GOVERNMENT POLYTECHNIC JAJPUR A/ P: Ragadi, Block: Korei, Dist.: Jajpur, Odisha- 755019 Website: https://www.gpjajpur.org E-mail: principalgpjajpur@yahoo.co.in Contact: 9437155107						
LESSON PLAN 1ST SEMESTER No. of classes available per week-4 Total period available-60 Class duration-55 minutes						
Teaching Method: Online meeting app, Lecture note, ppt, PDF Learning Method- Daily Assignment, Unit test, quiz.						
DEPARTMENT OF MATH & SCIENCE						
LESSON PLAN						
Discipline: Math & Science	Semester: 1st	Name of the Teaching faculty: Dr. BISWAM Branch - Mechanical	BHAR MOHANTY			
Subject: Engg. Physics	No of Days/Week class alloted: 4	Semester from Date:25/10/2022 No of weeks: 15	To Date: 31/01/2023			
Week	Class Day	Topics				
	1st	i) introduction to Units ii)System of units				
1st	2nd	Dimensions and Dimensional formula				
130	3rd	Application to dimensional Analysis				
	4th	i) Identification of Scalar and vector quantit	ties			
	1st	i) Types of vectors				
2nd		ii) Vector addition				
	2nd	i) Multiplication of Two vectors( Dot product)				
	3rd	i) Cross Product				
	4th	i) concept of rest and moving body				
		ii) Equation of motion under gravity				
Зrd	1st	i)Solving Numericals				
	2nd	i) Circular motion				
	3rd	i) Solving numericals				
	4th	i) Projectile motion. ii) Facts about Projectile.				
	1st	i) Projectile fired horizontally by making an	angle			
	2nd	i) Work				
4th	3rd	i) Friction				

1 1		ii) Types of Friction
	4th	i) Laws of limiting Friction
	1st	i) coefficient of friction
		ii) Methods of reducing Friction
	2nd	i)Numericals
5th		ii) Class test 1 conducted
	3rd	i) Gravitation
		ii) Newtons laws of Gravitation
	4th	i) Relation between g and G
	1st	ii) Universal gravitational constant i) Variation of g with altitude and depth
	2nd	i) Keplers laws of Planetary motion
6th 🗕	2110	
	3rd	i)Numericals
	4th	i)Oscillations(Simple Harmonic Motion)
	1st	i) Characteristics of SHM
	2nd	i) Numericals
7th	3rd	i) Waves
	510	ii) Types of wave motion
	4th	i) Properties of wave motion
	1st	i) Ultrasonics
	2nd	i) Heat
	210	ii) Specific heat
8th	3rd	i) Latent heat
		ii) Numericals on heat
	4th	i) Thermal expansion(Examples)
		ii) Expansion coefficients
	1st	i) Derivation of expansion coefficients
	2nd	i) Relation between expansion coefficients
9th	3rd	i) Work and heat
		ii) First law of Thermodynamics.
	4th	i) Numericals
	1st	i) Optics
		ii) Reflection & Refraction
401	2nd	i) Refractive index
10th		ii) Numericals
	3rd	i) Critical angle & Total Internal Reflection
	4th	i) Refraction through Prism
		ii) Fiber optics
	1st	i) Electrostatics
		ii) Coulombs laws
		i) Electric potential

11thii) Electric capacitance3rdi) Grouping of capacitorsii) Numericals4thi) Magnetostaticsii) Coulombs laws1stii) Coulombs laws1stii) Magnetic field3rdi) Magnetic field intensity12th2nd3rdi) Magnetic field intensity12th2nd3rdi) Magnetic flux4thCLASS Test 2 conducted3rdi) Concept of electric currentii) Ohm's law and its application2ndi) Grouping of resistorsii) Numericals on series and parallel combination of resistors3rdKirchhoff's law4thi) Numericals4thi) Application of Kirchhoff's law1stii) Balanced condition of wheatstone bridge14thi) Force on a conductor in a uniform magnetic fieldii) Force on a conductor in a uniform magnetic fieldii) Electromagnetis Induction	1	2nd	ii) Electric field	
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		2nd	i) LASER( Spontaneous and stimulated emission)	
4th i) Wireless Transmission		3rd	i) Principle, properties and application of LASER	
		4th	i) Wireless Transmission	

Extra one week will be required to complete the syllabus

Signature of Faculty