

ACADEMIC SESSION : Summer 2026

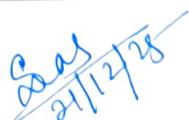
Discipline : Mechanical	Semester : 6th	Name of the Teaching Faculty : Anup Rana
Subject : TH-2 AUTOMOBILE ENGINEERING & HYBRID VEHICLES	No. of days / week class allotted-04	Semester From date: 22.12.2025 to 18.04.2026
Week	Class Day	Theory Topics
1st	1st	INTRODUCTION & TRANSMISSION SYSTEM:
	2nd	Automobiles: Definition, need and classification
	3rd	Clutch system :Need, Types (single & multiple) and working principle with sketch
	4th	
2nd	1st	Gear Box: Purpose of gear box, Construction and working of a 4 speed gear box
	2nd	
	3rd	Concept of automatic gear changing mechanisms
	4th	Propeller shaft: Constructional features
3rd	1st	Differential: Need, Types and working principle
	2nd	
	3rd	Layout of automobile chassis with major components (Line diagram)
	4th	BRAKING SYSTEM:
4th	1st	Braking systems in automobiles: Need and types
	2nd	Mechanical Brake in detail
	3rd	
	4th	Hydraulic Brake
5th	1st	Air Brake and Air assisted hydraulic brake
	2nd	
	3rd	
	4th	Vacuum Brake

6 th	1 st	IGNITION & SUSPENSION SYSTEM:
	2 nd	Describe the Battery ignition and Magnet ignition system
	3 rd	
	4 th	Spark plugs: Purpose, construction and specifications.
7 th	1 st	State the common ignition troubles and its remedies Description of the conventional suspension system for Rear and front axle
	2 nd	
	3 rd	
	4 th	
8 th	1 st	Description of independent suspension system used in cars (coil spring and tension bars)
	2 nd	
	3 rd	
	4 th	
9 th	1 st	Constructional features and working of a telescopic shock absorber
	2 nd	COOLING AND LUBRICATION:
	3 rd	Engine cooling: Need and classification
	4 th	Describe defects of cooling and their remedial measures
10 th	1 st	Describe the Function of lubrication Describe the lubrication System of I.C. engine
	2 nd	
	3 rd	

	4th	Describe the lubrication system of I.C. engine
11th	1st	FUEL SYSTEM:
	2nd	Describe Air fuel ratio
	3 rd	
	4th	Describe carburetion process for petrol Engine
12th	1st	Describe Multipoint fuel injection system for petrol engine
	2 nd	Describe the working principle of fuel injection system for multi cylinder engine 5.5 filter for Diesel engine
	3 rd	
	4 th	
13th	1st	Describe the working principle of Fuel feed pump and Fuel Injector for Diesel engine
	2nd	
	3rd	ELECTRIC AND HYBRID VEHICLES
	4th	Introduction, Social and Environmental importance of Hybrid and Electric Vehicles
14th	1 st	Description of Electric Vehicles, operational advantages, present performance and applications of Electric Vehicles
	2 nd	
	3rd	Battery for Electric Vehicles, Battery types and fuel cells
	4th	Hybrid vehicles. Types of Hybrid and Electric Vehicles: Parallel, Series, Parallel and Series configurations
15th	1st	Series Configurations
	2nd	Drive train
	3rd	Solar powered vehicles
	4th	Revision Classes


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