Sec - C (Mech)

BHARAT INSTITUTE OF ENGINEERING & TECHNOLOGY

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

STUDENT'S ATTENDANCE REGISTER

Time / Day	9.55 – 10.45	1.05 – 1.55			
MON	✓				
TUE		✓			
WED	✓				
FRI	✓				

Year/ Session	S-2023 St Dt 20/03/23 To Dt -26/06/23
Semester & Branch	2nd sem, civil (Sec-C)
Subject with Code	Engg. Mechanics (Th-4)
Name of the Faculty Member	Er. Ramkrushna Mohanty

B.I.E.T.,COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
			1. Fundamentals of Engg Mechanics. 14
			1.1. Fundamentals.
	4th	20/3/23	Definition of mechanics, static, Dynamics, Rigid bodies.
MAR			
			1.2. Force System.
		21/3/23	Definition, clasification of force system according to plane and line of action.
		22/3/23	Characteristics of force and effect of force.
		24/3/23	Principle of transmissibility and principle of superpusition.
	5th	27/3/23	Action & Reaction of forces. Concept of Free Body Diagram.

17/03/23

B.I.E.T.,COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
MAR	5th	28/3/23 29/3/23	1.3. Resolution of a force Definition, Method of Resolution, Types of component force perpendicular and non-perpendicular components.
APRIL	2nd	3/4/23 3/4/23 4/4/23	1.4. Composition of force Definition, Resultant force Method of composition of force 1.4.1. Analytical method such as Law of parallelogram law of forces. and method of resolution.

12/03/23

B.I.E.T.,COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
	3rd	5/4/23 10/4/23	1.4.2. Graphical method. Introduction space diagram, vector diagram polygon. Law of forces.
APRIL		11/4/23	1.4.3. Resultant of concurrent non-concurrent and parallel force system. by analytical and graphical method
		12/4/23	1.5. Moment of force definition, Geometrical meaning of moment of force. Measurement of moment of force and units.
	4th	17/4/23 18/4/23	classification of moment acc. to rotation. Law of moment, Varignon's Theorem. Couple definition, Measurement of couple & properties of couple.

17/03/23

B.I.E.T.,COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
			2. Equilibrium. 08
APRIL	4th	19/4/23 21/4/23 24/4/23	2.1. Definition, condition of equilibrium. Analytical and graphical conditions of equilibrium for concurrent and non-concurrent & F.B.D.
	5th	25/4/23 26/4/23 28/4/23	2.2. Lami's Theorem - statement Application for solving various engg. problems.

(8) CIS 12/03/23

B.I.E.T.,COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
			3. Friction. 10
MAY	1st	1/5/23 2/5/23 3/5/23	3.1. Definition of friction, Frictional forces, Limiting frictional forces, co-efficient of friction. Angle of friction and Repose Laws of friction, Advantage and Disadvantage of friction.
	2nd	8/5/23 9/5/23 10/5/23 12/5/23	3.2. Equilibrium of bodies on level plane - force applied on horizontal and inclined plane. 3.3. Ladder and wedge friction.

17/03/23

B.I.E.T.,COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
			A. centroid and Moment of Inertia
	3rd	15/5/23 16/5/23	A.1. centroid- definition, Moment of an area about an axis
MAY	4th.	17/5/23 22/5/23 23/5/23	centroid of geometrical figures such as square, rectangle, triangle, circle, semi-circle and quater circle.
		24/5/23	centroid of composite figures.
		26/5/23 29/5/23	A.2. Moment of inertia - Definition. Parallel and perpendicular axis theorem.
	5th.	30/5/23 31/5/23	M.I. of plane Lamina and different engg. sections.

B.I.E.T.,COURSE PLAN

Week	Class Day	Theory/Practical Topic
		5. Simple Machines.
1st	2/6/23	5.1. Definition of simple machine, velocity ratio of simple and compound gear train.
2nd	5/6/23 6/6/23	Explain simple and compound lifting machine. Define M.A, V.R, and efficiency. State relationship between them.
	7/6/23	State Law of m/c, self-locking m/c.
3rd	9/6/23 12/6/23	5.2. Study of simple m/c - simple axle and wheel.
	13/6/23	Single purchase & Double purchase crab winch.
	16/6/23	Worm and worm wheel and screw jack.
4th	19/6/23	5.3. Types of hoisting m/c like derricks. Their use and working principle

B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
			6. Dynamics. 06
	4th	21/6/23 23/6/23	6.1. Kinematics and Kinetics. Principle of dynamics. Newton's Law of motion. Motion of particle acted upon by a constant force.
JUNE	5th	26/6/23	Equation of Motion & De-alembert principle.
		(2)E	6.2. Work, power, Energy and its engineering applications.
		(2)E	Kinetic and potential energy and application.
		(1)E	6.3. Momentum and Impulse. Conservation of Energy and linear momentum.

B.I.E.T.,COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
		(2)E	collision of elastic bodies and co-efficient of Restitution.