LECTURE PLAN FOR NEET_PHYSICS (2021)

S. No.	Chapter	Topics	Lecture number	Date of Lecture	Date of Completion
1	**Basic Mathematics**	Trigonometry/Algebra-Basic equation	1	-	**23-May-21**
2		Graph – Straight Line, Parabola and Circle	1	-	
3		Differentiation	1	-	
4		Integration with Graphical Meaning	1	-	
5	**Units & Measurement**	Introduction, Physical Quantities, Units, System of units, Fundamental, Derived, and supplementary units,Conversion of units	1	28-May-21	**09-Jun-21**
6		Dimentionsal Analysis, Homogenity principle.	1	29-May-21	
7		Dimensional Analysis, Uses and limitations of dimensional analysis.	1	31-May-21	
8		Measurements: Parallax Method, Significant Figure, Rounding off.	1	02-Jun-21	
9		Errors, Propagation of errors	1	03-Jun-21	
10		Questions on error analysis	1	04-Jun-21	
11		Vernier Callipers, Screw gauge	1	07-Jun-21	
12		Problem practice (PYQ)	1	09-Jun-21	
13	**Motion in a straightline**	Distance vs Displacement, Average speed, Average Velocity, Average Acceleration	1	11-Jun-21	**09-Jul-21**
14		Speed/Velocity	1	14-Jun-21	
15		Questions in speed,velocity and acceleration	1	16-Jun-21	
16		Acceleration & Non-uniformly Accelerated Motion	1	18-Jun-21	
17		Accelerated, Type of motion, equations of motion	1	21-Jun-21	
18		Questions on Constant acceleration-1	1	23-Jun-21	
19		Questions on Constant acceleration-2	1	25-Jun-21	
20		Motion Under Gravity -1	1	28-Jun-21	
21		Motion Under Gravity -2	1	30-Jun-21	
22		Graph of one Dimension -1	1	02-Jul-21	
23		Graph of one Dimension -2	1	05-Jul-21	
24		Relative motion in one Dimension	1	07-Jul-21	
25		Problem practice (PYQ)	1	09-Jul-21	
26	**Motion in a plane**	Vectors (Introduction), Types of vectors, Unit vectors, Angle between vectors	1	12-Jul-21	**07-Aug-21**
27		Addition and Subtraction of vectors,Resolving of vectors	1	14-Jul-21	
28		Dot product and application	1	16-Jul-21	
29		Cross product and applications	1	19-Jul-21	
30		General motion of 2D	1	23-Jul-21	
31		Projectile motion. Ground to ground projectile	1	26-Jul-21	
32		Projectile from a tower.	1	28-Jul-21	
33		Relative Motion in 2D (Rain Man Problem, minimum distance of Approach.)	1	30-Jul-21	
34		River Swimmer Problems, miscellaneous problems	1	02-Aug-21	
35		Circular motion, Definition of angular variable, Centripetal acceleration, uniform and non uniform circular motion.	1	04-Aug-21	
36		Problems on Circular motion	1	06-Aug-21	
37		Problem practice(PYQ)	1	07-Aug-21	

38		Newton's three laws	1	09-Aug-21	
39		Impulse, Impulse Momentum theorem, Introduction to conservation of linear momentum (Theroritical examples only)	1	11-Aug-21	
40		Equilibrium of forces and free body diagrams, common forces Tension, Normal reaction	1	13-Aug-21	
41	Laws of Motion	Spring, weighing machine and spring balance, Pulley, Atwood machine,	1	14-Aug-21	**27-Aug-21**
42		Constraint relations.	1	16-Aug-21	
43		Questions on equilibrium and motion using constraints	1	18-Aug-21	
44		Friction 1	1	20-Aug-21	
45		Friction 2	1	21-Aug-21	
46		Pseudo Force		23-Aug-21	
47		Dynamics of Circular motion	1	25-Aug-21	
48		Problem practice (PYQ)	1	27-Aug-21	
49		Work, Work Done by constant force, Work done by variable force	1	28-Aug-21	
50		Work energy theorem	1	01-Sep-21	
51		Potential energy, Conservative forces, Relation between force and potential energy	1	03-Sep-21	
52	Work, Energy and Power	Equilibrium and its types	1	04-Sep-21	**13-Sep-21**
53		Conservation of mechanical energy	1	06-Sep-21	
54		Vertical circular motion 1	1	08-Sep-21	
55		Vertical circular motion 2	1	10-Sep-21	
56		Power	1	11-Sep-21	
57		Problem practice (PYQ)	1	13-Sep-21	
58		Location of center of mass	1	15-Sep-21	
59		Location of center of mass(negative system)	1	17-Sep-21	
60		Motion of center of mass(Velocity and acceleration of center of mass). Conservation of linear momentum.	1	18-Sep-21	
61	Center of mass	Applications of conservation of linear momentum, Jumping from the cart, recoil of gun, explosion of bombs	1	20-Sep-21	**27-Sep-21**
62		Collisions, Elastic/inelastic, headon	1	22-Sep-21	
63		velocities after collision and loss of Kinetic energy and questions	1	24-Sep-21	
64		oblique collisions.	1	25-Sep-21	
65		Problem practice (PYQ)	1	27-Sep-21	
66		Moment of inertia, Perpendicular axis theorem, parallel axis theorem.	1	29-Sep-21	
67		Radius of gyration and miscellaneous problems	1	01-Oct-21	
68		Definition and Calculation of Torque	1	04-Oct-21	
69		Rotational equilibrium	1	06-Oct-21	
70		Newton's second law in Rotation	1	08-Oct-21	
71	System of Particles	Kinematics of Rolling motion	1	09-Oct-21	**20-Oct-21**
72		Dynamics of rolling motion		11-Oct-21	
73		Kinetic energy in rotational motion, Conservation of mechanical energy problems.	1	13-Oct-21	
74		Calculation of Angular momentum	1	16-Oct-21	
75		Conservation of angular momentum	1	18-Oct-21	
76		Problem practice(PYQ)	1	20-Oct-21	

77		Newton's Law of Gravitation,	1	22-Oct-21	
78		Gravitational Field, Acceleration due to gravity, Variation in acceleration due to gravity due to height, depth androtation of earth.	1	23-Oct-21	
79		Gravitational potential, Potential due to a point mass,	1	25-Oct-21	
80	**Gravitation**	Potential due to a ring, potential due to spheres,	1	27-Oct-21	**08-Nov-21**
81		Gravitational potential energy, Relation between potential and potential energy. Escape velocity.	1	29-Oct-21	
82		Orbits, circular orbits, satellites, geostationary satellites	1	30-Oct-21	
83		kepler laws	1	01-Nov-21	
84		Problem practice(PYQ)	1	08-Nov-21	
85		Stress, Strain, Hooke's law, Modulus of elasticity, Stress-strain Curve	1	12-Nov-21	
86		Analogy of a spring, Elastic potential energy, Wires in series and parallel	1	13-Nov-21	
87		Hanging wire, Breaking stress.	1	15-Nov-21	
88		Problem practice(PYQ)	1	17-Nov-21	
89		Pressure, Relative density, Variation of pressure with depth,	1	20-Nov-21	
90		Pascal's Law, Hydraulic lift and brake,	1	22-Nov-21	
91	**Mechanical propertiesof solids**	Buoyancy and Archimedes Principle,	1	24-Nov-21	**06-Dec-21**
92		Problems on archimedes principle, Liquid in accelerated containers	1	26-Nov-21	
93		Types of flow, Bernoulli's Principle	1	27-Nov-21	
94		Applications of Bernoulli's principle (Torricelli's equation, venturimeter)	1	29-Nov-21	
95		Surface tension,	1	01-Dec-21	
96		Excess pressure in a soap bubble and a liquid drop, Capillary action,	1	03-Dec-21	
97		Viscosity, Stoke's law, Terminal velocity	1	04-Dec-21	
98		Problem practice(PYQ)	1	06-Dec-21	
99		Temperature, Thermometry, Thermal expansion (Linear, superficial and cubical expansion), Thermal stress and strain,	1	08-Dec-21	
100		Calorimetry, Specific heat capacity, Molar heat capacity, Latent heat of fusion and vaporization. Water equivalent.		10-Dec-21	
101	**Thermal properties of matter**	Modes of heat transfer, Thermal conduction, Rods in series and parallel,	1	11-Dec-21	**18-Dec-21**
102		Miscellenous circuits, Growth of ice on surface of lakes.	1	13-Dec-21	
103		Radiation, Stefan's Law	1	15-Dec-21	
104		Newton's law of cooling, Wien's displacement law.	1	17-Dec-21	
105		Problem practice(PYQ)	1	18-Dec-21	
106	**Kinetic theory of Gases**	Postulates of Kinetic theory of gases, Ideal gas laws, Expression for pressure of an Ideal gas,	1	20-Dec-21	**22-Dec-21**
107		Degrees of freedom, law of equipartition of energy, Speed distribution curve, Mean free path. Problem practice(PYQ)	1	22-Dec-21	

108	**Thermodynamics**	Zeroth law of thermodynamics, Heat, work and internal energy, First law of thermodynamics,	1	24-Dec-21	**07-Jan-22**
109		Thermodynamic processes (Isochoric, isobaric, isothermal, adiabatic, polytropic),	1	27-Dec-21	
110		Indicator diagrams	1	29-Dec-21	
111		Questions on thermodynamics process and indicator diagrams	1	31-Dec-21	
112		Cyclic processes, Heat engine, Refrigerator, heat pump,	1	03-Jan-22	
113		Second law of thermodynamics, Carnot cycle, Entropy.	1	05-Jan-22	
114		Problem practice(PYQ)	1	07-Jan-22	
115	**Oscillations**	Periodic motion, Simple harmonic motion, Equations of SHM,	1	08-Jan-22	**17-Jan-22**
116		Circle Diagram, Energy in SHM,	1	10-Jan-22	
117		Superposition of SHM, Time period of SHM, Linear SHM,	1	12-Jan-22	
118		Angular SHM, Compound pendulum, Torsional Pendulum,	1	14-Jan-22	
119		Damped oscillations, Forced Oscillations.	1	15-Jan-22	
120		Problem practice(PYQ)		17-Jan-22	
121	**Wave Motion**	Equation of wave, particle speed, particle acceleration	1	19-Jan-22	**05-Feb-22**
122		Wave speed, Speed of sound, effect of pressure, temperature and humidity on speed of sound.	1	21-Jan-22	
123		Interference, Intensity 1	1	22-Jan-22	
124		Interference, Intensity 2	1	24-Jan-22	
125		Reflection of waves	1	28-Jan-22	
126		Standing waves, waves on string and organ pipes	1	29-Jan-22	
127		Standing waves, waves on string and organ pipes,,	1	31-Jan-22	
128		Sonometer wire, resonance column tube experiment, end correction, beats	1	02-Feb-22	
129		Doppler effect.	1	04-Feb-22	
130		Problem practice(PYQ)	1	05-Feb-22	