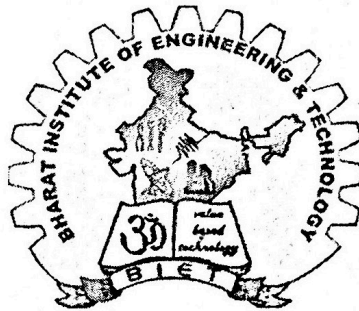


BHARAT INSTITUTE OF ENGINEERING & TECHNOLOGY

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



STUDENT'S ATTENDANCE REGISTER

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

Year/ Session : 2023 (winter)	Semester from Date: 16/08/2023 To Date : 11/12/2023
Semester & Branch	1 st Semester, Mechanical Branch
Subject with Code	Engineering Physics (Th 2A)
Name of the Faculty Member	Miss Arpita 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	3 rd Week	16/08/23	<p style="text-align: center;"><u>UNIT-I</u></p> <p style="text-align: center;"><u>Unit And Dimensions</u></p> <p>1.1 Physical quantities - Definition.</p> <p>1.2 Definition of fundamental and derived units (FPS, CGS, MKS, & SI)</p>
		17/08/23	<p>1.3 Definition of dimension and dimensional formula of physical quantities.</p> <p>1.4 Dimensional equations and principle of homogeneity.</p>
		19/08/23	<p>1.5 Checking the dimensional correctness of physical relations.</p>
		21/08/23	<p style="text-align: center;"><u>UNIT-2</u></p> <p style="text-align: center;"><u>Scalars And Vectors</u></p> <p>2.1 Scalar and vector quantities (definition and concept), Representation of a vector- examples, types of vectors.</p>
		21/08/23	
	4 th Week		

Signature of the Faculty: *Abatra*
14/08/23

Signature of the Principal/Course Co-ordinator/HOD: *14.8.23*

B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
AUGUST	4th Week		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.
		24/08/23	2.4 Vector Multiplication (Scalar product & vector product of vectors).
			<p><u>UNIT-3</u> <u>Kinematics</u></p>
	5th Week	26/08/23	{ 3.1 Concept of Rest and Motion. 3.2 Displacement, Speed, Velocity, Acceleration & Force (Definition, Formula, dimension & SI units).
28/08/23		3.3 Equations of Motion under gravity (upward and downward motion) - no derivation.	

Signature of the Faculty: *Anita*
14/08/23

Signature of the Principal/Course Co-ordinator/HOD: *(S) Tim*
14/08/23

B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
SEPTEMBER	5 th week	31/08/23	3.4 Circular Motion: Angular displacement, Angular velocity and Angular acceleration (Definition, formula & SI units).
		02/09/23	3.5 Relation between (i) linear & Angular velocity, (ii) linear & Angular acceleration).
	04/09/23	3.6 Define projectile, Examples of projectile.	
	6 th week	07/09/23	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.

Signature of the Faculty:
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 14/08/23

Signature of the Principal/Course Co-ordinator/HOD:

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COURSE PLAN

Week

Class Day

Theory/Practical Topic

SEPTEMBER

7th week

UNIT-4 WORK AND FRICTION

09/09/23

4.1 Work -

Definition, formula & SI units.

11/09/23

4.2 Friction -

Definition & Concept.

4.3

Types of friction (Static, dynamic)
Limiting friction (Definition with concept).

13/09/23

4.4

Laws of Limiting friction
(Only Statement, No experimental verification).

14/09/23

14/09/23

4.5

Coefficient of friction - Definition & formula, Simple numericals.

4.6

Methods to reduce friction.

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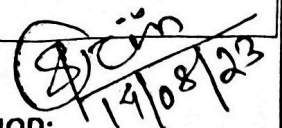
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B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic	
SEPTEMBER	8th week	16/09/23	5.1 Newtons laws of Gravitation :- Statement and Explanation.	
			5.2 Universal Gravitational Constant :- Definition, Unit and dimension.	
		18/09/23	5.3 Acceleration due to gravity 'g' - Definition and Concept.	
			5.4 Definition of mass and weight.	
		21/09/23	5.5 Relation between g and G.	
		23/09/23	5.6 Variation of g with altitude and depth (No derivation) - Only explanation	
		25/09/23	5.7 Keplers laws of planetary motion. (Statement only).	
	9th week			<u>UNIT:-6</u> <u>Oscillations And Waves</u>
		27/09/23	6.1 Simple Harmonic Motion - (SHM) Definition & Examples.	
		28/09/23	6.2 Expression (Formula/Equation) for displacement, velocity, acceleration of a body/particle in SHM.	

Signature of the Faculty:
Apakia
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B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
OCTOBER	10 th week	30/09/23	6.3 Wave motion - Definition & Concept.
			6.4 Transverse and Longitudinal wave motion - Definition, Examples & Comparison.
		04/10/23	6.5 Definition of different wave parameters (Amplitude, Wavelength, Frequency, Time period).
		05/10/23	6.6 Derivation of Relation between Velocity, Frequency and Wavelength of a wave.
		07/10/23	6.7 Ultrasonics :- Definition, properties & Applications.
		09/10/23	<p style="text-align: center;"><u>UNIT - 7</u></p> <p style="text-align: center;"><u>Heat And Thermodynamics</u></p> 7.1 Heat and Temperature - Definition & Difference. 7.2 Units of Heat - (FPS, CGS, MKS & SI).
		11/10/23	7.3 Specific Heat (Concept, definition, Unit, dimension) and Simple numerical
	11 th week		

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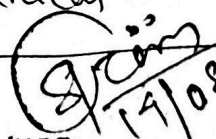
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Month	Week	Class Day	Theory/Practical Topic
OCTOBER	11 th Week		7.4 Change of State (Concept), Latent Heat (Concept, definition, Unit, dimension) and Simple numericals)
			12/10/23
		14/10/23	7.6 Expansion of Solids (Concept).
			7.7 Coefficient of Linear, Superficial and Cubical expansions of Solids - Definition & Units.
			7.8 Relation between α , β & γ .
	12 th Week	16/10/23	7.9 Work and Heat - Concept & Relation.
			7.10 Joules Mechanical Equivalent of Heat (Definition, Unit).
		18/10/23	7.11 First Law of Thermodynamics (Statement and Concept only).
			<u>UNIT - 8</u> <u>OPTICS</u>
	14 th Week	19/10/23	8.1 Reflection & Refraction - Definition
			8.2 Laws of reflection and refraction (Statement only).
	30/10/23	8.3 Refractive index - Definition, formula & Simple numerical.	

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Month	Week	Class Day	Theory/Practical Topic	
NOVEMBER	14 th week		8.4 Critical angle and Total internal reflection - Concept, definition & Explanation.	
			01/11/23 8.5 Refraction through prism (Ray diagram & formula only - NO derivation).	
		02/11/23 8.6 Fibre optics - Definition, properties & Applications.		
		<u>Unit:-9</u>		
		<u>Electrostatics & Magnetostatics</u>		
		04/11/23	9.1 Electrostatics - Definition & Concept.	
	15 th week		9.2 Statement & Explanation of Coulombs laws, Definition of unit charge.	
			06/11/23	9.3 Absolute & Relative permittivity (ϵ) Definition, Relation & Unit.
			9.4 Electric potential and Electric potential difference (Definition, formula & SI units).	
		08/11/23	9.5 Electric field, Electric field intensity (E) - Definition, formula & Unit.	

Signature of the Faculty: Ahtra
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14/08/23

B.I.E.T., COURSE PLAN


Month	Week	Class Day	Theory/Practical Topic
NOVEMBER	15 th week	09/11/23	9.6 Capacitance - Definition, formula & Unit.
		11/11/23	9.7 Series and parallel Combination of Capacitors (No derivation, formula for effective / Combined / total Capacitance & Simple numericals).
	16 th week	11/11/23	9.8 Magnet, properties of a magnet.
		13/11/23	9.9 Coulombs laws in Magnetism - Statement & Explanation, Unit pole (Definition).
		15/11/23	9.10 Magnetic field, Magnetic field intensity (H) - Definition, formula & SI unit). 9.11 Magnetic lines of force (Definition and properties).
			15/11/23

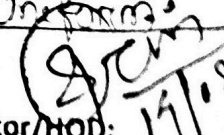
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B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic	
NOVEMBER	17th week		<u>UNIT :- 10</u> <u>Current Electricity</u>	
		16/11/23	10.1 Electric Current - Definition, Formula & SI units.	
		18/11/23	10.2 Ohm's Law and its applications.	
		20/11/23	10.3 Series and parallel Combination of resistors (No derivation), formula for effective/combined/total resistance & Simple numericals).	
		22/11/23		
	23/11/23	10.4 Kirchhoff's laws (Statement & Explanation with diagram).		
	25/11/23	10.5 Application of Kirchhoff's laws to wheatstone bridge - Balanced Condition of wheatstones Bridge - Condition of Balance (Equation).		
	18th week			<u>UNIT :- 11</u> <u>Electromagnetism & Electromagnetic Induction</u>
		29/11/23	11.1 Electromagnetism :- Definition & Concept. 11.2 Force acting on a Current carrying Conductor placed in a uniform magnetic field.	


 Signature of the Faculty: 14/10/23


 Signature of the Principal/Course Co-ordinator/HOD: 14/10/23

B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
DECEMBER	19th week		magnetic field, Flemings left hand Rule.
		30/11/23	11.3 Faradays Law of Electromagnetic Induction (Statement Only).
		02/12/23	11.4 Lenz's Law (Statement).
		04/12/23	11.5 Flemings Right hand Rule.
		06/12/23	11.6 Comparison between Fleming's Right hand rule and Fleming's Left hand Rule.
			<u>UNIT:-12</u> <u>Modern Physics</u>
	20th week	07/12/23	12.1 LASER & Laser beam (Concept & Definition).
			12.2 Principle of LASER (population Inversion & Optical pumping).
		09/12/23	12.3 Properties & Applications of LASER.
		11/12/23	12.4 Wireless Transmission - Ground waves, Sky waves, Space waves (Concept & Definition)

Aparna
14/08/23
nature of the Faculty:

Signature of the Principal/Course Co-ordinator/HOD:

Arjun
14/08/23
Arjun
14/08/23