BHARAT INSTITUTE OF ENGINEERING & TECHNOLOGY

SIVARAM VIHAR, GHATAKESWAR HILLS
MOHADA, BERHAMPUR (GM.)

STUDENT'S ATTENDANCE REGISTER

Time / Day	9:05 to 9:55		9:55 to 10:45		11:35 to 12:25
Mon			PHY.		
Tue					PHY.
Wed	PHY.				
Thu					
Fri	PHY.				
Sat					

Year/ Session : 2023 (winter)	Semester from Date: 16/08/2023 To Date : 11/12/2023
Semester & Branch	1st Semester, Civil Branch
Subject with Code	Engineering Physics [Th 2]
Name of the Faculty Member	Miss Pabita Patra
No of Weeks:	No of Days per Week Class Allotted :04

B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
AUGUST	3rd Week	16/08/23	UNIT - I Unit And Dimension 1.1 Physical quantities - (Definition). 1.2 Definition of fundamental and derived units, System of units (FPS, CGS, MKS, and SI units).
		18/08/23	1.3 Definition of dimension and Dimensional formulae of physical quantities. 1.4 Dimensional equations and Principal of homogenity.
	4th week	21/08/23	1.5 Checking the dimensional Correctness of physical relations.
		22/08/23	UNIT - II Scalars And Vectors 2.1 Scalar and Vector quantities, (definition and Concept) Representation of Vectors - examples, types of vectors.

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B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
AUGUST			2.2 Triangle and parallelogram law of vector addition, (Statement only) Simple numericals.
		23/08/23	2.3 Resolution of vectors – Simple numericals on Horizontal and Vertical Components.
		25/08/23	2.4 Vector multiplication.
			UNIT - III Kinematics
	5th week	28/08/23	3.1 Concept of Rest and Motion. 3.2 Displacement, Speed, Velocity, acceleration and Force. (Definition, formulae, dimensions & SI units).
		29/08/23	3.3 Equations of motion Under gravity (Upward and downward motion) - No derivation.

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B.I.E.T.,COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
SEPTEMBER	5th week	01/09/23	3.4 Circular Motion: Angular displacement, Angular Velocity and angular acceleration. (definition, formula & SI units)
	6th week	04/09/23	3.5 Relation Between – (i) Linear & Angular Velocity (ii) Linear & Angular acceleration).
			3.6 Define projectile, Examples of projectile.
		05/09/23	3.7 Expression for Equation of Trajectory, Time of flight, Maximum Height and Horizontal Range for a projectile fired at an angle, Condition for maximum Horizontal Range.

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B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
SEPTEMBER			UNIT-IV Work And Friction
		08/09/23	4.1 Work :- Definition, Formula, SI Unit. 4.2 Friction :- Concept & Definition.
		11/09/23	4.3 Types of friction (Static, Dynamic, Limiting friction) (Definition with Concept). 4.4 Laws of Limiting friction (Only Statement, No experimental verification).
	7th week	12/09/23	4.5 Coefficient of friction – Definition, Formula, Simple Numericals 4.6 Methods to reduce friction.

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B.I.E.T.,COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
SEPTEMBER	8th week	13/09/23	UNIT-V Gravitation 5.1 Newtons Laws of Gravitation - Statement & Explanation. 5.2 Universal Gravitational Constant (G) - Definition, Units & Dimension.
		15/09/23	5.3 Acceleration due to gravity (g) - Definition and Concept.
		18/09/23	5.4 Definition of mass and weight. 5.5 Relation between 'g' and 'G'.
		22/09/23	5.6 Variation of "g" with attitude and depth (No derivation) - Only Explanation). 5.7 Keplers Laws of planetary motion (Statements only).

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B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
SEPTEMBER	9th week	25/09/23	UNIT:- VI Oscillations and Waves 6.1 Simple Harmonic Motion (SHM):- Definition & Examples. 6.2 Expressions (formula/ Equation) for displacement, velocity, acceleration of a body/ particle in SHM.
		26/09/23	6.3 Wave motion - Definition & Concept. 6.4 Transverse and Longitudinal wave motion :- Definition, Examples & Comparison.
		27/09/23	6.5 Definition of different wave parameters (Amplitude, wavelength, Frequency, Time period.
	10th week	03/10/23	6.6 Derivation of Relation between Velocity, Frequency and wavelength of a wave.

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B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
OCTOBER	11th week	04/10/23	6.7 Ultrasonics - Definition, Properties & Applications.
			UNIT - VII
			Heat And Thermodynamic
		06/10/23	7.1 Heat and Temperature - Definition & Difference.
			7.2 Units of Heat (FPS, CGS, MKS & SI).
		09/10/23	7.3 Specific Heat (Concept, definition, Unit, dimension) and Simple numericals).
			7.4 Change of State (Concept); Latent Heat (Concept, definition, Unit, dimension) and Simple numericals).
		10/10/23	7.5 Thermal Expansion) - Definition & Concept.
			7.6 Expansion of Solids (Concept).

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B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
OCTOBER		11/10/23	7.7 Coefficient of Linear, Superficial and Cubical expansions of Solids. Definition & Units.
			7.8 Relation between α, β & γ.
		13/10/23	7.9 Work and Heat :- Concept & Relation).
			7.10 Joules Mechanical Equivalent of Heat (Definition, Unit).
		16/10/23	7.11 First Law of Thermodynamics (Statement & Concept only).
			UNIT :- VIII
			Optics
	12th Week	17/10/23	8.1 Reflection & Refraction - Definition.
			8.2 Laws of reflection and refraction (Statement only).
		18/10/23	8.3 Refractive index - Definition, Formula & Simple numericals.

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B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
			8.4 Critical Angle and Total internal reflection - Concept, Definition & Explanation.
NOVEMBER	15th week	30/10/23	8.5 Refraction through Prism (Ray Diagram & Formula only - No derivation).
		31/10/23	8.6 Fiber optics - Definition, Properties & Applications.
			UNIT :- IX
			Electrostatics And Magnetostatics
		01/11/23	9.1 Electrostatics - Definition & Concept.
			9.2 Statement & Explanation of Coulombs Laws, Definition of Unit Charge.

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B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
NOVEMBER	15th week	03/11/23	9.3 Absolute and Relative Permittivity (ε) - Definition, Relation & Unit.
			9.4 Electric potential and Electric Potential difference (Difference, Formula & Unit)
		06/11/23	9.5 Electric field, Electric field intensity (E) - Definition, formula & unit.
			9.6 Capacitance - Definition, Formula & Unit.
		07/11/23	9.7 Series and parallel Combination of Capacitors (No derivation), Formula for effective/Combined/total Capacitance & Simple numericals.
		08/11/23	9.8 Magnet, Properties of a magnet.

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B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
NOVEMBER			9.9 Coulomb's Laws in Magnetism – Statement & Explanation, unit pole (Definition).
		10/11/23	9.10 Magnetic field, Magnetic field intensity (H) – Definition, formula & SI unit).
			9.11 Magnetic lines of force. (Definition and properties).
	16th week	13/11/23	9.12 Magnetic flux (ϕ) & Magnetic Flux density (B) – Definition, formula & unit.
			UNIT-V
			Current Electricity
		14/11/23	10.1 Electric Current – Definition, formula & SI unit.
		15/11/23	10.2 Ohm's Law and its applications.
		17/11/23	10.3 Series and parallel Combination of resistors (No derivation, formula for effective/combined/total resistance & Simple numericals).
	17th week	20/11/23	

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B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
NOVEMBER	11th week	21/11/23	10.4 Kirchhoff's Laws (Statement and explanation with diagram).
		22/11/23	10.5 Application of Kirchhoff's laws to wheatstone bridge – Balanced Condition of wheatstone bridge - Condition of Balance (Equation).
			UNIT-XI Electromagnetism & Electromagnetic Induction
		24/11/23	11.1 Electromagnetism - Definition & Concept. 11.2 Force acting on a Current Carrying Conductor placed in a Uniform magnetic field, Fleming Left Hand Rule.

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B.I.E.T.,COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
DECEMBER	18th week	28/11/23	11.3 Faradays laws of Electromagnetic induction (Statement only).
		29/11/23	11.4 Lanz's Law (Statement)
		01/12/23	11.5 Flemings Right Hand Rule.
	19th week	04/12/23	11.6 Comparison between Flemings Right Hand Rule and Flemings Left Hand Rule.
			UNIT-XII
			Modern Physics
		06/12/23	12.1 LASER & Laser beam (Concept & Definition)
			12.2 Principle of Laser (Population Inversion & Optical pumping)
		08/12/23	12.3 Properties & Applications of LASER.

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