PNS SCHOOL OF ENGGINEERING & TECHNOLOGY, MARSHAGHAI, KENDRAPARA				
LESSON PLAN				
Discipline :	Semester: 3rd	Name of the Teaching Faculty :Er. Ramakanta Swain		
Automobile Subject : THERMAL	No. of Days /	Semester From date: 01.08.2023 to Date: 30.11.2023 No. of Weesks:		
ENGINEERING-I	per week class	12		
ENGINEERING-I	allotted : 6	12		
Week	Class Day	Topics		
1st	1st	Thermodynamic Systems		
	2nd	closed, open, isolated		
	3rd	Thermodynamic properties of a system		
	4th	pressure, volume, temperature		
	5th	simple problem solved		
	6th	simple problem solved		
	1st	entropy, enthalpy, Internal energy		
	2nd	units of measurement		
24	3rd	units of measurement		
2nd	4th	Intensive and extensive properties		
	5th	Define thermodynamic processes		
	6th	simple problem solved		
	1st	Path, cycle,state		
	2nd	Path function, Point function		
24	3rd	Thermodynamic Equilibrium.		
3rd	4th	Quasi-static Process		
	5th	simple problem solved		
	6th	Conceptual explanation of energy and its sources		
	1st	Work , heat,Comparison between the two		
	2nd	Mechanical Equivalent of Heat		
4th	3rd	simple problem solved		
	4th	Work transfer, Displacement work		
	5th	State & explain Zeroth law of thermodynamics		
	6th	State & explain First law of thermodynamics		
5th	1st	simple problem solved		
	2nd	Limitations of First law of thermodynamics		
	3rd	Application of First law of Thermodynamics		
	4th	C.O.P (solve simple numerical)		
	5th	Laws of perfect gas Boyle's law		
	6th	simple problem solved		
6th	1st	Charle's law		
	2nd	Avogadro's law		
	3rd	Dalton's law of partial pressure		
	4th	simple problem solved		
	5th	Guy lussac law		
	6th	General gas equation		

2nd Characteristic gas constant	7th	1st	simple problem solved
### Ath simple problem solved Sth Explain specific heat of gas (Cp and Cv)		2nd	characteristic gas constant
4th simple problem solved 5th Explain specific heat of gas (Cp and Cv) 6th Explain specific heat of gas (Cp and Cv) 1st Relation between Cp & Cv 2nd simple problem solved 3rd Enthalpy of a gas 4th Work done during a non-flow process 5th Application of first law of thermodynamics to various non flow process 6th simple problem solved 1st Isothermal, Isobaric 2nd Isentropic and polytrophic process 3rd Solve simple problems on above. 4th simple problem solved 5th Free expansion & throttling process 6th Explain I.C engine 1st classify I.C engine 2nd simple problem solved 3rd Terminology of I.C Engine such as bore, dead centers, stroke volume, 4th Explain the working principle of 2-stroke & 4- stroke engine C.I & S.I engine. 5th Differentiate between 2-stroke & 4- stroke engine C.I & S.I engine. 6th simple problem solved 1st Carnot cycle 2nd simple problem solved 5th Diesel cycle. 6th Dual cycle. 1st Define Fuel. 2nd Types of fuel. 3rd Application of different types of fuel.		3rd	Universal gas constant
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12th 3rd Application of different types of fuel. 4th simple problem solved	12th	1st	Define Fuel.
4th simple problem solved		2nd	Types of fuel.
		3rd	Application of different types of fuel.
5th Heating values of fuel.		4th	simple problem solved
		5th	Heating values of fuel.