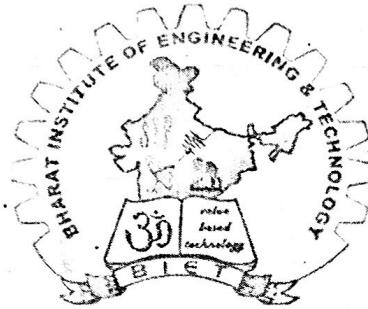


# BHARAT INSTITUTE OF ENGINEERING & TECHNOLOGY

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



## REGISTER FOR PROGRESS COURSE

Time Day	9:05 TO 9:55		9:55 TO 10:45		11:35 TO 12:25
MON			Engg. Phy.		
TUE			Engg. Phy.		
FRI	Engg. Phy.				
SAT					Engg. Phy.

Year/ Session <b>1<sup>st</sup>/2023</b>	Semester from Date: <b>20/03/2023</b> To Date: <b>26/06/2023</b>
Semester & Branch	<b>2<sup>nd</sup> Semester Electrical Branch (Sec-'D')</b>
Subject with Code	<b>Engineering Physics (Th-2b)</b>
Name of the Faculty Member	<b>Miss Anupama Patra</b>

# B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic	
M A R C H	4th Week	20/03/23	<u>Unit And Dimension</u>	
			1.1 Physical quantities - (Definition).	
		24/03/23	1.2 Definition of fundamental and derived units, System of units (FPS, CGS, MKS) and SI units).	
			21/03/23	1.3 Definition of dimension and dimensional formulae of physical quantities.
			1.4 Dimensional equations and principle of homogeneity.	
25/03/23	1.5 Checking the dimensional correctness of physical relation.			
			<u>Scalars And Vectors</u>	
		25/03/23	2.1 Scalar and vector quantities (definition and concept), Representation of a vector - examples, types of vectors.	

Signature of the Faculty: *Abhishek*

Signature of the Principal/Course Co-ordinator/HOD: *Pradyumn*  
17.03.23

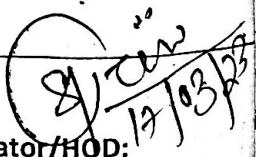
Signature of the Principal/Course Co-ordinator/HOD: *Pradyumn*  
17/03/23

# B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
M A R C H	5 <sup>th</sup> Week		2.2 Triangle and parallelogram law of vector addition (Statement only), Simple Numerical.
		27/03/23	2.3 Resolution of vectors - Simple Numericals on Horizontal and vertical components. 2.4 Vector multiplication (Scalar product and vector product of vectors).
		28/03/23	<u>Kinematics</u> 3.1 Concept of Rest and Motion. 3.2 Displacement, Speed, Velocity, Acceleration & Force. (Definition, formula, dimension & SI units).

*Apalga*

Signature of the Faculty:

  
 17/03/23

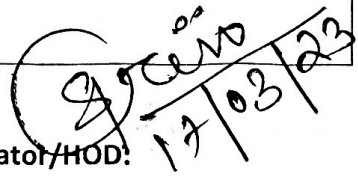
Signature of the Principal/Course Co-ordinator/HOD:

# B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
		31/03/23	3.3 Equation of Motion under Gravity (upward and downward motion) - no derivation.
A P R I L	2nd Week	03/04/23	3.4. Circular motion: Angular displacement, Angular velocity and angular acceleration (definition, formula and SI units).
		04/04/23	3.5 Relation between:- (i) linear and Angular velocity, (ii) linear and angular acceleration.
		08/04/23	3.6 Define projectile, Examples of projectile.  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.

*Apurva*

Signature of the Faculty:

  
 17/03/23

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



# B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
A P R I L	3rd Week	10/04/23	<u>WORK And Friction</u> 4.1 Work - Definition; formula & SI units.
		11/04/23	4.2 Friction - Definition & Concept. 4.3 Types of friction (static, dynamic), Limiting friction (Definition with concept).
		15/04/23	4.4 Laws of limiting friction (only statement, No experimental verification).
	4th Week	17/04/23	4.5 Coefficient of friction:- Definition & formula; Simple Numericals.
		18/04/23	4.6 Methods to reduce friction.

Signature of the Faculty: Abhishek

Signature of the Principal/Course Co-ordinator/HOD: (Signature) 17/03/23

# B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
APRIL 7 17 27	4th Week	21/04/23	Gravitation 5.1 Newtons law's of Gravitation:- Statement & Explanation.
			5.2 Universal Gravitational Constant (G) :- Definition Unit and Dimension.
		22/04/23	5.3 Acceleration due to gravity (g):- Definition and Concept
	5th Week	24/04/23	5.4 Definition of mass and weight.
			5.5 Relation between g and G
		25/04/23	5.6 Variation of g with altitude and depth (No derivation - only explanation).
			5.7: Keplers laws of planetary Motion (Statement only).

Signature of the Faculty: *Apalra*

Signature of the Principal/Course Co-ordinator/HOD: *Pravin*  
 17/03/23

# B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
A P R I L	5 <sup>th</sup> Week	28/04/23	6.1 Simple Harmonic Motion - (SHM) Definition & Examples.
			6.2 Expression (Formula/Equation) for displacement, velocity, acceleration of a body/particle in SHM.
		29/04/23	6.3 Wave motion - Definition and Concept.
			6.4 Transverse and longitudinal wave motion - Definition, Examples, & Comparison.
M A Y	1 <sup>st</sup> Week	01/05/23	6.5 Definition of different wave parameters - (Amplitude, wavelength, Frequency, Time period).

Signature of the Faculty: *Apoorva*

Signature of the Principal/Course Co-ordinator/HOD: *Ajith*  
17/03/23

# B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
M A Y	1 <sup>st</sup> Week	02/05/23	6.6 Derivation of relation between velocity, frequency and wavelength of wave.
		06/05/23	6.7 Ultrasonics - Definition, properties & applications.
	2 <sup>nd</sup> Week	08/05/23	<div style="text-align: center;"><u>Heat And Thermodynamics</u></div> 7.1 Heat and temperature - Definition & difference.
		09/05/23	7.2 Units of Heat (FPS, CGS, MKS & SI).  7.3 Specific heat (Concept, definition, Unit, dimension, and Simple numericals)  7.4 Change of state (Concept), Latent Heat (Concept, definition, Unit, dimension) & Simple numericals.

Signature of the Faculty: *Apakra*

Signature of the Principal/Course Co-ordinator/HOD: *(A) 12/03/23*

# B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
M A Y	2nd Week	12/05/23	7.5 Thermal Expansion :- Definition & Concept.
			7.6 Expansion of Solids :- (Concept)
		13/05/23	7.7 Coefficient of linear, Superficial and Cubical expansion Solids - Definition & units.
			7.8 Relation between $\alpha$ , $\beta$ & $\gamma$ .
	3rd Week	15/05/23	7.9 Work and Heat - Concept & relation.
			7.10 Joules Mechanical Equivalent of Heat (Definition, Heat).
		7.11 First law of Thermodynamics (Statement and Concept only).	

Signature of the Faculty: *Abatra*

Signature of the Principal/Course Co-ordinator/HOD: *Pravin*  
17/05/23

# B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
M A Y	3rd Week	16/05/23	<p style="text-align: center;"><u>OPTICS</u></p> <p>8.1 Reflection &amp; Refraction - Definition.</p> <p>8.2 Laws of reflection and refraction (Statement only).</p>
		20/05/23	<p>8.3 Refractive index - Definition, Formula &amp; Simple numerical.</p> <p>8.4 Critical Angle and Total internal reflection - Concept, Definition &amp; Explanation.</p>
		22/05/23	<p>8.5 Refraction through prism. (Ray diagram &amp; Formula only - No derivation).</p>
	4th Week	23/05/23	<p>8.6 Fiber optics - Definition, properties &amp; Applications.</p>
		<u>Electrostatics &amp; Magnetostatics</u>	
		26/05/23	<p>9.1 Electrostatics - Definition &amp; Concept.</p> <p>9.2 Statement &amp; Explanation of Coulomb's Law, Definition of unit charge.</p> <p>9.3 Absolute &amp; Relative permittivity (<math>\epsilon</math>) - Definition, Relation &amp; unit.</p>

*Signature*

  
 17/05/23

Signature of the Faculty:

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



# B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
M A Y	4th Week	27/05/23	9.4 Electric potential and Electric potential difference (Definition), Formula & SI units 9.5 Electric Field, Electric Field intensity (E) - Definition, Formula & unit.
	5th Week	29/05/23	9.6 Capacitance - Definition, Formula & unit. 9.7 Series & parallel combination of Capacitors. (No derivation), formula for effective/combined/total Capacitance & Simple Numericals].
		30/05/23	9.8 Magnet, properties of a magnet 9.9 Coulomb's law in magnetism - Statement & explanation, unit pole (Definition).

Signature of the Faculty: Abhra

Signature of the Principal/Course Co-ordinator/HOD: [Signature] 12/05/23

# B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
JUN 2023	1 <sup>st</sup> Week	02/06/23	9.10 Magnetic field, Magnetic field intensity (H) - (Definition, formula & SI unit) 9.11 Magnetic lines of force (Definition and properties). 9.12 Magnetic Flux ( $\Phi$ ) & Magnetic Flux density ( $\beta$ ) - Definition, formula & unit.
	2 <sup>nd</sup> Week	03/06/23  05/06/23 06/06/23 09/06/23	<p style="text-align: center;"><u>Current Electricity</u></p> 10.1 Electric Current - Definition, Formula & SI units. 10.2 Ohm's law and its applications. 10.3 Series and parallel combination of resistors (No derivation), formula for effective/combined/total resistance & simple numericals). 10.4 Kirchhoff's laws (Statement & Explanation) with diagram).

Signature of the Faculty: *Aradhya*

Signature of the Principal/Course Co-ordinator/HOD: *A. C. S. 17/06/23*

# B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
J U N E	2nd Week	10/06/23	10.5 Application of Kirchoff's Laws to wheatstone bridge - Balanced condition of wheatstone's bridge - Condition of balance (equation).
	3rd Week		<u>Electromagnetic and Electromagnetic Induction</u>
		12/06/23	11.1 Electromagnetism - Definition & Concept.
		13/06/23	11.2 Force acting on a current carrying conductor placed in a uniform magnetic field, Fleming's left hand rule.
		16/06/23	11.3 Faraday's laws of Electromagnetic induction (Statement only).
		17/06/23	11.4 henz's law (Statement)
	17/06/23	11.5 Fleming's Right Hand Rule.	
	4th Week	19/06/23	11.6 Comparison between Fleming's Right Hand Rule and Fleming's left Hand Rule.

Signature of the Faculty: *Apalra*

Signature of the Principal/Course Co-ordinator/HOD: *Apalra*  
19/06/23

# B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
J U N E	4th Week	23/06/23	<p style="text-align: center;"><u>Modern Physics</u></p> <p>12.1 LASER &amp; Laser beam (Concept and Definition)</p>
		24/06/23	<p>12.2 Principle of Laser (population Inversion and optical pumping).</p> <p>12.3 properties &amp; Applications of LASER.</p>
	5th Week	26/06/23	<p>12.4 Wireless transmission) - Ground waves, Sky waves, Space waves, (Concept &amp; Definition).</p>

*Aparna*  
Signature of the Faculty:

*Pravin* 17.3.23  
Signature of the Principal/Course Co-ordinator/HOD:

*Pravin* 17/03/23