

SYNERGY POLYTECHNIC, BBSR

The Lesson Plan

Discipline:	Semester:2	Name of the Teaching Faculty: Swati Priya Pany
Subject: Engg Phy	No of Days/per week class allotted:	Semester from Date: 20/03/2023 to Date: 31/1/2022 27/06/2023 No of Weeks:15
Week	Class Day	Theory/Practical Topics
1st	1st	Physical quantity and definition 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 of 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 range for 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 cylinder 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 planetary 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- definition & example, comparison
	2nd	wave parameters- amplitude, wave length, frequency, time period
	3rd	Relation 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 by 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 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
	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
 19/4/23


 HOD
 19/4/23


 Principal
 19/4/23