

**PHYSICS (Reduced / Non Evaluation Syllabus only for Academic Year 2020-21 only )**

**Note :**

1. The topics in the following table are Deleted for the academic year 2020-21 as an exceptional case.
2. All boxes **EXCEPT 'Solved examples'** and **'Remember This'** are Deleted / Non evaluative For 2020-21 only

**XI PHYSICS (54)**

Sr No.	Page No	Article No	Portion Deleted for year 2020-21
<b>Chapter 1 Units and Measurements</b>			
1	3 to 5	1.3	Measurement of length
2	5	1.4	Measurement of Mass
3	5 to 6	1.5	Measurement of Time
4	8	1.7	Accuracy, Precision and Uncertainty in measurement
5	10 to 11	1.8.2	Combination of errors
<b>Chapter 2 Mathematical Methods</b>			
1	25 - 28	2.6	Introduction to Calculus
<b>Chapter 3 Motion in a Plane</b>			
1	30 - 36	3.2	Rectilinear Motion
<b>Chapter 4: Laws of motion</b>			
1	47	4.2	Aristotle's fallacy
2	48	4.3 only	Newton's laws of motion
4	52	4.5.2	Contact and non-contact forces
6	55, 56	4.6	Work energy theorem
7	56, 57	4.7	Principle of conservation of linear momentum
8	61	4.8.5	Loss in K.E....Use the result 4.11 without proof
10	63 to 64	4.9.1	Necessity of defining impulse
11	67	4.11.1	To prove that the moment of a couple is independent of the axis of rotation
12	72	4.13.4	characteristics of Centre of mass
<b>Chapter 5 Gravitation</b>			
1	84	5.4	Measurement of the Gravitational Constants
<b>Chapter 6 Mechanical Properties of solid</b>			
1	108	6.8	Hardness
2	109 - 111	6.9	Friction in Solid

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<b>Chapter 7 Thermal Properties of Matter</b>			
1	114	7.2	Temperature and Heat
2	115 -118	7.3	Measurement of Temperature
3	118 -121	7.4	Absolute Temperature and Ideal Gas Equation
4	129 -133	7.8	Change of State
<b>Chapter 8: Sound Waves</b>			
2	142 -144	8.2	Common Properties of all Waves
3	144 -145	8.3	Transverse Waves, Longitudinal Waves
4	149	8.6	Principle of Superposition of Waves
5	150	8.7.2	Reverberation
6	150 to 151	8.7.3	Acoustics
7	154	8.9.2	Listener Approaching a Stationary Source with velocity $v$
<b>Chapter 9: Optics</b>			
1	159	9.2	Nature of light
2	159 - 161	9.3	Ray optics and geometrical optics
4	162	9.4.2	Relation between $f$ , $u$ and $v$
5	166, 167	9.6.1 (ii, iii)	Prism binoculars and periscope
6	167	9.7	Till equation 9.2
11	175 to 177	9.9	Natural phenomena due to sunlight
12	183 - 184	9.11 (last part)	Telescope onwards, till the end.
<b>Chapter 10 Electrostatics</b>			
1	188	10.2	Electric charge
2	195	10.6.1	Electric field intensity due to point charge in a material medium
3	196	10.6.2	Practical way of calculating electric field
4	199	10.8	Proof of the Gauss' law
5	201 -204	10.9	Electric dipole
8	204	10.10	Continuous charge distribution
<b>Chapter 11 Electric Current Through Conductors</b>			
1	207	11.2	Electric current
2	207	11.3	Flow of current through a conductor

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3	207-208	11.4	Drift speed
4	209	11.5	Ohm's law
5	210	11.6	Limitations of the Ohm's law
6	210	11.7	Electrical energy and power
7	211-213	11.8	Resistors
8	213	11.9	Specific Resistance(Resistivity)
<b>Chapter12 Magnetism</b>			
1	224-225	12.4	Gauss' Law of Magnetism
<b>Chapter13: Electromagnetic Waves and Communication System</b>			
3	234-235	13.3.5-13.3.7	Ultraviolet Rays, X & Gamma Rays
5	239	13.6	Modulation
<b>Chapter 14 Semiconductors</b>			
1	254	14.8	Semiconductor devices

**Note Due to the Covid 19 pandemic situation and the social distancing**

**it may be difficult to complete even 75% Practicals and Activities.**

**Hence for the year 2020-21 the students are required to perform only 60% of the Practicals and Activities**

**XII PHYSICS (54)**

Sr No.	Page No	Article No	Portion Deleted for year 2020-21
<b>Chapter 1 Rotational Dynamics</b>			
1	11	1.4.2	Sphere of Death
2	11	1.4.3	Vehicle at the Top of a Convex Over Bridge
3	19-20	1.11	Rolling Motion
<b>Chapter 2 Mechanical Properties Of Fluids</b>			
1	27-33	2.3	Pressure
2	48-49	2.8	Equation of Continuity
3	50-53	2.9	Bernoulli Equation
<b>Chapter 3 Kinetic Theory Of Gases and Radiation</b>			
1	56	3.2	Behaviour of a gas
2	57	3.3	Ideal Gas and Real Gas

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3	57	3.4	Mean Free Path
4	61-62	3.8	Law of Equipartition of Energy
<b>Chapter 4 Thermodynamics</b>			
1	96	4.8	Heat Engines
2	99	4.9	Refrigerators and Heat Pumps
3	102	4.10	Second Law of Thermodynamics
4	104	4.11	Carnot Cycle and Carnot Engine
5	106	4.12	Sterling Cycle
<b>Chapter 5 : Oscillations</b>			
1	116-117	5.7	Reference Circle Method
2	118-119	5.9	Graphical representation of S.H.M.
3	126-127	5.14	Damped Oscillations
4	127-128	5.15	Free Oscillations, Forced Oscillations and Resonance
<b>Chapter 6: Superposition of Waves</b>			
1	132-133	6.3	Reflection of waves
2	153	6.10	Characteristics of sound
3	154	6.11	Musical Instruments
<b>Chapter 7 : Wave Optics</b>			
1	158	7.2.	Corpuscular Nature
2	164	7.6	Refraction of a light at a Plane Boundary between two media
3	164	7.7	Polarization
4	180	7.10	Resolving power
<b>Chapter 8 : Electrostatics</b>			
1	194-195	8.5	Equipotential Surfaces
2	199	8.7	Conductors and insulators, Free charges and Bound charges
3	208	8.11	Displacement current
4	210-211	8.13	Van de Graaff Generator
<b>Chapter 10 Magnetic Fields due to Electric Current</b>			
1	232-234	10.3	Cyclotron Motion
2	234	10.4	Helical Motion
<b>Chapter 11 Magnetic Materials</b>			
1	251-253	11.2	Torque Acting on a Magnetic Dipole in a Uniform Magnetic Field

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2	257-261	11.5	Magnetic Properties of Materials
3	261-262	11.6	Hysteresis
4	262	11.7	Permanent Magnet and Electromagnet
5	262	11.8	Magnetic Shielding
<b>Chapter 12 Electromagnetic Induction</b>			
1	270-273	12.6	Induced emf in a Stationary Coil in a Changing Magnetic Field
2	273-274	12.7	Generator
3	274-276	12.8	Back emf and back torque
4	281	12.13	Energy Density of a Magnetic Field
<b>Chapter 13 AC Circuits</b>			
1	288	13.2	A.C. Generator
2	297-299	13.6	Power in A.C. Circuits
3	302-303	13.9	Sharpness of Resonance: Q factor
4	303	13.10	Choke coil
<b>Chapter 14 Dual Nature of Radiation and Matter</b>			
1	314	Table 14.2	Summary of analysis of observations from
2	316	14.4	Photo Cell
3	318-319	14.6	Davison and Germer Experiment
<b>Chapter 15 Structure of Atoms and Nuclei</b>			
1	324	15.3	Geiger Marsden Experiment
2	330-332	15.7	Atomic Nuclues
3	332-333	15.8	Nuclear Binding Enenergy
4	333-336	15.9	Radioactive Decays
5	338-341	15.11	Nuclear energy
<b>Chapter 16 Semiconductor Devices</b>			
1	347-350	16.3.1	Zener Diode

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