

PADMASHREE KRUTARTHA ACHARYA INSTITUTE OF ENGINEERING & TECHNOLOGY, BARGARH



LESSON PLAN Session-2024-2025

Semester: 6th Discipline: Mechanical Engg.

Subject: AE & HV

Name of the Teaching Faculty: Soumya Prakash Rath

subject: AE & HV No. of Days/per week class allotted : 04
Semester From Date : 04/02/2025 To Date: 17/05/2025 No. of Weeks : 15

Week	Class Day	Theory /Practical Topics
1	01	Introduction of Automobile Engg.
	02	Defination of Automobile Engg.
	03	Need of Automobile Engg.
	04	Classification of Automobile Engg.
2	01	Layout of Automobile chassis.
	02	major components of Automobiles.
	03	Clutch, need, types of clutch
	04	Working principle of clutch.
3	01	Gear box, Purpose, Construction and working.
	02	Concept of Automobile (Automatic) Gear Changing mechanism.
	03	Propeller Shaft, constructional features.
	04	Differential, need, types and working principle.


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Week	Class Day	Theory / Practical Topics
4	01	Braking System in Automobile.
	02	Mechanical brake
	03	Hydraulic brake
	04	Air Brake, Air assisted Hydraulic brake.
5	01	Vacuum brake
	02	Introduction to ignition and Suspension System.
	03	Describe Battery Ignition System.
	04	Magneto-ignition System.
6	01	Spark plug (purpose)
	02	Classification and specification of Spark plug.
	03	Common ignition trouble and its remedies.
	04	Suspension System for rear and front axle.

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Week	Class Day	Theory /Practical Topics
7	01	Independent Suspension System.
	02	Coil Spring and Tension bar
	03	Telescopic Shock absorber.
	04	Introduction to Cooling and lubrication.
8	01	Need of engine cooling
	02	Classification of engine cooling
	03	Defects of cooling.
	04	Remedial measures for defect of cooling.
9	01	function of lubrication
	02	Lubrication System of I.C. engine.
	03	Discussion of M.C.Q
	04	Introduction to fuel system.


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Week	Class Day	Theory /Practical Topics
10	01	Describe air fuel ratio
	02	Describe Carburetor
	03	Combustion process for Petrol engine
	04	Multi-point fuel injection system for petrol engine.
11	01	Working principle of fuel injection system for multi-cylinder engine.
	02	Filter for diesel engine.
	03	Working principle of fuel feed pump.
	04	fuel injector for diesel engine.
13	01	Description of MCAs
	02	Introduction to electric and hybrid vehicle.
	03	Social and environmental imp. of Hybrid vehicle.
	04	Description of electric vehicle operational advantage.


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Week	Class Day	Theory /Practical Topics
13	01	Present Performance and Application of electric vehicle
	02	Battery for electrical vehicle
	03	Fuel cells and battery types
	04	Hybrid vehicles
14	01	Types of Hybrid vehicles and electric vehicles.
	02	Parallel and Series Configuration.
	03	Drive Train
	04	Discussion of mecs
15	01	Solar powered vehicles
	02	Doubt clearing class
	03	Overall Chapter discussion.
	04	Overall Subject discussion


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