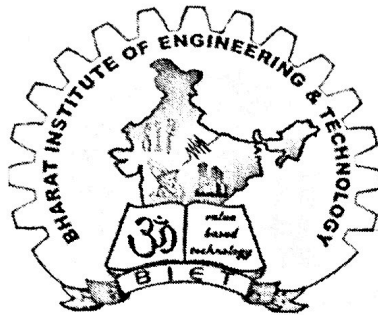


Engg. phys - (Sec - B)

BHARAT INSTITUTE OF ENGINEERING & TECHNOLOGY

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



STUDENT'S ATTENDANCE REGISTER

Time Day	9.05 to 9.55am	9.55 to 10.45am	10.45 to 11.35am	11.35 to 12.25pm	
Mon	phy				
Tue			phy		
Wed					
Thu		phy			
Fri				phy.	
Sat					

Year/ Session : 2023 (winter)	Semester from Date: 16/08/23 To Date: 11/12/23.
Semester & Branch	First Semestare and Mechanical Branch
Subject with Code	Engn. Physics & Tet. 2(a)
Name of the Faculty Member	Chitta Ranjan Maharana.
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 August	1st.	17/8/23 17/8/23	<u>UNIT - 1.</u> 1.1 Physical quantities, definition, Example. 1.2 Definition of fundamental units. Definition of derived units. System of units. F.P.S, C.G.S, M.K.S and S.I. units. 1.3 Dimensions, definition Dimensional formulae of physical quantities.
		18/8/23 18/8/23	1.4 Dimensional Equations Principle of homogeneity.
		20/8/23 21/8/23	1.5 Checking the dimensional correctness of physical relations.
	2nd.	22/8/23 22/8/23	<u>UNIT - 2</u> 2.1 Scalars and vector quantities Definition and Concept. Representation of a vector-examples.

Signature of the Faculty:



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


14/08/23

B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
August	2nd	24/8/23	Types of vectors, Examples. 2.2 Triangle law, parallelogram law of vector addition Statement, Simple Numericals Solved.
		25/8/23	2.3 Resolution of vectors Simple Numericals Solved based on horizontal Components and vector Components.
	3rd	28/08/23	2.4 Scalar product of vectors vector product of vectors. <u>UNIT-3</u> 3.1 Concept of rest and motion 3.2 Defination, formula, explanation, Dimensions,

Signature of the Faculty:

[Signature]

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

[Signature]

B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
August			S.I. units, Displacement, Speed, Velocity, acceleration, Force.
	3rd.	29/08/23	3.3. Equation of motion, upward motion, downward motion.
		31/08/23	3.4. Definition, formula, Explanation, S.I. units. Circular motion, examples. Angular displacement, Angular velocity. Angular acceleration, concept 3.5. Relation between Linear velocity and angular velocity Linear acceleration and Angular acceleration.

Signature of the Faculty:

[Signature]

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

[Signature]
14/08/23

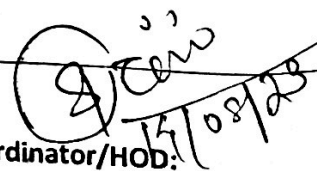
B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic	Month
September	3rd.	1/09/23	3.6. Defination of projectile. Examples of projectile. vertical projection of a projectile.	Sept
			3.7. Expression for Equation of trajectory. Time of flight, Maximum height, time of ascent.	
	4th.	4/09/23	Time of decent, Horizontal range. Condition for maximum horizontal range.	
		5/09/23	projectile fired at an angle 'θ'. Horizontal projection. <u>UNIT-4.</u>	
		7/09/23	4.1 work, types of work done, defination, formula, S.I. unit. Examples.	

Signature of the Faculty:



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

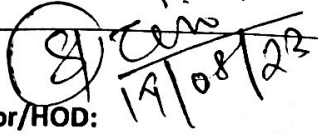

15/08/23

nature

B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
September	4th	8/09/23	4.2. Friction, defination, Concept examples.
	5th	11/09/23	4.3 Types of friction static friction Dynamic friction. Limiting friction. Defination and Concept, formula Examples.
		12/09/23	4.4. Laws of limiting friction. Statement, Explanation. Simple Numericals.
		14/09/23	4.5. Co-efficient of friction, Defination, formula, Concept. Simple Numericals.
		15/09/23	4.6. Methods of reducing friction, Examples.
			<u>UNIT-5</u>
		15/09/23	5.1 Newton's law of Gravitation, Statement and Explanation.

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
September	6th	18/09/23	5.2. Universal Gravitational Constant, (G), Definition, unit, Dimensions,
		21/09/23	5.3. Acceleration due to Gravity (g), Definition and Concept.
		22/09/23	5.4. Definition of mass and weight, Difference; Simple Numericals.
	7th	25/09/23	5.5. Relation between ' g ' and ' G '. 5.6. Variation of ' g ' with altitude and depth.
		26/09/23	5.7. Kepler's laws of planetary motion. <u>UNIT-6</u> 6.1. Simple Harmonic motion, Definition and example. 6.2. Definition, explanation, formula, Equation,

Signature of the Faculty:



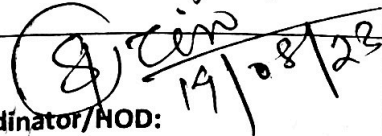
Signature of the Principal/Course Co-ordinator/HOD:


14/08/23

B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
September	7th.	28/09/23	for displacement, velocity, acceleration of a body, particle in S.H.M.
	8th.	3/10/23	6.3. Wave motion - Defination, Concept, example. 6.4. Defination, formula, Explanation Example of Transverse wave motion. Longitudinal wave motion, Formation of waves, equation & Comparision between transverse motion and longitudinal motion.
October		5/10/23	6.5. Defination of different wave parameters → Amplitude, wavelength, Frequency, Time period.
	9th	9/10/23	6.6. Derivation of relation between velocity, Frequency, wavelength of a wave. Simple Numericals. 6.7. Ultrasonic - Defination, properties, Applications.

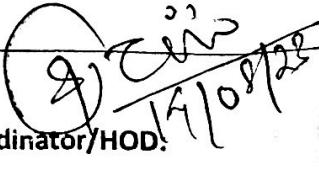
Signature of the Faculty: 

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

B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
October	9th	10/10/23	<u>UNIT-7</u> 7.1. Defination and difference Heat and temperature. Formula, unit. Example.
		12/10/23	7.2. units of heat, F.P.S, C.G.S. System, S.I. System, M.K.S. System. 7.3. Defination, Concept, unit, dimensions for specific heat. Simple Numericals Solved.
	10th	13/10/23	7.4. Change of state, Concept, Latent heat, Concept, defination unit and dimensions. Simple Numericals Solved.
			7.5. Defination and Concept. Example of thermal expansions solid
		16/10/27	7.6. Expansions of Concept, example. 7.7. Co-efficient of linear expansion of solid.

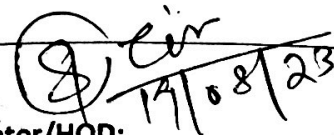
Signature of the Faculty: 

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

B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
October	10th	17/10/23	Co-efficient of Superficial expansions, Co-efficient of Cubical expansions of solids. Defination, Concept, unit and dimensions.
October	11th	19/10/23	7.8. Relation between α , β , γ . 7.9. Work and Heat Concept and Relation. Simple Numericals.
October	12th	30/10/23	7.10. Joules Mechanical Equivalent of Heat, Defination, Unit. 7.11. First law of thermodynamics Statement and concept only.
		31/10/23	<u>UNIT- 8</u> 8.1. Defination, Concept, examples of reflection. Refraction. 8.2. Laws of reflection. Laws of refraction. Statement only.

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
November	12th	2/11/23	8.3. Definition, formula, Concept, of Refractive index. Simple Numericals solved.
		3/11/23	8.4. Concept, definition, formula, explanation, example. Simple Numericals solved. Critical angle.
	13th	6/11/23	8.5. Refraction through prism, ray diagram Concept, formula. Simple Numericals.
		7/11/23	8.6. Fibre optics - Definitions, properties and applications.
		7/11/23	<u>UNIT- 9.</u> 9.1. Electrostatics - Concept and definition. 9.2. Statement and

Signature of the Faculty

[Signature]

Signature of the Principal/Course Co-ordinator/HOD

[Signature]
16/08/23

B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
November	13th	9/11/23	Explanation of Coulomb's law. Defination of unit Charge.
			9.3. Absolute permittivity. Relative permittivity. Defination, relation and unit.
	14th	10/11/23	9.4. Electric potential Electric potential difference Defination, formula, S.I. units Concept.
			9.5. Electric field, Defination formula, unit. Electric field intensity - Defination, Concept, formula, unit.
	14th	13/11/23	9.6. Capacitance - Defination, Concept, formula, unit.
			9.7. Series Combination. parallel Combination. of Capacitors. formula, Concept. Simple Numericals solved

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
November		14/11/23	9.8. Magnet, properties of magnet. concept.
			9.9. Coulomb's law in magnetism - statement, explanation, unit pole.
	14th	16/11/23	9.10. Magnetic field, Magnetic field intensity concept, formula, unit.
			9.11. Magnetic lines of forces. Definition, concept, properties
			9.12. Magnetic flux Magnetic flux density - Definition, formula, Concept, unit & Dimensions,
			<u>UNIT-10</u>
		17/11/23	10.1. Electric Current, Definition, Concept, formula, unit. S.I.

Signature of the Faculty:

[Signature]

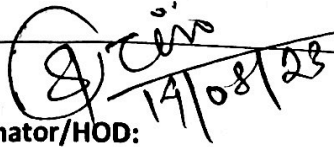
Signature of the Principal/Course Co-ordinator/HOD:

[Signature]
14/08/23

B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
November	15th	20/11/23	10.2. Ohm's law and its applications.
		21/11/23	10.3. Series Combination of resistors. parallel Combination of resistors. Concept, explanation, formula, Simple Numerical solved.
		23/11/23	10.4. Kirchhoff's law - statement and explanation with diagram. formula.
		24/11/23	10.5. Application of Kirchhoff's law to wheatstone bridge. - Condition of Balance.
	16th		<u>UNIT-11</u> 11.1 - Electromagnetism - Defination and Concept. 11.2. Force acting on a Current Carrying Conductor placed in a uniform magnetic field.

Signature of the Faculty: 

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

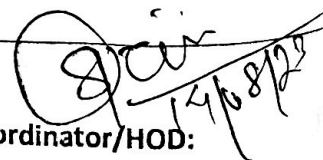
B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
November	16th.	30/11/23	Flemming left hand rule 11.3. Faradays laws of electromagnetic Induction.
		7/12/23	11.4. Lenz's law Statement formula. 11.5. Flemming's right hand rule.
December	17th.	4/12/23	11.6. Comparision between Flemmings right hand rule and flemmings left hand rule. Simple Numericals.
		7/12/23	<u>UNIT-12.</u> 12.1. Lasere and laser beam Concept, formula, Defination, 12.2. principle of laere population inversion. optical pumping.

Signature of the Faculty:



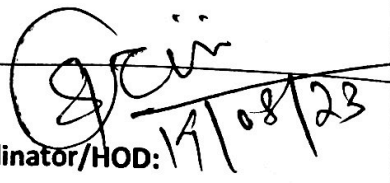
Signature of the Principal/Course Co-ordinator/HOD:


14/6/23

B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
December	17th.	8/12/23	12.3. properties of Lasers. Application of Lasers.
	18th.	11/12/23	12.4. wireless transmission - Ground waves, Sky waves, Space waves, Concept & Defination.

Signature of the Faculty: 

Signature of the Principal/Course Co-ordinator/HOD:  14/08/23