Waves and Oscillations	Holography, theory and applications
14-November	Mon	8:00 AM - 9:00 AM	Sonu Sir	Electricity & Magnetism	Coulomb's Law,
15-November	Tue	8:00 AM - 9:00 AM	Sonu Sir	Electricity & Magnetism	Electric field.
16-November	Wed	8:00 AM - 9:00 AM	Sonu Sir	Electricity & Magnetism	Gauss's Law.
17-November	Thu	8:00 AM - 9:00 AM	Sonu Sir	Electricity & Magnetism	Electric potential,
18-November	Fri	8:00 AM - 9:00 AM	Sonu Sir	Electricity & Magnetism	Possion and Laplace equations for a homogeneous dielectric, uncharged conducting Plane.
21-November	Mon	8:00 AM - 9:00 AM	Sonu Sir	Electricity & Magnetism	Magnetic Shell Magnetic induction and field strength.
22-November	Tue	8:00 AM - 9:00 AM	Sonu Sir	Electricity & Magnetism	Biot-Savart law and applications.
23-November	Wed	8:00 AM - 9:00 AM	Sonu Sir	Electricity & Magnetism	Electro-magnetic induction,
24-November	Thu	8:00 AM - 9:00 AM	Sonu Sir	Electricity & Magnetism	Faraday's Lenz's laws,
25-November	Fri	8:00 AM - 9:00 AM	Sonu Sir	Electricity & Magnetism	Self and mutual inductances.
28-November	Mon	8:00 AM - 9:00 AM	Sonu Sir	Electricity & Magnetism	Alternating currents. L.C.R circuits series and parallel resonance circuits, quality factor.
29-November	Tue	8:00 AM - 9:00 AM	Sonu Sir	Electricity & Magnetism	Kirchoffs laws with application.
30-November	Wed	8:00 AM - 9:00 AM	Sonu Sir	Electricity & Magnetism	Maxwell's equations and electromagnetic waves, Transverse nature of electromagnetic waves.
1-December	Thu	8:00 AM - 9:00 AM	Sonu Sir	Electricity & Magnetism	Poynting vector,
2-December	Fri	8:00 AM - 9:00 AM	Sonu Sir	Electricity & Magnetism	magnetic fields in matter—dia, para, ferro antiferro and ferri magnetism
5-December	Mon	8:00 AM - 9:00 AM	Sonu Sir	Modern Physics	Bohr's theory of hydrogen atom.
6-December	Tue	8:00 AM - 9:00 AM	Sonu Sir	Modern Physics	Electron spin,
7-December	Wed	8:00 AM - 9:00 AM	Sonu Sir	Modern Physics	Optical and X-ray Spectra.
8-December	Thu	8:00 AM - 9:00 AM	Sonu Sir	Modern Physics	Stern- Gerlach experiment and spatial quantization.
9-December	Fri	8:00 AM - 9:00 AM	Sonu Sir	Modern Physics	Vector model of the atom,

12-December	Mon	8:00 AM - 9:00 AM	Sonu Sir	Modern Physics	spectral terms, fine structure of spectral lines.
13-December	Tue	8:00 AM - 9:00 AM	Sonu Sir	Modern Physics	J-J and L-S coupling.
14-December	Wed	8:00 AM - 9:00 AM	Sonu Sir	Modern Physics	Zeeman effect,
15-December	Thu	8:00 AM - 9:00 AM	Sonu Sir	Modern Physics	Paull's exclusion principle,
16-December	Fri	8:00 AM - 9:00 AM	Sonu Sir	Modern Physics	spectral terms of two equivalent and non-equivalent electrons.
19-December	Mon	8:00 AM - 9:00 AM	Sonu Sir	Modern Physics	Gross and fine structure of electronic band Spectra.
20-December	Tue	8:00 AM - 9:00 AM	Sonu Sir	Modern Physics	Raman effect & Photoelectric effect.
21-December	Wed	8:00 AM - 9:00 AM	Sonu Sir	Modern Physics	Compton effect,
22-December	Thu	8:00 AM - 9:00 AM	Sonu Sir	Modern Physics	Debroglie waves.
23-December	Fri	8:00 AM - 9:00 AM	Sonu Sir	Modern Physics	Wave particle duality and uncertainty principle.
26-December	Mon	8:00 AM - 9:00 AM	Sonu Sir	Modern Physics	Schrodinger wave equation with application to (i) particle in a box. (ii) motion across a step potential,
27-December	Tue	8:00 AM - 9:00 AM	Sonu Sir	Modern Physics	One dimensional harmonic oscillator Eigen values and Eigen functions.
28-December	Wed	8:00 AM - 9:00 AM	Sonu Sir	Modern Physics	Uncertainty Principle Radio activity, Alpha, beta and gamma radiations.
29-December	Thu	8:00 AM - 9:00 AM	Sonu Sir	Modern Physics	Elementary theory of the alpha decay.
30-December	Fri	8:00 AM - 9:00 AM	Sonu Sir	Modern Physics	Nuclear binding energy.
2-January	Mon	8:00 AM - 9:00 AM	Sonu Sir	Modern Physics	Mass Spectroscopy, Semi empirical mass formula.
3-January	Tue	8:00 AM - 9:00 AM	Sonu Sir	Modern Physics	Nuclear fission and fusion.
4-January	Wed	8:00 AM - 9:00 AM	Sonu Sir	Modern Physics	Elementary Reactor physics.
5-January	Thu	8:00 AM - 9:00 AM	Sonu Sir	Modern Physics	Elementary particles and their classification.
6-January	Fri	8:00 AM - 9:00 AM	Sonu Sir	Modern Physics	Strong, and Weak Electromagnetic interactions.
7-January	Sat	8:00 AM - 9:00 AM	Sonu Sir	Modern Physics	Particle accelerators ; Cyclotron. Linear accelerations,
8-January	Sun	8:00 AM - 9:00 AM	Sonu Sir	Modern Physics	Elementary ideas of Super conductivity.
9-January	Mon	8:00 AM - 9:00 AM	Sonu Sir	Electronics	Band theory of Solids : Conductors, insulators and semiconductors,
10-January	Tue	8:00 AM - 9:00 AM	Sonu Sir	Electronics	Intrinsic and extrinsic semiconductors.

11-January	Wed	8:00 AM - 9:00 AM	Sonu Sir	Electronics	P-N junction. Thermistor,
12-January	Thu	8:00 AM - 9:00 AM	Sonu Sir	Electronics	Zenner diodes and transistors for rectification, amplification,
13-January	Fri	8:00 AM - 9:00 AM	Sonu Sir	Electronics	oscillation modulation and detection of r.f. waves. Transistor receiver. Television
16-January	Mon	8:00 AM - 9:00 AM	Sonu Sir	Electronics	Logic Gates.

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