SYNERGY POLYTECHNIC, BBSR

The Lesson Plan

Descipline:	Semester:2nd	Name of the Teaching Faculty: Swati Priya Pany
Subject: Physics	No of Days/per week class allotted:	Semester from Date: 29/1/2024 to Date: 14/5/2024 No of Weeks:15
Week	Class Day	Theory/Practical Topics
1st	1st	Physical quantity and defination of fundamental & derived units
	2nd	Dimension formula of physical quantity
	3rd	Principle of homogeneity & correctness of physical relation
	4th	Scalar & vector quantities, e.g, .Types of vectors
	5th	LAB- Find the cross sectional area or a wire using screw gauge
2nd	1st	Law of vector addition & resolution of vector
	2nd	vector multiplication
	3rd	concept of rest &Motion, Displacement,speed, velocity etc
	4th	equation of motion under gravity
	5th	LAB- Find the thickness & volume of glass piece using screw gauge
3rd	1st	Circular motion, angular displacement, angular velocity & acceleration
	2nd	relation between linear & angular velocity &angular acceleration
	3rd	projectile, e.g of projectile, equation of trajectory, time of flight
	4th	maximum height, horizontal rangefor projectile
	5th	LAB-Find the volume of a solid cylinder by using vernier callipers
4th	1st	WORK &Friction- definition,formula, SI Units
	2nd	Types of friction, limiting friction
	3rd	Laws of limiting friction
	4th	coefficient of friction
	5th	Find the volume of a hollow cyllinder by using vernier callipers
5th	1st	Methods of reduce friction
	2nd	Newton's law of gravitation, universal gravitational constant-definition
	3rd	Acceleration due to gravity, definition of mass and weight
	4th	Relation between g & G
	5th	LAB-Find the radius of curvature of convex surface using Spherometer

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Week	Class Day	Theory/Practical Topics	
6th	1st	Variation of g with altitude & depth	
	2nd	Kepler's law of planetory motion	
	3rd	Simple harmonic motion, expression for displacement, velocity	
	4th	expression for acceleration. Wave motion-definition & concept	
	5th	LAB-Find the radius of curvature of concave surface using Spherometer	
7th	1st	Transverse & longitudinal wave- defination & example, comparison	
	2nd	wave parameters- amplitude.wave length, frequency, time period	
	3rd	Realtion between velocity, frequency, wavelength of a wave	
	4th	Ultrasonic-definition, properties,application	
	5th	LAB- Determine the angle of Prism	
8th	1st	Heat & temp. - definition,units, difference	
	2nd	specific heat, latent heat-concept,definition,unit	
	3rd	thermal expansion, expansion in solid	
	4th	coefficient of linear,superficial & cubical expansion of solids	
	5th	LAB- Determine the angle of minimum deviation bt I-D curve method.	
9th	1st	Relation between α, β and γ	
	2nd	Work & Heat-concept and relation	
	3rd	Joule;s law & 1st law of thermodynamics	
	4th	Reflection & Refraction, laws of reflection & refraction	
	5th	LAB-Trace the lines of forces due to a Bar magnet north pole pointing north.	
10th	1st	Refractive index, critical angle and total internal reflection	
	2nd	Refraction through through Prism	
	3rd	Fibre Optics	
	4th	Electrostatics-concept, Coulomb's law	
	5th	LAB-Trace the lines of forces due to a Bar magnet north pole pointing south.	
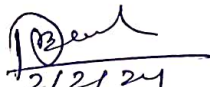
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Week	Class Day	Theory/Practical Topics	
11th	1st	Electric potential, potential difference, electric field, field intensity	
	2nd	Capacitance, series and parallel connection of capacitors	
	3rd	Magnet-properties of magnet	
	4th	coulomb's law of magnetism	
	5th	LAB-Verify Ohm's law by Ammeter.	
12th	1st	Magnetic field, field intensity, magnetic lines of forces	
	2nd	magnetic flux, flux density-definition,formula ,unit	
	3rd	Electric current-definition, formula	
	4th	Ohm's law and application	
	5th	LAB	
13th	1st	Resistors, series and parallel combination of resistors	
	2nd	Kirchoff's law	
	3rd	Application of kirchoff's law	
	4th	Wheatstone's Bridge- balancing condition	
	5th	LAB	
14th	1st	Electromagnetism-definition and concept	
	2nd	force acting on a current carrying conductor placed in a uniform magnetic field	
	3rd	Faraday law of electromagnetism, Fleming's Left & right hand rule	
	4th	Lenz's law	
	5th	LAB	
15th	1st	comparision between Fleming's left hand & right hand rule	
	2nd	LASER, Principle of LASER	
	3rd	Propereties and application of LASER	
	4th	Wireless transmission	
	5th	LAB	

Sign of Faculty   HOD   Principal