Govt. Polytechnic Hamirpur (H.P.)
Lesson Planning (Theory)

Branch : **Electrical Engg & IT**
Subject : Applied Physics-I
Teacher: **Pritam Singh Dogra**

Semester : First
Session : **Aug 24 to Dec 24**
Class Room:

Sr. No.	No. of Lectures		Chapter/ Unit Description	Detail of Contents	Reference Resources	Remarks
1	11	3rd, 4th and 5th week of August	Physical world, Units and Measurements	Physical quantities: fundamental and derived	R1, R2, R3 and R4	
				Units and systems of units (FPS, CGS and SI units)		
				Dimensions and dimensional formulae of physical quantities		
				Principle of homogeneity of dimensions, Dimensional equations and their applications (conversion from one system of units to other)		
				(checking of dimensional equations and derivation of simple equations), Limitations of dimensional analysis.		
				Errors in measurements (systematic and random), absolute error, relative error, error estimation and significant figures.		
				Revision of whole Chapter		
2	12	1st ,2nd and 3rd week of Sepetember	Force and Motion	Scalar and Vector quantities – examples, representation of vector, types of vectors.	R1, R2, R3 and R4	
				Addition and Subtraction of Vectors, Triangle and Parallelogram law (Statement only)		
				Scalar and Vector Product, Resolution of a Vector and its application to inclined plane (Rectangular components) and lawn roller.		
				linear momentum, its applications such as recoil of gun &rockets, Impulse and its applications.		
				Circular motion, definition of angular displacement, angular velocity, angular acceleration, frequency, time period.		
				Relation between linear and angular velocity, linear acceleration and angular acceleration (related numerical),		
				Centripetal and Centrifugal forces with live examples, Expression and applications such as banking of roads and bending of cyclist and **Class test-I.**		
				Revision of whole Chapter		
3	10	4th week of sept. and 1st ,2nd week of October	Work, Power and Energy	Work: Concept and units, examples of zero work, positive work and negative work	R1, R2, R3 and R4	
				Friction: concept, types, laws of limiting friction, coefficient of friction		
				methods for reducing friction and its engineering applications		
				Work done in moving an object on horizontal and inclined plane for rough and plane surfaces and related applications		
				Energy and its units, kinetic energy, gravitational potential energy with examples and derivations		
				Mechanical energy, conservation of mechanical energy for freely falling bodies, transformation of energy (examples).		
				Power and its units, power and work relationship, calculation of power (numerical problems).		
				Revision of whole Chapter		